

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended October 31, 2018

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number 1-33913

QUANEX BUILDING PRODUCTS CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

1800 West Loop South, Suite 1500, Houston, Texas

(Address of principal executive offices)

26-1561397

(I.R.S. Employer Identification No.)

77027

(Zip code)

Registrant's telephone number, including area code: (713) 961-4600

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, \$0.01 par value	New York Stock Exchange, Inc.

Securities registered pursuant to Section 12(g) of the Act: NONE

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definition of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

The aggregate market value of the voting and non-voting common equity held by non-affiliates as of April 30, 2018, computed by reference to the closing price for the Common Stock on the New York Stock Exchange, Inc. on that date, was \$593,689,919. Such calculation assumes only the registrant's officers and directors at such date were affiliates of the registrant.

At December 7, 2018 there were outstanding 33,500,953 shares of the registrant's Common Stock, \$0.01 par value.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive Proxy Statement for its 2019 Annual Meeting of Stockholders to be filed with the Commission within 120 days of October 31, 2018 are incorporated herein by reference in Part III of this Annual Report on Form 10-K.

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Unless the context indicates otherwise, references to "Quanex", the "Company", "we", "us" and "our" refer to the consolidated business operations of Quanex Building Products Corporation and its subsidiaries.

Cautionary Note Regarding Forward-Looking Statements

Certain of the statements contained in this document and in documents incorporated by reference herein, including those made under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations" are "forward-looking" statements as defined under the Private Securities Litigation Reform Act of 1995. Generally, the words "expect," "believe," "intend," "estimate," "anticipate," "project," "will" and similar expressions identify forward-looking statements, which generally are not historical in nature. Forward looking statements are (1) all statements which address future operating performance, (2) events or developments that we expect or anticipate will occur in the future, including statements relating to volume, sales, operating income and earnings per share, and (3) statements expressing general outlook about future operating results. Forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from our historical experience and our current projections or expectations. As and when made, we believe that these forward-looking statements are reasonable. However, caution should be taken not to place undue reliance on any such forward-looking statements since such statements speak only as of the date when made and there can be no assurance that such forward-looking statements will occur. We are not obligated to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Factors that could cause actual results to differ materially from those expressed or implied by the forward-looking statements include, but are not limited to the following:

- changes in market conditions, particularly in the new home construction, and residential remodeling and replacement (R&R) activity markets in the United States, United Kingdom and Germany;
- changes in non-pass-through raw material costs;
- changes in domestic and international economic conditions;
- changes in purchases by our principal customers;
- fluctuations in foreign currency exchange rates;
- our ability to maintain an effective system of internal controls;
- our ability to successfully implement our internal operating plans and acquisition strategies;
- our ability to successfully implement our plans with respect to information technology (IT) systems and processes;
- our ability to control costs and increase profitability;
- changes in environmental laws and regulations;
- changes in warranty obligations;
- changes in energy costs;
- changes in tax laws, and interpretations thereof;
- changes in interest rates;
- our ability to service our debt facilities and remain in good standing with our lenders;
- changes in the availability or applicability of our insurance coverage;
- our ability to maintain good relationships with our suppliers, subcontractors, and key customers; and
- the resolution of litigation and other legal proceedings.

Additional factors that could cause actual results to differ materially are discussed under "Item 1A. Risk Factors" included elsewhere in this Annual Report on Form 10-K.

About Third-Party Information

In this report, we rely on and refer to information regarding industry data obtained from market research, publicly available information, industry publications, United States government sources and other third parties. Although we believe this information is reliable, we cannot guarantee the accuracy or completeness of the information and have not independently verified it.

PART I

Item 1. Business (Continuing Operations).

Our Company

Quanex was incorporated in Delaware on December 12, 2007, as Quanex Building Products Corporation. We manufacture components for original equipment manufacturers (OEM) in the building products industry. These components can be categorized as window and door (fenestration) components and kitchen and bath cabinet components. Examples of fenestration components include (1) energy-efficient flexible insulating glass spacers, (2) extruded vinyl profiles, (3) window and door screens, and (4) precision-formed metal and wood products. In addition, we provide certain other non-fenestration components and products, which include solar panel sealants, trim moldings, vinyl decking, fencing, water retention barriers, and conservatory roof components. We use low-cost production processes and engineering expertise to provide our customers with specialized products for their specific window, door, and cabinet applications. We believe these capabilities provide us with unique competitive advantages. We serve a primary customer base in North America and the United Kingdom, and also serve customers in international markets through our operating plants in the United Kingdom and Germany, as well as through sales and marketing efforts in other countries.

Our History

Our predecessor company, Quanex Corporation, was organized in Michigan in 1927 as Michigan Seamless Tube Company, and was later reincorporated in Delaware in 1968. In 1977, Michigan Seamless Tube Company changed its name to Quanex Corporation. On December 12, 2007, Quanex Building Products Corporation was incorporated as a wholly-owned subsidiary in the state of Delaware, in order to facilitate the separation of Quanex Corporation's vehicular products and building products businesses. This separation became effective on April 23, 2008, through a spin-off of the building products business to Quanex Corporation's then-existing shareholders. Immediately following the spin-off, our former parent company, consisting principally of the vehicular products business and all non-building products related corporate accounts, merged with a wholly-owned subsidiary of Gerda S.A.

Since the spin-off in 2008, we have evolved our business by making investments in organic growth initiatives and taking a disciplined approach to new business and strategic acquisition opportunities, while disposing of non-core businesses.

Notable developments and transactions which occurred since the spin-off include the following:

- in March 2011, we acquired Edgetech, I.G. Inc. and its German subsidiary, which provided us with three manufacturing facilities, one each in the United States, United Kingdom and Germany, that produce and market a full line of flexible insulating glass spacer systems for window and door customers in North America and abroad. This acquisition complemented our then existing insulating glass products business in the United States and, as a result, we committed to a plan to consolidate these facilities in November 2011. This consolidation plan, in part, resulted in the closure of a plant in Barbourville, Kentucky, and the relocation of equipment that was used to manufacture the single seal, warm-edge spacer system to our facility in Cambridge, Ohio. This consolidation was substantially completed by August 2012, with minor residual cash payments and program costs incurred during fiscal 2013. We sold the facility in Barbourville in May 2014;
- in December 2012, we acquired substantially all of the assets of Alumco Inc. and its subsidiaries (Alumco), an aluminum screen manufacturer, which allowed us to expand the scope of our fenestration business to include screens for vinyl window and door manufacturers and to expand our geographic reach throughout the United States;
- in April 2014, we sold our interest in a limited liability company which held the net assets of our Nichols Aluminum business to a privately held company that provides aluminum rolled products and extrusions, aluminum recycling and specification aluminum alloy production;
- in June 2015, we acquired the outstanding ownership shares of Flamstead Holdings Limited, an extruder of vinyl lineal products and manufacturer of other plastic products incorporated and registered in England and Wales. Following a pre-sale reorganization and purchase, Flamstead Holdings Limited owned 100% of the ownership shares of the following subsidiaries: HL Plastics Limited, Vintage Windows Limited, Wegoma Machinery Sales Limited (renamed in 2016 as Avantek Machinery Company), and Linar Limited (collectively referred to as "HLP"), each registered in England and Wales. This acquisition expanded our vinyl extrusion product offerings and expanded our international presence in the global fenestration business;
- in November 2015, we completed the merger of QWMS, Inc., a Delaware corporation which was a newly-formed and wholly-owned Quanex subsidiary, and WII Holding, Inc. (WII), a Delaware corporation. Upon satisfaction or waiver of

conditions set forth in the merger agreement, QWMS, Inc. merged with and into WII, and WII became our wholly-owned subsidiary, and, as a result, we acquired all the subsidiaries of WII (referred to collectively as Woodcraft). Woodcraft is a manufacturer of cabinet doors and other components for OEMs in the kitchen and bathroom cabinet industry, operating various plants in the United States and Mexico;

- in October 2016, we committed to a restructuring plan that included the closure of two vinyl extrusion plants in the United States and our kitchen and bathroom cabinet door plant in Guadalajara, Mexico; and
- in September 2017, we closed a kitchen and bathroom cabinet door plant in Lansing, Kansas, and, in October 2017, sold a wood-flooring business in Shawano, Wisconsin.

As of October 31, 2018, we operated 34 manufacturing facilities located in 17 states in the United States, two facilities in the United Kingdom, and one in Germany. These facilities feature efficient plant design and flexible manufacturing processes, enabling us to produce a wide variety of custom engineered products and components primarily focused on the window and door segment of the residential building products markets. We are able to maintain minimal levels of finished goods inventories at most locations because we typically manufacture products upon order to customer specifications. We believe the primary drivers of our operating results are residential remodeling and replacement activity and new home construction in the markets we serve.

Our Industry

Our business is largely North American based and dependent upon the spending and growth activity levels of our customers which include national and regional residential window, door and cabinet manufacturers. Our international presence includes vinyl extruded lineals for house systems to smaller customers primarily in the United Kingdom, as well as our insulating glass business in the United Kingdom and Germany.

We use data related to housing starts and window shipments in the United States, as published by or derived from third-party sources, to evaluate the fenestration market in these countries. We also use data related to cabinet demand in the United States to evaluate the residential cabinet market.

The following table presents calendar-year annual housing starts information as of October 2018, as published by the United States Census Bureau based on data collected from the National Association of Home Builders (NAHB), (units in thousands):

Period	Single-family Units		Multi-family Units		Manufactured Units		Total Units
	Units	% Change	Units	% Change	Units	% Change	
Annual Data							
2012	537	N/A	247	N/A	55	N/A	839
2013	620	15%	308	25%	60	9%	988
2014	647	4%	355	15%	64	7%	1,066
2015	713	10%	394	11%	71	11%	1,178
2016	785	10%	393	—%	81	14%	1,259
2017	852	9%	356	(9)%	93	15%	1,301
Annual Data - Forecast							
2018	885	4%	383	8%	105	13%	1,373
2019	927	5%	366	(4)%	115	10%	1,408
2020	979	6%	364	(1)%	125	9%	1,468

The following table presents calendar-year annual window shipments information as of November 2018, derived from reports published by Ducker Worldwide LLC, a consulting and research firm, (units in thousands):

Period	New Construction						Remodeling & Replacement					
	Wood	Aluminum	Vinyl	Fiberglass	Other	Total	Wood	Aluminum	Vinyl	Fiberglass	Other	Total
Annual Data												
2012	2,736	2,516	8,625	592	237	14,706	4,566	696	18,902	657	594	25,415
2013	2,989	3,077	10,585	668	264	17,583	4,739	658	19,588	685	658	26,328
2014	3,108	3,471	11,651	728	291	19,249	4,697	718	19,972	698	677	26,762
2015	2,911	3,470	12,925	793	358	20,457	4,324	562	20,742	766	740	27,134
2016	3,028	3,432	13,690	909	355	21,414	4,225	573	21,302	781	759	27,640
2017	3,109	3,525	14,648	984	391	22,657	4,122	573	21,719	810	955	28,179
Annual Data - Forecast												
2018	3,199	3,430	15,551	1,112	402	23,694	4,163	558	22,268	858	1,007	28,854
2019	3,258	3,423	16,155	1,198	416	24,450	4,228	545	22,966	914	1,067	29,720
2020	3,320	3,541	16,765	1,240	430	25,296	4,294	531	23,686	972	1,130	30,613

According to Catalina Research, a consulting and research firm, total United States residential cabinet demand is expected to increase annually through 2020. Projections as of September 2018 include growth rates for the stock, semi-custom and custom cabinet markets, which are presented in the table below:

Cabinet Market Annual Growth Rates				
Period	Stock	Semi-Custom ⁽¹⁾	Custom	Overall
Annual Data				
2012	(4.9)%	10.0%	5.3%	1.7%
2013	28.9%	5.7%	6.3%	17.0%
2014	16.6%	(15.6)%	(10.0)%	2.3%
2015	16.7%	10.1%	21.6%	15.4%
2016	5.3%	1.0%	8.1%	4.4%
2017	7.3%	5.7%	(0.3)%	6.0%
Annual Data - Forecast				
2018	6.0%	2.7%	3.9%	4.9%
2019	5.7%	2.7%	4.3%	4.8%
2020	5.4%	3.0%	4.7%	4.7%

⁽¹⁾We operate primarily in the semi-custom cabinet market.

We have noted the following trends which we believe affect our industry:

- the number of housing starts and window shipments in the United States has increased in recent years following a dramatic decline from 2007 through 2011. The NAHB expects this trend to continue for the next several years, which should result in higher demand for our fenestration and kitchen and bathroom cabinet door products;
- the recent growth in the housing market over the past several years has been predominately in new construction which has outpaced the growth in the residential remodeling and replacement sector;
- the recovery of the housing market has slowed due primarily to the declining growth of multi-family units;
- programs in the United States such as Energy Star have improved customer awareness of the technological advances in window and door energy-efficiency, but the government has been reluctant to enforce stricter energy standards;
- foreign currency rates in the United Kingdom and other European nations have changed significantly relative to the United States Dollar due in part to Brexit in the United Kingdom, as well as other international unrest or uncertainties;
- commodity prices have fluctuated in recent years, and to the extent we cannot pass this cost to our customers, this impacts the cost of critical materials used in our manufacturing processes such as resin, which affects margins related to our vinyl extrusion products; oil products such as butyl, which affects our insulating glass products; and aluminum, wood and silicone products used by our other businesses; and

- higher energy efficiency standards in Europe should favorably impact sales of our insulating glass spacer products in the short- to mid-term.

Strategy

Our vision is to be the preferred supplier to our customers in each market we serve. Our strategy to achieve this vision includes the following:

- focus on organic growth with our current customer base and expand our market share with national and regional customers by providing: (1) a quality product; (2) a high level of customer service; (3) product choices at different price points; and (4) new products or enhancements to existing product offerings. These enhancements may include higher thermal efficiency, enhanced functionality, improved weatherability, better appearance and best-in-class quality for our fenestration and cabinet door products;
- realize improved profitability in our manufacturing processes through: (1) ongoing preventive maintenance programs; (2) better utilization of our capacity by focusing on operational efficiencies and reducing scrap; (3) marketing our value added products; and (4) focusing on employee safety;
- offer logistic solutions that provide our customers with just-in-time service which can reduce their processing costs;
- pursue targeted business acquisitions that allow us to expand our existing footprint, enhance our existing product offerings, acquire complementary technology, enhance our leadership position within the markets we serve, and expand into adjacent markets or service lines; and
- exit unprofitable service lines or customer relationships.

Our Strengths

We believe our strengths include design expertise, new technology development capability, high quality manufacturing, just-in-time delivery systems, customer service, the ability to generate unique patented products and participation in industry advocacy.

Raw Materials and Supplies

We purchase a diverse range of raw materials, which include PVC resin, epoxy resin, butyl, titanium dioxide (TiO₂) desiccant powder, silicone and EPDM rubber compounds, coated and uncoated aluminum sheet and wood (both hardwood and softwood). These raw materials are generally available from several suppliers at market prices. We may enter into sole sourcing arrangements with our suppliers from time to time if we believe we can realize beneficial savings, but only after we have determined that the vendor can reliably supply our raw material requirements. These sole sourcing arrangements generally have termination clauses to protect us if a sole sourced vendor could not provide raw materials timely and on economically feasible terms. We believe there are other qualified suppliers from which we could purchase raw materials and supplies.

Competition

Our products are sold under highly competitive conditions. We compete with a number of companies, some of which have greater financial resources than us. We believe the primary competitive factors in the markets we serve include price, product quality, delivery and the ability to manufacture to customer specifications. The volume of engineered building products that we manufacture represents a small percentage of annual domestic consumption. Similarly, our subsidiaries in the United Kingdom compete against some larger vinyl producers and smaller window manufacturers. For our kitchen and bathroom cabinet door business, we believe we are the largest supplier to OEMs in the United States, but we compete with other national and regional businesses, including OEMs who are vertically integrated.

We compete against a range of small and mid-size metal, vinyl and wood products suppliers, wood molding companies, and the in-house operations of customers who have vertically integrated fenestration operations. We also compete against insulating glass (IG) spacer manufacturing firms. IG systems are used in numerous end markets including residential housing, commercial construction, appliances and transportation vehicles, but we primarily serve the residential housing market. Competition is largely based on regional presence, custom engineering, product development, quality, service and price. Primary competitors include, but are not limited to, Veka, Deceuninck, Energi, Vision Extrusions, GED Integrated Solutions, Technoform, Swiss Spacer, Thermix, RiteScreen, Allmetal, and Endura. Competitors in the vinyl extrusion business in the United Kingdom include Epwin, Veka, Synseal, Eurocell and others. Primary competitors in the cabinet door business in the United States include Conestoga, Decore-active Specialties, Northern Contours and others.

Sales, Marketing, and Distribution

We sell our products to customers in various countries. Therefore, we have sales representatives whose territories essentially cover the United States, Canada, Europe, and to a lesser extent, the Middle East, Latin and South America, Australia and Asia. Our sales force is tasked with selling and marketing our complete range of components, products and systems to national and regional OEMs through a direct sales force in North America and Europe, supplemented with the limited use of distributors and independent sales agents.

Customers

Certain of our businesses or product lines are largely dependent on a relatively few large customers. See Note 1, "Nature of Operations, Basis of Presentation and Significant Accounting Policies - Concentration of Credit Risk and Allowance for Doubtful Accounts," of the accompanying financial statements in this Annual Report on Form 10-K for related disclosure.

Sales Backlog

Given the short lead times involved in our business, we have a relatively low backlog, approximately \$20 million as of October 31, 2018. The criteria for revenue recognition has not been met with regard to sales backlog, and therefore, we have not recorded revenue or deferred revenue pursuant to these sales orders. If these sales orders result in a sale, we will record revenue during fiscal 2019 in accordance with our revenue recognition accounting policy.

Seasonal Nature of Business

Our business is impacted by seasonality. We have historically experienced lower sales for our products during the first half of our fiscal year as winter weather reduces homebuilding and home improvement activity. Our operating income tends to decline during this period of lower sales because a higher percentage of our operating expenses are fixed overhead. We typically experience more favorable results in the third and fourth quarters of the fiscal year. Our exposure to seasonality was somewhat tempered with the entry into the kitchen and bathroom cabinet door industry, which is focused "inside the house" and less susceptible to inclement weather. Expenses for labor and other costs are generally semi-variable throughout the year.

Working Capital

We fund operations through a combination of available cash and cash equivalents, cash flow generated from our operations, and borrowings from our revolving credit facility. We extend credit to our domestic customers in the ordinary course of business generally for a term of 30 days, while the terms for our international customers vary from cash advances to 90 days. Inventories of raw materials are carried in quantities deemed necessary to ensure a smooth production process, some of which are governed by consignment agreements with suppliers. We strive to maintain minimal finished goods inventories, while ensuring an adequate supply on hand to service customer needs.

Service Marks, Trademarks, Trade Names, and Patents

Our federally registered trademarks or service marks include QUANEX, QUANEX and design, "Q" design, TRUSEAL TECHNOLOGIES, DURASEAL, DURALITE, SOLARGAIN EDGE TAPE, ENVIROSEALED WINDOWS, EDGETHERM, COLONIAL CRAFT, EDGETECH, ECOBLEND, SUPER SPACER, TSS, TRUE WARM, E & Design, QUIET EDGE, HEALTH SMART WINDOWS, ENERGY WISE WINDOWS, DESIROPE, 360 and design, INTELLICLIP, SUSTAINAVIEW, MIKRON, MIKRONWOOD, MIKRONBLEND, MIKRON BLEND and design, ENERGYCORE, FUSION INSULATED SYSTEM, AIRCELL, SUPERCOAT, SUPERCAP, STYLELOCK, STYLELOCK and design, K2 MIKRON and design, HOMESHIELD, HOMESHIELD and design, STORM SEAL, and TENON. We consider the following marks, design marks and associated trade names to be valuable in the conduct of our business: HOMESHIELD, COLONIAL CRAFT, TRUSEAL TECHNOLOGIES, EDGETECH, MIKRON, WOODCRAFT and QUANEX. Through HLP, we hold a number of registered designs, patents and trademarks registered in the United Kingdom, which include: MODLOK, LINIAR, SUPERCUT, and various other trademarks and patents which are pending approval. Generally, our business does not depend on patent protection, but patents obtained with regard to our vinyl extrusion products and processes, fabricated metal components and IG spacer products business remain a valuable competitive advantage over other building products manufacturers. We obtain patent protection for various dies and other tooling created in connection with the production of customer-specific vinyl profile designs and vinyl extrusions. Our fabricated metal components business obtains patent protection for its thresholds. Our window sealant business unit relies on patents to protect the design of several of its window spacer products. Although we hold numerous patents, the proprietary process technology that has been developed is also considered a source of competitive advantage.

Environmental and Employee Safety Matters

We are subject to extensive laws and regulations concerning worker safety, the discharge of materials into the environment and the remediation of chemical contamination. To satisfy such requirements, we must make capital and other expenditures on an on-going basis. The cost of worker safety and environmental matters has not had a material adverse effect on our operations or financial condition in the past, and we are not currently aware of any existing conditions that we believe are likely to have a material adverse effect on our operations, financial condition, or cash flows.

Safety and Environmental Policies

For many years, we have maintained compliance policies that are designed to help protect our workforce, to identify and reduce the potential for job-related accidents, and to minimize liabilities and other financial impacts related to worker safety and environmental issues. These policies include extensive employee training and education, as well as internal policies embodied in our Code of Business Conduct and Ethics. We have a Director of Environmental, Health and Safety and maintain a company-wide committee, comprising leaders from across the organization, which meets regularly to discuss safety issues and drive safety improvements. We plan to continue to focus on safety in particular as a core strategy to improve our operational efficiency and financial performance.

Remediation

Under applicable state and federal laws, we may be responsible for, among other things, all or part of the costs required to remove or remediate wastes or hazardous substances at locations we, or our predecessors, have owned or operated. From time to time, we also have been alleged to be liable for all or part of the costs incurred to clean up third-party sites where there might have been an alleged improper disposal of hazardous substances. At present, we are not involved in any such matters.

Environmental Compliance Costs

From time to time, we incur routine expenses and capital expenditures associated with compliance with existing environmental regulations, including control of air emissions and water discharges, and plant decommissioning costs. We have not incurred any material expenses or capital expenditures related to environmental matters during the past three fiscal years, and do not expect to incur a material amount of such costs in fiscal 2019. While we will continue to have future expenditures related to environmental matters, any such amounts are impossible to reasonably estimate at this time. Based upon our experience to date, we do not believe that our compliance with environmental requirements will have a material adverse effect on our operations, financial condition or cash flows.

Employees

As of October 31, 2018, we had 3,818 employees. Of these employees, 3,162 were domiciled in the United States, 573 in the United Kingdom, and 83 in Germany.

For Investors

We periodically file or furnish documents to the Securities and Exchange Commission (SEC), including our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other reports as required. These reports are also available free of charge from the Investor Relations Section of our website at <http://www.quanex.com>, as soon as reasonably practicable after we file such material or furnish it to the SEC. As permitted by the SEC rules, we post relevant information on our website. However, the information contained on our website is not incorporated by reference into this Annual Report on Form 10-K and should not be considered part of this report.

Item 1A. Risk Factors.

The following risk factors, along with other information contained elsewhere in this Annual Report on Form 10-K and our other public filings with the SEC, should be carefully considered before deciding to invest in our securities. Additional risks and uncertainties that are not currently known to us or that we may view as immaterial could impair our business if such risks were to develop into actual events. Therefore, any of these risks could have a material adverse effect on our financial condition, results of operations and cash flows. This listing of risk factors is not all-inclusive and is not necessarily presented in order of importance.

Industry Risks

Any sustained decline in residential remodeling, replacement activities, or housing starts could have a material adverse effect on our business, financial condition and results of operations.

The primary drivers of our business are residential remodeling, replacement activities and housing starts. The home building and residential construction industry is cyclical and seasonal, and product demand is based on numerous factors such as interest rates, general economic conditions, consumer confidence and other factors beyond our control. Declines in the number of housing starts and remodeling expenditures resulting from such factors could have a material adverse effect on our business, results of operations and financial condition.

If the availability of critical raw materials were to become scarce or if the price of these items were to increase significantly, we might not be able to timely produce products for our customers or maintain our profit levels.

We purchase from outside sources significant amounts of raw materials, such as butyl, titanium dioxide, vinyl resin, aluminum, steel, silicone and wood products for use in our manufacturing facilities. Because we do not have long-term contracts for the supply of many of our raw materials, their availability and price are subject to market fluctuation and may be subject to curtailment or change. Any of these factors could affect our ability to timely and cost-effectively manufacture products for our customers.

Compliance with, or liabilities under, existing or future environmental laws and regulations could significantly increase our costs of doing business.

We are subject to extensive federal, state and local laws and regulations concerning the discharge of materials into the environment and the prevention and/or remediation of chemical contamination. To satisfy such requirements, we must make capital and other expenditures on an on-going basis. Future expenditures relating to environmental matters will necessarily depend upon whether such regulations and future governmental decisions or interpretations of these regulations apply to us and our facilities. It is likely that we will be subject to increasingly stringent environmental standards, and we will incur additional expenditures to comply with such standards. Furthermore, if we fail to comply with applicable environmental regulations, we could be subject to substantial fines or penalties and to civil and criminal liability.

Our goodwill and indefinite-lived intangible assets may become impaired and could result in a charge to income.

We evaluate our goodwill and indefinite-lived intangible assets at least annually to determine whether we must test for impairment. In making this assessment, we must use judgment to make estimates of future operating results and appropriate residual values. Actual future operating results and residual values associated with our operations could differ significantly from these estimates, which may result in an impairment charge in a future period, resulting in a decrease in net income from operations in the year of the impairment, as well as a decline in our recorded net worth. We recorded a goodwill impairment charge in 2016 and could record future impairment charges. Goodwill totaled \$219.6 million at October 31, 2018. The results of goodwill impairment testing are described in the accompanying notes to the audited financial statements, Note 6, "Goodwill and Intangible Assets" included elsewhere in this Annual Report on Form 10-K.

We may not be able to protect our intellectual property.

We rely on a combination of copyright, patent, trade secrets, confidentiality procedures and contractual commitments to protect our proprietary information. However, these measures can only provide limited protection and unauthorized third parties may try to copy or reverse engineer portions of our products or may otherwise obtain and use our intellectual property. If we cannot protect our proprietary information against unauthorized use, we may not be able to retain a perceived competitive advantage and we may lose sales to the infringing sellers, which may have a material adverse effect on our financial condition, results of operations and cash flows.

We are subject to various existing and contemplated laws, regulations and government initiatives that may materially impact the demand for our products, our profitability or our costs of doing business.

Our business may be materially impacted by various governmental laws, regulations and initiatives that may artificially create, deflate, accelerate, or decelerate consumer demand for our products. For example, when the government issues tax credits designed to encourage increased homebuilding or energy-efficient window purchases, the credits may create a spike in demand that would not otherwise have occurred and our production capabilities may not be able to keep pace, which could materially impact our profitability. Likewise, when such laws, regulations or initiatives expire, our business may experience a material loss in sales volume or an increase in production costs as a result of the decline in consumer demand.

Our operations outside the United States require us to comply with a number of United States and international anti-corruption regulations, violations of which could have a material adverse effect on our consolidated results of operations and consolidated financial condition.

Our international operations require us to comply with a number of United States and international regulations, including the Foreign Corrupt Practices Act (FCPA) and the United Kingdom Bribery Act 2010. While we have implemented appropriate training and compliance programs to prevent violations of these anti-bribery regulations, we cannot ensure that our policies, procedures and programs will always protect us from reckless or criminal acts committed by our employees or agents. Allegations of violations of applicable anti-corruption laws, may result in internal, independent, or government investigations, and violations of anti-corruption laws may result in severe criminal or civil sanctions or other liabilities which could have a material adverse effect on our business, consolidated results of operations and financial condition.

Due to the fact that we have operations located within the United Kingdom (UK), our business and financial results may be negatively impacted as a result of the UK's planned exit from the European Union (EU), resulting primarily from (a) continued depression in the value of the British Pound Sterling as compared to the United States Dollar; and (b) potential price increases for supplies purchased by our UK businesses from companies located in the EU or elsewhere. These risks would be heightened in the event that the UK and the EU are unable to reach a mutually satisfactory exit agreement before the current deadline of March 29, 2019.

Following the UK's vote to leave the EU in 2016 (commonly referred to as Brexit), the value of the British Pound Sterling incurred significant fluctuations. Additionally, further actions related to Brexit may occur in the future. If the value of the British Pound Sterling continues to incur similar fluctuations, unfavorable exchange rate changes may negatively affect the value of our operations and businesses located in the UK, as translated to our reporting currency, the United States Dollar, in accordance with US GAAP, which may impact the revenue and earnings we report. For more information with respect to Exchange Rate risk applicable to us, please see Part 2 Item 7A. "Market Risk Disclosures" elsewhere in this Annual Report on Form 10-K. Continued fluctuations in the British Pound Sterling may also result in the imposition of price adjustments by EU-based suppliers to our UK businesses, as those suppliers seek to compensate for the changes in value of the British Pound Sterling as compared to the European Euro. In addition, a so-called "Hard Brexit," where no formal agreement is made between the EU and UK prior to the UK's exit, could result in a continued deflation of the British Pound Sterling; additional increases in prices, fees, taxes or tariffs applicable to goods that are bought and sold between the UK and Europe, and a negative impact on end markets in the UK as a result of declines in consumer sentiment or decreased immigration rates into the UK. Any of these results could have a material adverse effect on the business, revenues and financial condition of our UK and European operations.

Failure to achieve and maintain effective internal controls could have a material adverse effect on our business and on our stock price.

Effective internal controls are necessary for us to effectively monitor our business, prevent fraud or theft, remain in compliance with our credit facility covenants, and provide reliable financial reports, both to the public and to our lenders. If we fail to maintain the adequacy of our internal controls, both in accordance with current standards and as standards are modified over time, we could trigger an event of default under our credit facilities or lose the confidence of the investing community, both of which could result in a material adverse effect on our stock price, limit our ability to borrow funds, or result in the application of unfavorable commercial terms to borrowings then outstanding.

The impact of foreign trade relations and associated tariffs could adversely impact our business.

We currently source a number of raw materials from international suppliers. Import tariffs, taxes, customs duties and/or other trading regulations imposed by the United States government on foreign countries, or by foreign countries on the United States, could significantly increase the prices we pay for certain raw materials, such as aluminum and wood, that are critical to our ability to manufacture our products. In addition, we may be unable to find a domestic supplier to provide the necessary raw materials on an economical basis in the amounts we require. If the cost of our raw materials increases, or if we are unable to procure the necessary raw materials required to manufacture our products, then we could experience a negative impact on our operating results, profitability, customer relationships and future cash flows.

Company Risks

Our business will suffer if we are unable to adequately address potential supplier or customer pricing pressures, both with respect to OEMs that have significant pricing leverage over suppliers, and to large suppliers who have significant pricing leverage over our customers.

Our primary customers are OEMs, who have substantial leverage in setting purchasing and payment terms. In addition, many of our suppliers are large international conglomerates with numerous customers that are much larger than us, which lessens our leverage in pricing and supply negotiations. We attempt to manage this pricing pressure and to preserve our business relationships with suppliers and OEMs by negotiating reasonable price concessions when needed, and by reducing our production costs through various measures, which may include managing our purchase process to control the cost of our raw materials and components, maintaining multiple supply sources where possible, and implementing cost-effective process improvements. However, our efforts in this regard may not be successful and our operating margins could be negatively impacted.

Our revenues could decline or we may lose business if our customers vertically integrate their operations, diversify their supplier base, or transfer manufacturing capacity to other regions.

Certain of our businesses or product lines are largely dependent on a relatively few large customers. For example, the revenues of our United States vinyl business declined significantly in 2017 as a result of shedding less profitable business with one such OEM. Although we believe we have an extensive customer base, if we were to lose one of these large customers or if such customer were to materially reduce its purchases as a result of vertical integration, supplier diversification, or a shift in regional focus, our revenue, general financial condition and results of operations could be adversely affected.

Our credit facility contains certain operational restrictions, reporting requirements, and financial covenants that limit the aggregate availability of funds.

Our revolving credit facility contains certain financial covenants and other operating and reporting requirements that could present risk to our operating results or limit our ability to access capital for use in the business. For a full discussion of the various covenants and operating requirements imposed by our revolving credit facility and information related to the potential limitations on our ability to access capital, see Item 7, *Management's Discussion and Analysis of Financial Conditions and Results of Operations-Liquidity and Capital Resources*, in this Annual Report on Form 10-K.

We may not be able to successfully manage or integrate acquisitions, and if we are unable to do so, then our profitability could be adversely affected.

We cannot provide assurance that we will successfully manage or integrate acquisition targets once we have purchased them. If we acquire a business for which we do not fully understand or appreciate the specific business risks, if we overvalue or fail to conduct effective due diligence on an acquisition, or if we fail to effectively and efficiently integrate a business that we acquire, then there could be a material adverse effect on our ability to achieve the projected growth and cash flow goals associated with the new business, which could result in an overall material adverse effect on our long-term profitability or revenue generation.

If our information technology systems fail, or if we experience an interruption in our operations due to an aging information system infrastructure, then our results of operations and financial condition could be materially adversely affected.

The failure of our information technology systems, our inability to successfully maintain, enhance and/or replace our information technology systems when necessary, or a significant compromise of the integrity or security of the data that is generated from our information technology systems, could adversely affect our results of operations and could disrupt business and prevent or severely limit our ability to respond to data requests from our customers, suppliers, auditors, shareholders, employees or government authorities.

We may not have the right personnel in place to achieve our operating goals, and the rural location of some of our operations may make it difficult to locate or hire highly skilled employees.

We operate in some rural areas and small towns where the competition for labor can be fierce, and where the pool of qualified employees may be very small. If we are unable to obtain skilled workers and adequately trained professionals to conduct our business, we may not be able to manage our business to the necessary high standards. In addition, we may be forced to pay higher wages or offer other benefits that might impact our cost of labor and thereby negatively impact our profitability.

Equipment failures or catastrophic loss at any of our manufacturing facilities could prevent us from manufacturing our products.

An interruption in production capabilities at any of our facilities due to equipment failure, catastrophic loss, or other reasons could result in our inability to manufacture products, which could severely affect delivery times, return or cancellation rates, and future sales, any of which could result in lower sales and earnings or the loss of customers. Although we have a disaster recovery plan in place, we currently have one plant which is the sole source for our insulating glass spacer business in the United States. If that plant were to experience a catastrophic loss and our disaster recovery plan were to fail, it could have a material adverse effect on our results of operations or financial condition.

Product liability claims and product replacements could harm our reputation, revenue generation and financial condition, or could result in costs related to litigation, warranty claims, or customer accommodations.

We have, on occasion, found flaws and deficiencies in the manufacturing, design, testing or installation of our products, which may result from a product defect, a defect in a component part provided by our suppliers, or as a result of the product being installed incorrectly by our customer or an end user. The failure of products before or after installation could result in litigation or claims by our customers or other users of the products, or in the expenditure of costs related to warranty coverage, claim settlement, litigation, or customer accommodation. In addition, we are currently party to certain legal claims related to a commercial sealant product, and there is no assurance that we will prevail on those claims. We may be required to expend legal fees, expert costs, and other costs associated with defending the claims and/or lawsuits. We may elect to enter into legal settlements or be forced to pay any judgments that result from an adverse court decision. Any such settlements, judgments, fees and/or costs could negatively impact our profitability, results of operations, cash flows and financial condition.

Our insurance coverage may be inapplicable or inadequate to cover certain liabilities, and our insurance policies may exclude coverage for certain products.

While we maintain a robust insurance program that is reasonably designed to cover our known and unknown risks, there is no assurance that our insurance carriers will voluntarily agree to cover every potential liability, or that our insurance policies include limits large enough to cover all liabilities associated with our business or products. In addition, coverage under our insurance policies may be unavailable in the future for certain products. For example, during a prior renewal of our insurance program, our insurance carriers excluded future coverage of a product line we no longer manufacture or sell. If our insurers refuse to cover claims, in whole or in part, or if we exhaust our available insurance coverage at some point in the future, then we might be forced to expend legal fees and settlement or judgment costs, which could negatively impact our profitability, results of operations, cash flows and financial condition.

Risks Associated with Investment in Quanex Securities

Our corporate governance documents and the provisions of Delaware law may delay or preclude a business acquisition or divestiture that stockholders may consider to be favorable, which might result in a decrease in the value of our common shares.

Our certificate of incorporation and bylaws and Delaware law contain provisions that could make it more difficult for a third party to acquire us without the consent of our Board of Directors. These provisions include restrictions on the ability of our stockholders to remove directors and supermajority voting requirements for stockholders to amend our organizational documents and limitations on action by our stockholders by written consent. In addition, our Board of Directors has the right to issue preferred stock without stockholder approval, which could be used to dilute the stock ownership of a potential hostile acquirer. Although we believe these provisions protect our stockholders from coercive or otherwise unfair takeover tactics, and thereby provide for an opportunity for us to receive a higher bid by requiring potential acquirers to negotiate with our Board of Directors, these provisions apply even if the offer may be considered beneficial by some stockholders.

We have the ability to issue additional equity securities, which would lead to dilution of our issued and outstanding common stock.

We are authorized to issue, without stockholder approval, 1,000,000 shares of preferred stock, no par value, in one or more series, which may give other stockholders dividend, conversion, voting, and liquidation rights, among other rights, which may be superior to the rights of holders of our common stock. The issuance of additional equity securities or securities convertible into equity securities would result in dilution of existing stockholders' equity interests. Our Board of Directors has no present intention to issue any such preferred shares, but has the right to do so in the future. In addition, we were authorized, by prior stockholder approval, to issue up to 125,000,000 shares of our common stock, \$0.01 par value per share, of which 37,433,817 were issued at October 31, 2018. These authorized shares can be issued, without stockholder approval, as securities convertible into either common stock or preferred stock.

Item 1B. *Unresolved Staff Comments.*

None.

Item 2. Properties.

The following table lists our principal properties by location, general character and use as of October 31, 2018. These properties are owned by us, unless indicated otherwise.

Location	Character & Use of Property
Executive Offices	
Houston, Texas (Lease expires 2023)	Executive corporate office
NA Engineered Components Segment	
Rice Lake, Wisconsin	Fenestration products
Chatsworth, Illinois	Fenestration products
Richmond, Indiana	Fenestration products
Dubuque, Iowa (Lease expires 2018)	Fenestration products
Akron, Ohio (Lease expires 2026)	Flexible spacer, and adhesive research and sales
Cambridge, Ohio, (Lease expires 2032)	Flexible spacer and solar adhesives
Richmond, Kentucky	Vinyl and composite extrusions
Winnebago, Illinois	Vinyl extrusions
Kent, Washington (Lease expires 2020)	Vinyl and composite extrusions
Durham, North Carolina (Lease expires 2021)	Division executive offices
Sacramento, California (Lease expires 2021)	Screens for vinyl windows and doors
Dallas, Texas (Lease expires 2022)	Screens for vinyl windows and doors
Des Moines, Iowa (Lease expires 2019)	Screens for vinyl windows and doors
Phoenix, Arizona (Lease expires 2023)	Screens for vinyl windows and doors
Denver, Colorado (Lease expires 2020)	Screens for vinyl windows and doors
Paris, Illinois (Lease expires 2019)	Screens for vinyl windows and doors
Parkersburg, West Virginia (Lease expires 2020)	Screens for vinyl windows and doors
Fontana, California (Lease expires 2019)	Screens for vinyl windows and doors
Perrysburg, Ohio (Lease expires 2019)	Screens for vinyl windows and doors
Chehalis, Washington (Lease expires 2019)	Screens for vinyl windows and doors
Tumwater, Washington (Lease expires 2024)	Division executive offices
EU Engineered Components Segment	
Denby, United Kingdom (Leases expire 2027 & 2037)	Vinyl and composite extrusions
Alfreton, United Kingdom (Lease expires 2022)	Vinyl and composite extrusions
Coventry, United Kingdom	Flexible spacer
Heinsberg, Germany (Lease expires 2025)	Flexible spacer
NA Cabinet Components Segment	
Bowling Green, Kentucky	Hardwood components for kitchen and bath
Conover, North Carolina (Lease expires 2021)	Hardwood doors for kitchen and bath
Foreston, Minnesota	Hardwood components for kitchen and bath
Greenville, Pennsylvania	Hardwood components for kitchen and bath
Middlefield, Ohio (Leases expire 2019)	Hardwood components for kitchen and bath
Orwell, Ohio	Hardwood doors for kitchen and bath
St. Cloud, Minnesota	Hardwood doors & components for kitchen and bath
Moorefield, West Virginia (Lease expires 2026)	Engineered wood products for kitchen and bath
Wahpeton, North Dakota	Engineered wood products for kitchen and bath
Molalla, Oregon	Hardwood & engineered products for kitchen & bath
Luck, Wisconsin	Wood products
Mounds View, Minnesota (Lease expires 2021)	Wood products

We maintain a lease in Yakima, Washington, which will expire in 2021, related to a location which was closed as a result of restructuring activities. See Note 1, "Nature of Operations, Basis of Presentation and Significant Accounting Policies - Restructuring" to the accompanying consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

We believe our operating properties are in good condition and well maintained, and are generally suitable and adequate to carry on our business. In fiscal 2018, our facilities operated at approximately 59% of capacity.

Item 3. Legal Proceedings.

From time to time, we, along with our subsidiaries, are involved in various litigation matters arising in the ordinary course of our business, including those arising from or related to contractual matters, commercial disputes, intellectual property, personal injury, environmental matters, product performance or warranties, product liability, insurance coverage and personnel and employment disputes.

We regularly review with legal counsel the status of all ongoing proceedings, and we maintain insurance against these risks to the extent deemed prudent by our management and to the extent such insurance is available. However, there is no assurance that we will prevail in these matters or that our insurers will accept full coverage of these matters, and we could, in the future, incur judgments, enter into settlements of claims, or revise our expectations regarding the outcome or insurability of matters we face, which could materially impact our results of operations.

We have been and are currently party to multiple claims, some of which are in litigation, relating to alleged defects in a commercial sealant product that was manufactured and sold during the 2000's. Several claims were resolved during fiscal 2017 and 2018, and we continue to defend the remaining claims. While we believe that our product was not defective and that we would prevail in these commercial sealant product claims if taken to trial, the timing, ultimate resolution and potential impact of these claims is not currently determinable. Nevertheless, after taking into account all currently available information, including our defenses, the advice of our counsel, and the extent and currently-expected availability of our existing insurance coverage, we believe that the eventual outcome of these commercial sealant claims will not have a material adverse effect on our overall financial condition, results of operations or cash flows, and we have not recorded any accrual with regard to these claims.

We reserve for litigation loss contingencies that are both probable and reasonably estimable. We do not expect that losses resulting from any current legal proceedings will have a material adverse effect on our consolidated financial statements if or when such losses are incurred.

For discussion of environmental issues, see Item 1, "*Business - Environmental and Employee Safety Matters*" discussed elsewhere in this Annual Report on Form 10-K.

Item 4. Mine Safety Disclosures.

Not Applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Our common stock has been listed on the New York Stock Exchange under the ticker symbol NX since April 24, 2008. Electronic copies of our public filings are available on the Securities and Exchange Commission's website (www.sec.gov).

Equity Compensation Plan Information

The following table summarizes certain information regarding equity compensation to our employees, officers and directors under equity compensation plans as of October 31, 2018:

Plan Category	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights ⁽¹⁾	(b) Weighted-average exercise price of outstanding options, warrants and rights ⁽²⁾	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders	2,866,758	\$ 18.47	1,438,160

⁽¹⁾ Column (a) includes securities that may be issued upon future vesting of performance share awards that have been previously granted to key employees and officers. The number of securities reflected in this column includes the maximum number of shares that would be issued pursuant to these performance share awards assuming the performance measures are achieved. The performance measures may not be achieved.

⁽²⁾ The weighted-average exercise price in column (b) does not include the impacts of the performance share awards or any securities that may be issued thereunder. For additional details, see Note 15, "Stock-Based Compensation" included elsewhere within this Annual Report on Form 10-K.

Issuer Purchases of Equity Securities

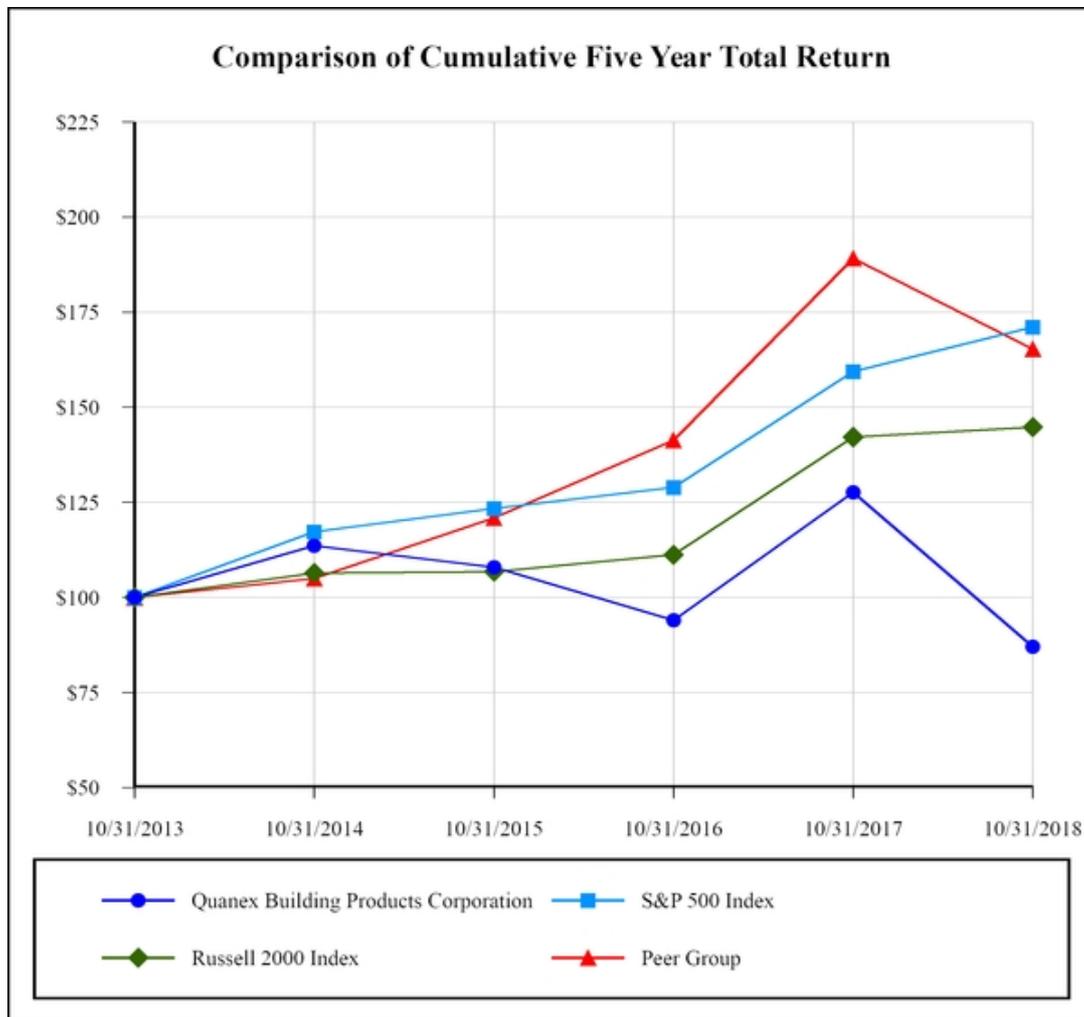
Set forth below is a table summarizing the program and the repurchase of shares during the quarter ended October 31, 2018.

Period	(a) Total Number of Shares Purchased⁽¹⁾	(b) Average Price Paid per Share⁽¹⁾	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs⁽¹⁾	(d) Maximum US Dollars Remaining that May Yet Be Used to Purchase Shares Under the Plans or Programs⁽¹⁾
August 1, 2018 through August 31, 2018	—	—	—	\$60,000,000
September 1, 2018 through September 30, 2018	—	—	—	\$60,000,000
October 1, 2018 through October 31, 2018	1,900,000	16.86	1,900,000	\$27,966,000
Total	1,900,000	\$16.86	1,900,000	

⁽¹⁾ On August 30, 2018, our Board of Directors approved a stock repurchase program that authorized the repurchase of up to \$60.0 million worth of shares of our common stock. Repurchases under the new program will be made in open market transactions or privately negotiated transactions, subject to market conditions, applicable legal requirements and other relevant factors. The program does not have an expiration date or a limit on the number of shares that may be purchased. During the year ended October 31, 2018, we purchased 1,900,000 shares at a cost of \$32.0 million under this program.

Stock Performance Graph

The following chart represents a comparison of the five year total return of our common stock to the Standard & Poor’s 500 Index (S&P 500), the Russell 2000 Index, and a peer group index selected by us, which includes companies offering similar products and services to ours. Following our execution of various strategic initiatives, we made a change to our peer group index for the year ended October 31, 2018 in order to ensure that it continues to reflect an appropriate comparison to our business. To that end, we added Insteel Industries Inc. to the peer group. As such, the companies in our peer group for the year ended October 31, 2018 are AAON Inc., American Woodmark Corp, Apogee Enterprises Inc., Continental Building Products Inc., Gibraltar Industries Inc., Griffon Corporation, LCI Industries, Insteel Industries Inc., Louisiana-Pacific Corp., Masonite International, NCI Building Systems Inc., Patrick Industries Inc., PGT Innovations, Inc., Ply Gem Holdings Inc., Simpson Manufacturing Company Inc., Trex Company Inc., and Universal Forest Products Inc.



INDEXED RETURNS

Company Name / Index	For the Years Ended					
	10/31/2013	10/31/2014	10/31/2015	10/31/2016	10/31/2017	10/31/2018
Quanex Building Products Corporation	\$ 100.00	\$ 113.55	\$ 107.91	\$ 94.02	\$ 127.58	\$ 87.06
S&P 500 Index	\$ 100.00	\$ 117.27	\$ 123.37	\$ 128.93	\$ 159.40	\$ 171.11
Russell 2000 Index	\$ 100.00	\$ 106.43	\$ 106.79	\$ 111.18	\$ 142.14	\$ 144.78
New Peer Group	\$ 100.00	\$ 104.99	\$ 120.92	\$ 141.34	\$ 189.14	\$ 165.32

Item 6. Selected Financial Data.

The following table presents selected historical consolidated financial and operating data for the periods shown. The selected consolidated financial data as of October 31, 2018, 2017, 2016, 2015 and 2014 and for each of the fiscal years then ended was derived from our audited consolidated financial statements for those dates and periods, adjusted for discontinued operations, as indicated. The following information should be read in conjunction with “*Management’s Discussion and Analysis of Financial Condition and Results of Operations*” and our audited financial statements and related notes included elsewhere in this Annual Report on Form 10-K.

	Fiscal Years Ended October 31,				
	2018 ⁽¹⁾⁽²⁾⁽³⁾	2017 ⁽¹⁾	2016 ⁽¹⁾⁽⁴⁾⁽⁵⁾⁽⁶⁾	2015 ⁽⁷⁾	2014 ⁽⁸⁾⁽⁹⁾
(Dollars in thousands, except per share data)					
Consolidated Statements of Income					
Net sales	\$ 889,785	\$ 866,555	\$ 928,184	\$ 645,528	\$ 595,384
<i>Cost and expenses:</i>					
Cost of sales (excluding depreciation and amortization)	696,567	672,162	710,644	499,097	464,584
Selling, general and administrative	103,535	97,981	114,910	86,536	82,150
Restructuring charges	1,486	4,550	529	—	—
Depreciation and amortization	51,822	57,495	53,146	35,220	33,869
Asset impairment charges	—	—	12,602	—	505
Operating income (loss)	36,375	34,367	36,353	24,675	14,276
<i>Non-operating income (expense):</i>					
Interest expense	(11,100)	(9,595)	(36,498)	(991)	(562)
Other, net	178	730	(5,479)	(531)	92
Income (loss) from continuing operations before income taxes	25,453	25,502	(5,624)	23,153	13,806
Income tax (expense) benefit	875	(6,819)	3,765	(7,539)	(5,468)
Income (loss) from continuing operations	26,328	18,683	(1,859)	15,614	8,338
Income (loss) from discontinued operations, net of taxes	—	—	—	479	20,896
Net income (loss)	\$ 26,328	\$ 18,683	\$ (1,859)	\$ 16,093	\$ 29,234
<i>Basic earnings (loss) per common share:</i>					
Basic earnings (loss) from continuing operations	\$ 0.76	\$ 0.55	\$ (0.05)	\$ 0.46	\$ 0.22
Basic earnings (loss) from discontinued operations	—	—	—	0.01	0.57
Basic earnings (loss) per share	\$ 0.76	\$ 0.55	\$ (0.05)	\$ 0.47	\$ 0.79
<i>Diluted earnings (loss) per common share:</i>					
Diluted earnings (loss) from continuing operations	\$ 0.75	\$ 0.54	\$ (0.05)	\$ 0.46	\$ 0.22
Diluted earnings (loss) from discontinued operations	—	—	—	0.01	0.56
Diluted earnings (loss) per share	\$ 0.75	\$ 0.54	\$ (0.05)	\$ 0.47	\$ 0.78
Cash dividends declared per share	\$ 0.20	\$ 0.16	\$ 0.16	\$ 0.16	\$ 0.16
Other Financial & Operating Data					
Cash provided by operating activities	\$ 104,611	\$ 79,778	\$ 87,341	\$ 67,087	\$ 20,778
Cash (used for) provided by investing activities	(26,052)	(41,124)	(282,103)	(160,144)	74,124
Cash (used for) provided by financing activities	(65,817)	(46,636)	195,448	(4,581)	(24,459)
Acquisitions, net of cash acquired	—	8,497	245,904	131,689	5,161
Capital expenditures	\$ 26,484	\$ 34,564	\$ 37,243	\$ 29,982	\$ 33,779
Selected Consolidated Balance Sheet Data at Year End					
Cash and cash equivalents	\$ 29,003	\$ 17,455	\$ 25,526	\$ 23,125	\$ 120,384
Total assets	741,849	773,879	780,353	565,516	517,113
Long-term debt, excluding current portion	209,332	218,184	259,011	53,767	586
Total liabilities	\$ 347,697	\$ 367,032	\$ 412,522	\$ 170,221	\$ 96,193

- ⁽¹⁾ In 2018, 2017 and 2016, we incurred \$1.5 million, \$4.6 million and \$0.5 million, respectively, of restructuring costs associated with the closure of several plant facilities. See Note 1, "Nature of Operations, Basis of Presentation and Significant Accounting Policies - Restructuring," included elsewhere in this Annual Report on Form 10-K.
- ⁽²⁾ In October 2018, we refinanced our credit facility resulting in a charge of \$1.1 million of unamortized deferred financing fees. See Note 8, "Debt and Capital Lease Obligations" included elsewhere in this Annual Report on Form 10-K.
- ⁽³⁾ In 2018, we recorded a \$6.5 million net benefit related to the tax effect of implementing the Tax Cuts and Jobs Act, which was signed into law on December 22, 2017. See note 11, "Income Taxes" included elsewhere in this Annual Report on Form 10-K.
- ⁽⁴⁾ In November 2015, we acquired Woodcraft, a manufacturer of cabinet doors and other components to OEMs in the kitchen and bathroom cabinet industry. The results of operations of Woodcraft including revenue of \$223.4 million and net income of \$4.1 million have been included in our consolidated operating results since the date of acquisition, November 2, 2015.
- ⁽⁵⁾ In July 2016, we refinanced our credit facility resulting in a \$3.1 million prepayment call premium fee, a charge of \$8.1 million of unamortized deferred financing fees and a charge of \$5.5 million of unamortized original issuer's discount. See Note 8, "Debt and Capital Lease Obligations" included elsewhere in this Annual Report on Form 10-K.
- ⁽⁶⁾ In October 2016, we recorded a goodwill impairment charge of \$12.6 million associated with our United States vinyl extrusion business.
- ⁽⁷⁾ In June 2015, we acquired HLP, a vinyl profile extruder with operations located in the United Kingdom. The results of operations of HLP include revenue of \$42.3 million and net income of \$1.5 million for the period June 15, 2015 through October 31, 2015.
- ⁽⁸⁾ In April 2014, we sold Nichols Aluminum, LLC. Accordingly, the related assets and liabilities were reported as discontinued operations in the consolidated balance sheets for the applicable periods presented, and the related operating results, including the gain on the sale, are reported as discontinued operations, net of tax, in the consolidated statements of income (loss) presented, as applicable.
- ⁽⁹⁾ In fiscal 2014, we decreased our warranty reserve and reduced expense by \$2.8 million (\$1.8 million net of tax) related to claims associated with a discontinued legacy product.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following discussion and analysis contains forward-looking statements based on our current assumptions, expectations, estimates and projections about our business and the homebuilding industry, and therefore, it should be read in conjunction with our consolidated financial statements and related notes thereto, as well as "Cautionary Note Regarding Forward-Looking Statements" discussed elsewhere within this Annual Report on Form 10-K. For a listing of potential risks and uncertainties which impact our business and industry, see "Item 1A. Risk Factors." Actual results could differ from our expectations due to several factors which include, but are not limited to: market price and demand for our products, economic and competitive conditions, capital expenditures, new technology, regulatory changes and other uncertainties. Unless otherwise required by law, we undertake no obligation to publicly update any forward-looking statements, even if new information becomes available or other events occur in the future.

Our Business

We manufacture components for original equipment manufacturers in the building products industry. These components can be categorized as window and door (fenestration) components and kitchen and bath cabinet components. Examples of fenestration components include (1) energy-efficient flexible insulating glass spacers, (2) extruded vinyl profiles, (3) window and door screens, and (4) precision-formed metal and wood products. In addition, we provide certain other non-fenestration components and products, which include solar panel sealants, trim moldings, vinyl decking, fencing, water retention barriers, and conservatory roof components. We use low-cost production processes and engineering expertise to provide our customers with specialized products for their specific window, door, and cabinet applications. We believe these capabilities provide us with unique competitive advantages. We serve a primary customer base in North America and the United Kingdom, and also serve customers in international markets through our operating plants in the United Kingdom and Germany, as well as through sales and marketing efforts in other countries.

We continue to invest in organic growth initiatives and have completed several targeted business acquisitions in recent years. We intend to continue to pursue business acquisitions that allow us to expand our existing fenestration and cabinet component footprint, enhance our product offerings, provide new complementary technology, enhance our leadership position within the markets we serve, and expand into new markets or service lines. We have disposed of non-core businesses in the past, and continue to evaluate our business portfolio to ensure that we are investing in markets where we believe there is potential future growth.

We currently have three reportable business segments: (1) North American Engineered Components segment ("NA Engineered Components"), comprising four operating segments primarily focused on the fenestration market in North America manufacturing vinyl profiles, IG spacers, screens & other fenestration components; (2) European Engineered Components segment ("EU Engineered Components"), comprising our United Kingdom-based vinyl extrusion business, manufacturing vinyl profiles and conservatories, and the European insulating glass business manufacturing IG spacers; and (3) North American Cabinet Components segment ("NA Cabinet Components"), comprising the North American cabinet door and components business acquired in November 2015 and two wood-manufacturing plants. We maintain a grouping called Unallocated Corporate & Other, which includes transaction expenses, stock-based compensation, long-term incentive awards based on the performance of our common stock and other factors, certain severance and legal costs not deemed to be allocable to all segments, depreciation of corporate assets, interest expense, other, net, income taxes and inter-segment eliminations, and beginning in 2018, executive incentive compensation and medical expense fluctuations relative to planned costs as determined during the annual planning process. Other corporate general and administrative costs have been allocated to the reportable business segments, based upon a relative measure of profitability in order to more accurately reflect each reportable business segment's administrative costs. We allocate corporate expenses to businesses acquired mid-year from the date of acquisition. No change in historical corporate expense allocation has been made to reflect the plant moves noted above as the impact would not have been significant. The accounting policies of our operating segments are the same as those used to prepare our accompanying consolidated financial statements. Corporate general and administrative expenses allocated during the years ended October 31, 2018, 2017 and 2016 were \$18.7 million, \$17.0 million and \$19.1 million, respectively.

Notable Items

During 2017, we rationalized capacity and closed two United States vinyl plants and two cabinet door plants, relocating assets to improve overall operational efficiency. We have incurred \$1.5 million and \$4.6 million of expense associated with these restructuring efforts during fiscal 2018 and 2017, respectively, and have recognized \$6.2 million of accelerated depreciation and amortization associated with related assets during fiscal 2017.

On February 20, 2017, we entered into a \$16.6 million capital lease arrangement with a related party to purchase a new manufacturing facility in the United Kingdom, as further described in Note 8, "Debt and Capital Lease Obligations," to the accompanying consolidated financial statements contained elsewhere herein.

On November 2, 2015, we acquired Woodcraft, a manufacturer of cabinet doors and other components to OEMs in the kitchen and bathroom cabinet industry. We paid \$245.9 million in cash, resulting in goodwill totaling \$113.7 million. For additional details of this acquisition, see Note 2, "Acquisitions and Dispositions," to the accompanying consolidated financial statements contained elsewhere herein.

On June 15, 2015, we acquired HLP, an extruder of vinyl lineal products and manufacturer of other plastic products incorporated and registered in England and Wales, for \$131.7 million in cash, net of cash acquired, \$7.7 million of debt assumed and contingent consideration of \$10.3 million, resulting in goodwill of approximately \$61.3 million. The agreement contains an earn-out provision which is calculated as a percentage of earnings before interest, tax and depreciation and amortization for a specified period, as defined in the purchase agreement. Pursuant to this earn-out provision, the former owner selected the twelve-month period ended July 31, 2016 as the measurement period for the earn-out calculation. On November 7, 2016, we paid \$8.5 million pursuant to this earn-out agreement, as further described in Note 2, "Acquisitions and Dispositions," to the accompanying consolidated financial statements contained elsewhere herein.

Market Overview and Outlook

We believe the primary drivers of our operating results continue to be North American residential remodeling and replacement (R&R) and new home construction activity. We believe that housing starts and window shipments are indicators of activity levels in the homebuilding and window industries, and we use this data, as published by or derived from third-party sources, to evaluate the market. We have historically evaluated the market using data from the National Association of Homebuilders (NAHB) with regard to housing starts, and published reports by Ducker Worldwide, LLC (Ducker), a consulting and research firm, with regard to window shipments. These sources generally provide information about activity levels in the United States.

Housing starts and window shipments in the United States have increased in recent years. The NAHB has forecasted calendar-year housing starts (excluding manufactured units) at 1.2 million units in 2017 increasing to 1.3 million units in 2018 through 2020, reflecting increasing consumer confidence and a healthier economy. Ducker indicated that window shipments in the R&R market are expected to increase from 28.2 million units in 2017 to 28.9 million units in 2018 and 29.7 million units in 2019, and new construction window shipments are forecasted to increase at a higher pace. Derived from reports published by Ducker, the overall growth in window shipments for the trailing twelve-month period ended September 30, 2018 was 3.7%. During this period, growth in new construction increased 5.2%, while growth in R&R activity increased 2.5%. Growth in new construction continues to outpace the growth in R&R, with a greater portion of the new construction growth associated with multi-family housing.

Our HLP business is largely focused on the sale of vinyl house systems under the trade name "Liniar" to smaller window manufacturers in the United Kingdom. HLP is one of the larger providers of vinyl extruded products in the United Kingdom in terms of volume shipped. Currently, the United Kingdom is experiencing a shortage in affordable housing, with rising demand due in part to a growing immigrant population. HLP's current primary customers are smaller window fabricators, as opposed to the larger OEMs that comprise a large portion of the North American market. These manufacturers seek the quality and technology of the specific products identified by the Liniar trade name. In addition, HLP services non-fenestration markets including the manufacture of roofing for conservatories, vinyl decking and vinyl water retention barriers used for landscaping. We believe there are growth opportunities within these markets in the United Kingdom and potential synergies which may enable us to sell complementary products.

Woodcraft manufactures kitchen and bathroom cabinet doors and components, amongst other products, using a variety of woods from traditional hardwoods to engineered wood products. Currently, Woodcraft sells all of its products in the United States, so domestic housing starts and R&R activity constitute the primary drivers of this business as well. We also utilize industry publications to evaluate the wood markets and commodity trends. Although NAHB forecasts indicate expected continued growth in the United States housing market, much of this anticipated growth is in new construction for multi-family dwellings, or rental properties, which is not the primary market for Woodcraft's products. In recent years, forecasts project increased growth in single family homes. The cabinet door market is stratified as follows: stock (low-cost, low-variations), semi-custom (more customized, just-in-time manufacturing, higher price point) and custom (precise customer specifications, just-in-time manufacturing, high-end price point). Woodcraft's primary market is semi-custom.

Our business is seasonal, particularly our fenestration business, as inclement weather during the winter months tends to slow down construction, particularly as related to "outside of the house" construction. To some extent, we believe our kitchen and bathroom cabinet door business lessens the impact of seasonality on our operating results, as the cabinet business is "inside of the house" and less susceptible to weather. However, significant weather events do disrupt the construction industry. The Southern United States was impacted by Hurricane Michael in October 2018 and Hurricanes Harvey and Irma in August and September of 2017. Although our operating plants were not directly impacted, several of our customers were impacted directly, as well as indirectly, as some skilled laborers relocated to the region for construction jobs. From a longer-term perspective, the rebuilding efforts from these storms spur additional growth in construction beyond the year in which they make landfall.

We are impacted by regulation of energy standards. Although the United States government has been less aggressively pursuing higher energy efficiency standards in recent years, other countries have implemented higher energy efficiency standards which should bode well for our fenestration-related business in these markets, particularly our warm-edge spacer products.

We utilize several commodities in our business for which pricing can fluctuate, including polyvinyl resin (PVC), petroleum products, aluminum, titanium dioxide (TiO₂), silicone and wood. For the majority of our customers and critical suppliers, we have price adjusters in place which effectively share the base pass-through price changes for these commodities with our customers commensurate with the market at large. Our long-term exposure to these price fluctuations is somewhat mitigated due to the contractual component of the adjuster program. However, these adjusters are not in place with all customers, and there is a level of exposure to such volatility due to the lag associated with the timing of price updates in accordance with our customer agreements.

In July 2016, the United Kingdom voted to exit the European Union (commonly referred to as “Brexit”), which has impacted the valuation of the British Pound Sterling relative to other currencies used in our business, including our reporting currency, the United States Dollar. Although the British Pound Sterling relative to the United States Dollar appears to have stabilized during fiscal 2017, the Pound remains well below the pre-Brexit level, and some general market uncertainty remains in the United Kingdom. Although we do not know the long-term effects of this change, there has been some impact on our results of operations to date (primarily foreign currency translation).

The global economy remains uncertain due to currency devaluations, political unrest, terror threats, and even the political landscape in the United States. These and other macro-economic factors have impacted the global financial markets, which may have contributed to significant changes in foreign currencies. We continue to monitor our exposure to changes in exchange rates.

We remain optimistic about our growth prospects in the near-term and believe our restructuring efforts in fiscal 2017 will enhance our financial performance and cash flow generation in fiscal 2018 and beyond.

Comparison of the fiscal years ended October 31, 2018 and 2017

This table sets forth our consolidated results of operations for the twelve-month periods ended October 31, 2018 and 2017.

	For the Years Ended October 31,					
	2018		2017		2018 vs. 2017	
	Amounts	% of Sales	Amounts	% of Sales	\$ Change	Variance %
	(Dollars in millions)					
Net sales	\$ 889.8	100%	\$ 866.6	100%	\$ 23.2	3%
Cost of sales (excluding depreciation and amortization)	696.6	78%	672.2	78%	24.4	(4)%
Selling, general and administrative	103.5	12%	98.0	11%	5.5	(6)%
Restructuring charges	1.5	—%	4.5	1%	(3.0)	67%
Depreciation and amortization	51.8	6%	57.5	7%	(5.7)	10%
Operating income	36.4	4%	34.4	4%	2.0	6%
Interest expense	(11.1)	(1)%	(9.6)	(1)%	(1.5)	(16)%
Other, net	0.2	—%	0.7	—%	(0.5)	(71)%
Income tax benefit (expense)	0.9	—%	(6.8)	(1)%	7.7	113%
Net income	\$ 26.4	3%	\$ 18.7	2%	\$ 7.7	41%

Our year-over-year results by reportable segment follow.

Changes Related to Operating Income by Reportable Segment:
NA Engineered Components

	For the Years Ended October 31,			
	2018	2017	\$ Change	Variance %
	(Dollars in millions)			
Net sales	\$ 485.4	\$ 474.9	\$ 10.5	2%
Cost of sales (excluding depreciation and amortization)	371.3	357.8	13.5	(4)%
Selling, general and administrative	54.0	52.9	1.1	(2)%
Restructuring charges	1.4	3.6	(2.2)	61%
Depreciation and amortization	27.2	34.3	(7.1)	21%
Operating income	<u>\$ 31.5</u>	<u>\$ 26.3</u>	<u>\$ 5.2</u>	20%
Operating income margin	6%	6%		

Net Sales. Net sales increased \$10.5 million, or 2%, for the twelve months ended October 31, 2018 compared to the same period in 2017. We experienced market growth of \$24.5 million year-over-year across the core product sales and an increase in revenue of \$8.0 million related to base price increases, raw material price and surcharges. This was offset by a \$22.0 million decrease related to the U.S. vinyl volume we shed and the divestiture of the wood flooring business.

Cost of Sales. Cost of sales increased \$13.5 million, or 4%, for the twelve months ended October 31, 2018 compared to the same period in 2017. This increase is primarily due to inflationary increases in raw material, freight and labor costs.

Selling, General and Administrative. Our selling, general and administrative expenses increased by \$1.1 million, or 2%, for the twelve months ended October 31, 2018 compared to the same period in 2017. This increase is primarily related to higher incentive accruals based on cash flow performance. The increase in annual incentive accruals was partially offset by a decrease related to a \$1.8 million loss on the sale of our wood-flooring business in 2017.

Restructuring Charges. Restructuring charges of \$1.4 million relate to facility lease expenses related to the leases of two vinyl extrusion plants which were closed in November 2016 and January 2017 in the United States, one of which was terminated during September 2018. Restructuring charges of \$3.6 million incurred during the twelve months ended October 31, 2017 represent equipment and inventory moving costs incurred in conjunction with the announced closure of two vinyl extrusion plants in the United States, and other related costs including facility lease expense, severance and employee benefit costs.

Depreciation and Amortization. Depreciation and amortization expense decreased \$7.1 million for the twelve months ended October 31, 2018 compared to the same period in 2017. This decrease reflects the impact of restructuring efforts in 2017 which included accelerated depreciation of \$4.3 million and amortization of \$1.9 million associated with an October 2016 change in estimate of the remaining service lives of select fixed and intangible assets. Incremental depreciation expense associated with property, plant and equipment placed in service during the twelve months ended October 31, 2018, was more than offset by the run-off of depreciation expense associated with existing assets and disposals during this period.

EU Engineered Components

	For the Years Ended October 31,			
	2018	2017	\$ Change	Variance %
	(Dollars in millions)			
Net sales	\$ 160.0	\$ 148.0	\$ 12.0	8%
Cost of sales (excluding depreciation and amortization)	114.9	104.9	10.0	(10)%
Selling, general and administrative	22.8	20.6	2.2	(11)%
Depreciation and amortization	9.6	8.8	0.8	(9)%
Operating income	<u>\$ 12.7</u>	<u>\$ 13.7</u>	<u>\$ (1.0)</u>	(7)%
Operating income margin	8%	9%		

Net Sales. Net sales increased \$12.0 million, or 8%, when comparing the twelve months ended October 31, 2018 to the same period in 2017. This increase includes a favorable foreign exchange impact of \$8.7 million, volume increases of \$4.4 million, and base price increases of \$6.0 million, partially offset by \$7.1 million of lower U.K. vinyl business that was shed during 2017.

Cost of Sales. The cost of sales increased \$10.0 million for the twelve months ended October 31, 2018 compared to the same period in 2017. This increase is primarily related to an increase in vinyl and silicone material cost inflation experienced in the U.K. as well as the impact of foreign exchange rate changes during the period.

Selling, General and Administrative. Our selling, general and administrative expense increased \$2.2 million for the twelve months ended October 31, 2018 compared to the same period in 2017. This increase reflects an increase in salaries and higher incentive accruals related to cash flow performance, as well as the impact of foreign exchange rate changes during the period.

Depreciation and Amortization. Depreciation and amortization expense increased \$0.8 million for the twelve months ended October 31, 2018 compared to the same period in 2017, primarily attributable to the effect of foreign exchange rate changes as well as the timing of new property, plant and equipment placed in service during the twelve months ended October 31, 2018, less the run-off of depreciation expense associated with existing assets and disposals during the period.

NA Cabinet Components

	For the Years Ended October 31,			
	2018	2017	\$ Change	Variance %
	(Dollars in millions)			
Net sales	\$ 249.8	\$ 248.8	\$ 1.0	—%
Cost of sales (excluding depreciation and amortization)	214.1	213.3	0.8	—%
Selling, general and administrative	18.0	16.6	1.4	(8)%
Restructuring charges	0.1	0.9	(0.8)	89%
Depreciation and amortization	14.4	13.9	0.5	(4)%
Operating income	\$ 3.2	\$ 4.1	\$ (0.9)	(22)%
Operating income margin	1%	2%		

Net Sales. Net sales increased \$1.0 million for the twelve months ended October 31, 2018 compared to the same period in 2017. On a year-over-year basis, we experienced a \$12.0 million increase in price and raw material surcharges, which was partially offset by a \$3.9 million decrease in sales volume related to the closure of two facilities during 2017 and additional lower margin business we shed and \$7.1 million of market declines in existing business.

Cost of Sales. The cost of sales increased \$0.8 million for the twelve months ended October 31, 2018 compared to the same period in 2017. This increase was primarily impacted by higher wood and material costs partially offset by market volume declines.

Selling, General and Administrative. Our selling, general and administrative expense increased \$1.4 million, or 8%, for the twelve months ended October 31, 2018 as compared to the same period in 2017. This increase was primarily related to higher incentive accruals related to cash flow performance.

Restructuring Charges. Restructuring charges of \$0.1 million for the year ended October 31, 2018 represent the remaining costs from the Kansas plant closure effected in September 2017 which were incurred during the first quarter of the year ended October 31, 2018. Restructuring charges of \$0.9 million in the twelve months ended October 31, 2017 represent equipment moving and other related costs associated with the Mexican plant closure effected in October 2016 and the Kansas plant closure.

Depreciation and Amortization. Depreciation and amortization expense increased \$0.5 million for the twelve months ended October 31, 2018 compared to the same period in 2017. This increase primarily reflects accelerated depreciation expense associated with a change in estimate for useful lives of certain assets associated with a plant re-layout, partially offset by a decrease in accelerated depreciation of assets at the Kansas plant, which was closed in September 2017. The incremental depreciation and amortization expense associated with property, plant and equipment placed into service during the twelve months ended October 31, 2018, was largely offset by the run-off of depreciation expense associated with existing assets and disposals during this period.

Unallocated Corporate & Other

	For the Years Ended October 31,			
	2018	2017	\$ Change	Variance %
	(Dollars in millions)			
Net sales	\$ (5.4)	\$ (5.1)	\$ (0.3)	(6)%
Cost of sales (excluding depreciation and amortization)	(3.7)	(3.8)	0.1	(3)%
Selling, general and administrative	8.7	7.9	0.8	(10)%
Depreciation and amortization	0.6	0.5	0.1	(20)%
Operating loss	\$ (11.0)	\$ (9.7)	\$ (1.3)	(13)%

Net Sales. Net sales for Unallocated Corporate & Other represents the elimination of inter-segment sales for the twelve months ended October 31, 2018 and 2017.

Cost of Sales. Cost of sales for Corporate & Other consists of the elimination of inter-segment profit in inventory and changes in the LIFO reserve adjustments and other costs. The change for the twelve-month periods ended October 31, 2018 and 2017 of \$0.1 million was primarily related to the elimination of inter-segment sales partially offset by an increase in the LIFO reserve of \$0.3 million in 2018.

Selling, General and Administrative. Our selling, general and administrative expenses increased \$0.8 million, for the twelve months ended October 31, 2018 compared to the same period in 2017. This increase was driven by higher medical costs due to a higher claims experience during the year, higher executive annual incentive accruals based on cash flow performance, and higher advisory fees during the period. These increases were offset by stock based compensation, which decreased \$8.2 million year-over-year based on revised lower estimates of performance shares expected to vest in December 2018, the impact of the lower stock price on other long-term liabilities that are marked-to-market, and the impact of issuing performance restricted stock units in December 2017 instead of stock options.

Depreciation and Amortization. Depreciation and amortization expense increased \$0.1 million, or 20%, for the twelve months ended October 31, 2018 compared to the same period in 2017. The incremental depreciation expense associated with property, plant and equipment placed into service during the trailing twelve months was mostly offset by the run-off of depreciation expense associated with existing assets and disposals during the period.

Changes Related to Non-Operating Items:

Interest Expense. Interest expense increased \$1.5 million for the twelve months ended October 31, 2018 compared to the same period in 2017. The increase in interest expense was primarily driven by the impact of \$1.1 million of deferred financing fees which were incurred related to amending the 2016 Credit Agreement. Excluding these fees, interest expense increased due to higher interest rates, partially offset by lower debt balances during 2018. The weighted average interest rate for borrowings outstanding for the twelve months ended October 31, 2018 was 3.76% compared with 2.95% for the twelve months ended October 31, 2017.

Other, net. The reduction in other, net of \$0.5 million for the twelve months ended October 31, 2018 compared to the same period in 2017 relates to foreign exchange gains and losses. In 2018 and 2017, we recorded gains of \$0.2 million and \$0.7 million, respectively, largely associated with an unhedged foreign currency position with regard to the borrowings to fund the HLP transaction, which were partially offset by net foreign currency exchange derivative losses.

Income Taxes. We recorded an income tax benefit of \$0.9 million for the twelve months ended October 31, 2018, an effective benefit rate of 3.4%. The effective rate for 2018 was impacted by the Tax Cuts and Jobs Act which was signed into law on December 22, 2017. The act reduced our federal tax rate from 35% to 23.3% for the fiscal year ending October 31, 2018. As a result, the effective rate was impacted by a discrete benefit of \$7.7 million for the re-measurement of our deferred income tax assets and liabilities due to the decrease in the federal corporate income tax rate, a benefit of \$0.2 million for the true up of our accruals and related deferred taxes from prior year filings and settled tax audits, and a benefit of \$0.2 million related to the vesting or exercise of equity-based compensation awards, partially offset by a tax expense of \$1.2 million for the one-time mandatory transition tax on deemed repatriation of previously tax-deferred and unremitted foreign earnings. We recorded income tax expense of \$6.8 million for the twelve months ended October 31, 2017, an effective rate of 26.7%. The effective rate for 2017 was impacted by a \$1.0 million discrete benefit associated with a change in the statutory deferred tax rate in the United Kingdom from 19% to 17% over the next three years.

Comparison of the fiscal years ended October 31, 2017 and 2016

This table sets forth our consolidated results of operations for the twelve-month periods ended October 31, 2017 and 2016.

	For the Years Ended October 31,					
	2017		2016		2017 vs. 2016	
	Amounts	% of Sales	Amounts	% of Sales	\$ Change	Variance %
	(Dollars in millions)					
Net sales	\$ 866.6	100%	\$ 928.2	100%	\$ (61.6)	(7)%
Cost of sales (excluding depreciation and amortization)	672.2	78%	710.6	77%	(38.4)	5%
Selling, general and administrative	98.0	11%	114.9	12%	(16.9)	15%
Restructuring charges	4.5	1%	0.5	—%	4.0	(800)%
Depreciation and amortization	57.5	7%	53.2	6%	4.3	(8)%
Asset impairment charges	—	—%	12.6	1%	(12.6)	1%
Operating income	34.4	4%	36.4	4%	(2.0)	(5)%
Interest expense	(9.6)	(1)%	(36.5)	(4)%	26.9	74%
Other, net	0.7	—%	(5.5)	(1)%	6.2	113%
Income tax (expense) benefit	(6.8)	(1)%	3.7	—%	(10.5)	(284)%
Net income (loss)	<u>\$ 18.7</u>	<u>2%</u>	<u>\$ (1.9)</u>	<u>—%</u>	<u>\$ 20.6</u>	<u>1,084%</u>

Our operating results for the twelve months ended October 31, 2017 and 2016 include the contributions of Woodcraft acquired on November 2, 2015. Our year-over-year results by reportable segment follow.

Changes Related to Operating Income (Loss) by Reportable Segment:
NA Engineered Components

	For the Years Ended October 31,					
	2017		2016		\$ Change	Variance %
	Amounts	% of Sales	Amounts	% of Sales		
	(Dollars in millions)					
Net sales	\$ 474.9		\$ 538.3		\$ (63.4)	(12)%
Cost of sales (excluding depreciation and amortization)	357.8		399.2		(41.4)	10%
Selling, general and administrative	52.9		62.1		(9.2)	15%
Restructuring charges	3.6		0.4		3.2	(800)%
Depreciation and amortization	34.3		29.8		4.5	(15)%
Asset impairment charges	—		12.6		(12.6)	1%
Operating income	<u>\$ 26.3</u>		<u>\$ 34.2</u>		<u>\$ (7.9)</u>	<u>(23)%</u>
Operating income margin		6%		6%		

Net Sales. Net sales decreased \$63.4 million, or 12%, for the twelve months ended October 31, 2017 compared to the same period in 2016. On a year-over-year basis, we experienced a \$66.4 million decrease in sales attributable to volume, an increase of \$5.4 million related to surcharges for commodities used in our business, primarily resin and aluminum, and a decrease of \$2.4 million attributable to price. The significant decrease in volume was anticipated with regard to our previously-announced plan to shed low-margin business associated with our United States vinyl business, although the transition of this volume to other suppliers was at a quicker pace than originally expected. In addition, \$2.4 million of the decrease was associated with poor performance of our wood-flooring business which was sold on October 31, 2017. The overall decrease in volume is significantly offset by a corresponding decrease in cost of goods sold including purchases of raw materials used in our manufacturing process and labor, thereby mitigating some of the negative impact on our operating margins. We continue to align our cost structure to counter the effects of the anticipated volume reduction.

Cost of Sales. The cost of sales decreased \$41.4 million, or 10%, for the twelve months ended October 31, 2017 compared to the same period in 2016. This decrease correlates with a 12% decrease in revenues for the respective period. Overall material and labor costs decreased year-over-year, directly related to the lower sales volume, and cost saving measures to align the labor

force in light of the decreased volume. In addition, freight and repair and maintenance costs declined, and fixed cost savings were realized due to restructuring efforts in 2017. Consolidated gross margin for the segment declined year-over-year primarily due to the mix of products produced and sold during 2017 compared to 2016, particularly at our United States vinyl operations, and lower volume of solar edge tape sales for our insulating glass business.

Selling, General and Administrative. Our selling, general and administrative expenses decreased by \$9.2 million, or 15%, for the twelve months ended October 31, 2017 compared to the same period in 2016. Of this decrease, \$1.2 million represents a decline in the amount of corporate costs allocated to the segment year-over-year, reflecting an overall decline in such corporate office costs. The remainder of the difference is primarily associated with lower headcount following restructuring efforts at our United States vinyl operations, lower incentive accruals based on financial performance, and lower professional fees. Partially offsetting these declines in expense is a loss on the sale of our wood-flooring business of \$1.8 million in October 2017, and normal salary and employee benefit costs inflation.

Restructuring Charges. Restructuring charges of \$3.6 million represent equipment and inventory moving costs incurred in conjunction with the announced closure of two vinyl extrusion plants in the United States, and other related costs including facility lease expense, severance and employee benefit costs.

Depreciation and Amortization. Depreciation and amortization expense increased \$4.5 million for the twelve months ended October 31, 2017 compared to the same period in 2016 primarily due to a change in estimate regarding the remaining service lives for assets associated with the restructuring efforts noted above, resulting in incremental depreciation of \$3.2 million, and a change in estimate related to certain intangible assets resulting in incremental amortization of \$1.6 million. Incremental depreciation expense associated with property, plant and equipment placed in service during the twelve months ended October 31, 2017, was more than offset by the run-off of depreciation expense associated with existing assets and disposals during this period.

Asset Impairment Charges. We recorded an asset impairment charge of \$12.6 million in 2016 which represents the write-off of the remaining goodwill asset associated with our United States vinyl extrusion business. We did not incur an asset impairment charge during 2017.

EU Engineered Components

	For the Years Ended October 31,			
	2017	2016	\$ Change	Variance %
	(Dollars in millions)			
Net sales	\$ 148.0	\$ 150.2	\$ (2.2)	(1)%
Cost of sales (excluding depreciation and amortization)	104.9	104.5	0.4	—%
Selling, general and administrative	20.6	23.2	(2.6)	11%
Depreciation and amortization	8.8	9.3	(0.5)	5%
Operating income	<u>\$ 13.7</u>	<u>\$ 13.2</u>	<u>\$ 0.5</u>	<u>4%</u>
Operating income margin	9%	9%		

Net Sales. Net sales decreased \$2.2 million, or 1%, when comparing the twelve months ended October 31, 2017 to the same period in 2016. This decrease is entirely attributable to a \$10.7 million negative impact associated with changes in foreign exchange rates. Excluding the foreign exchange impact, revenue increased \$8.5 million, of which \$8.6 million related to volume, partially offset by a slight decrease in price of \$0.1 million. The volume improvement reflects favorable market growth despite the intentional shed of some lower margin customers at HLP.

Cost of Sales. The cost of sales increased \$0.4 million, year-over-year compared to a decrease in revenue for these periods. Excluding the impact of foreign exchange rate changes as noted above, the increase in cost of goods sold reflects higher material costs, due in part to volume, but also due to higher cost of commodities such as resin and silicone. In addition, margins were impacted during 2017 at HLP due to some inefficiencies caused by delays transitioning to the new warehouse.

Selling, General and Administrative. Our selling, general and administrative expense decreased \$2.6 million for the twelve months ended October 31, 2017 compared to the same period in 2016. The decrease reflects a \$0.4 million decline in costs allocated from corporate in 2017, as well as lower selling and marketing costs, lower incentive accruals based on earnings, and the impact of foreign exchange rate changes.

Depreciation and Amortization. Depreciation and amortization expense decreased \$0.5 million for the twelve months ended October 31, 2017 compared to the same period in 2016, primarily attributable to the effect of foreign exchange rate changes as

well as the timing of new property, plant and equipment placed in service during the twelve months ended October 31, 2017, less the run-off of depreciation expense associated with existing assets and disposals during the period.

NA Cabinet Components

	For the Years Ended October 31,			
	2017	2016	\$ Change	Variance %
	(Dollars in millions)			
Net sales	\$ 248.8	\$ 248.1	\$ 0.7	—%
Cost of sales (excluding depreciation and amortization)	213.3	213.3	—	—%
Selling, general and administrative	16.6	15.8	0.8	(5)%
Restructuring charges	0.9	0.1	0.8	(800)%
Depreciation and amortization	13.9	13.5	0.4	(3)%
Operating income	<u>\$ 4.1</u>	<u>\$ 5.4</u>	<u>\$ (1.3)</u>	<u>(24)%</u>
Operating income margin	2%	2%		

Net Sales. Net sales increased \$0.7 million for the twelve months ended October 31, 2017 compared to the same period in 2016. On a year-over-year basis, we experienced a \$0.7 million increase in sales attributable to higher volume, an increase of \$2.4 million in revenues associated with pricing, offset by a \$2.4 million decrease in revenue associated with lower wood surcharges. The increase in volume reflects market growth of approximately 5%, some new customers, higher-than-expected spot sales, and incremental volume of \$1.1 million associated with the two plants transferred from the NA Engineered Components segments. These volume increases are partially offset by volume lost as a result of restructuring efforts that included the closure of a plant in Mexico in October 2016 and a plant in Kansas in September 2017, as well as the previously-announced plan to shed less profitable business. The decrease in revenue associated with wood surcharges represents the change in the price of wood used in our business and the timing lag associated with our contractual ability to pass this cost to our customers.

Cost of Sales. The cost of sales remained consistent at \$213.3 million for the years ended October 31, 2017 and 2016. However, the results for 2016 include a charge of \$2.3 million related to purchase accounting (step-up and turn of inventory acquired) which did not occur in 2017. Excluding this item, cost of sales increased \$2.3 million, or 1%, year-over-year. Margins in 2017 reflect a more favorable product mix, but were negatively impacted by some labor inefficiency, higher health insurance and benefit costs, less favorable material pricing and inventory adjustments and reserves. Overall, cost of sales reflects changes in sales volume and product mix.

Selling, General and Administrative. Our selling, general and administrative expense increased \$0.8 million, or 5%, for the twelve months ended October 31, 2017 as compared to the same period in 2016, despite a \$0.5 million decrease in allocated corporate costs during this period. The overall \$1.3 million increase reflects some additional administrative headcount, normal wage inflation, and higher medical insurance and employee benefit costs year-over-year.

Restructuring Charges. Restructuring charges of \$0.9 million represent equipment moving and other related costs associated with the Mexican plant closure effected in October 2016 and a Kansas plant closure effected in September 2017.

Depreciation and Amortization. Depreciation and amortization expense increased \$0.4 million for the twelve months ended October 31, 2017 compared to the same period in 2016. Of this increase, \$0.2 million was associated with accelerated depreciation of assets at the Kansas plant, closed in September 2017. The incremental depreciation and amortization expense associated with property, plant and equipment placed into service during the twelve months ended October 31, 2017, slightly exceeded the run-off of depreciation expense associated with existing assets and disposals during this period.

Unallocated Corporate & Other

	For the Years Ended October 31,			
	2017	2016	\$ Change	Variance %
	(Dollars in millions)			
Net sales	\$ (5.1)	\$ (8.4)	\$ 3.3	39%
Cost of sales (excluding depreciation and amortization)	(3.8)	(6.4)	2.6	(41)%
Selling, general and administrative	7.9	13.8	(5.9)	43%
Depreciation and amortization	0.5	0.6	(0.1)	17%
Operating loss	<u>\$ (9.7)</u>	<u>\$ (16.4)</u>	<u>\$ 6.7</u>	41%

Net Sales. Net sales for Unallocated Corporate & Other represents the elimination of inter-segment sales for the twelve months ended October 31, 2017 and 2016. The change between periods reflects the amount of inter-segment sales (primarily between NA Engineered Components and EU Engineered Components related to a change in the terms of a royalty agreement in 2017).

Cost of Sales. Cost of sales for Corporate & Other consists of the elimination of inter-segment profit in inventory and changes in the LIFO reserve adjustments and other costs. The change for the twelve-month periods ended October 31, 2017 and 2016 of \$2.6 million was primarily related to the elimination of inter-segment sales and a decrease in the LIFO reserve of \$0.3 million in 2016.

Selling, General and Administrative. Our selling, general and administrative expenses decreased \$5.9 million, for the twelve months ended October 31, 2017 compared to the same period in 2016, despite a \$2.1 million decrease in the amount of corporate expense allocated to the operating segments in 2017 compared to 2016. Therefore, the overall decrease in selling, general and administrative expenses is \$8.0 million. Of this amount, a net decrease of \$4.7 million relates to transaction costs, as the prior year included \$5.2 million associated with the Woodcraft acquisition. The remainder of the difference relates primarily to lower professional fees as we received \$4.0 million of insurance reimbursement in 2017 for legal fees incurred defending an alleged product defect claim. We also recorded lower incentive accruals based on financial performance. These decreases were partially offset by normal wage inflation and higher medical insurance and benefit costs.

Depreciation and Amortization. Depreciation and amortization expense decreased \$0.1 million, or 17%, for the twelve months ended October 31, 2017 compared to the same period in 2016, reflecting the run-off of depreciation during 2016 primarily related to computer software, hardware and licensing. Relatively few new assets were placed in service at corporate during the twelve months ended October 31, 2017.

Changes Related to Non-Operating Items:

Interest Expense. Interest expense decreased \$26.9 million for the twelve months ended October 31, 2017 compared to the same period in 2016. Of this amount, \$16.7 million was attributable to the write-off of unamortized deferred financing fees, original issuer's discount and a 1% prepayment penalty associated with the July 2016 refinance and retirement of our Term Loan B and asset-based lending facilities. This facility was replaced with a Term Loan A and revolving credit facility with significantly lower interest rates. The relative outstanding balances under our credit facilities decreased at October 31, 2017 compared to October 31, 2016 due to net repayments. The weighted average interest rate for borrowings outstanding for the twelve months ended October 31, 2017 was 2.95% compared with 5.26% for the twelve months ended October 31, 2016.

Other, net. The change in other net of \$6.2 million for the twelve months ended October 31, 2017 compared to the same period in 2016 relates to foreign exchange gains and losses. In 2017, we recorded a gain of \$0.7 million and for 2016 we recorded a loss of \$5.5 million, largely associated with an unhedged foreign currency position with regard to the borrowings to fund the HLP transaction, as well as net foreign exchange losses associated with our other foreign operations.

Income Taxes. We recorded income tax expense of \$6.8 million for the twelve months ended October 31, 2017, an effective rate of 26.7%. The effective rate for 2017 was impacted by a \$1.0 million discrete benefit associated with a change in the statutory deferred tax rate in the United Kingdom from 19% to 17% over the next three years. We recorded an income tax benefit of \$3.7 million, an effective rate of 66.9%, for the twelve months ended October 31, 2016. The effective rate for 2016 was impacted by a discrete benefit of \$0.8 million for the R&D credit which was made permanent in December 2015. However, this rate was also impacted by permanent items, and the foreign tax rate differential, as a greater percentage of our taxable income for fiscal 2016 was derived from our foreign operations, primarily in the United Kingdom, a jurisdiction with a lower statutory tax rate than the United States.

Liquidity and Capital Resources

Overview

Historically, our principal sources of funds have been cash on hand, cash flow from operations, and borrowings under our credit facilities. As of October 31, 2018, we had \$29.0 million of cash and equivalents, \$195.0 million outstanding under our credit facilities, \$5.3 million of outstanding letters of credit and \$17.0 million outstanding under capital leases. We had \$124.7 million available for use under the Credit Agreement at October 31, 2018.

On November 2, 2015, we acquired Woodcraft for \$245.9 million in cash, net of cash acquired, subject to a working capital true-up and including certain holdbacks with regard to potential indemnity claims, as more fully described in the accompanying notes to consolidated financial statements (Note 2, "Acquisitions and Dispositions").

In order to fund this acquisition, we entered into senior secured credit facilities of \$410.0 million consisting of an asset-based lending (ABL) revolving credit facility of \$100.0 million (for which the borrowing base was determined monthly) and a Term Loan B facility of \$310.0 million. On November 2, 2015, we borrowed \$310.0 million under the term loan facility and \$10.5 million under the ABL facility to fund the Woodcraft acquisition, to refinance and retire outstanding debt of \$50.0 million under a predecessor credit facility and to pay fees associated with these borrowings. The proceeds were reduced by a debt discount of \$6.2 million, which was being recognized on the effective interest method over the term of the facility. We recorded expense of \$0.5 million in November 2015 to write off the unamortized deferred financing fees associated with the predecessor facility.

On July 29, 2016, we refinanced and retired our Term Loan B and ABL credit facilities and entered into a \$450.0 million credit agreement comprising a \$150.0 million Term Loan A and a \$300.0 million revolving credit facility (collectively, the "2016 Credit Agreement"), under which we borrowed \$150.0 million and \$150.0 million, respectively. The proceeds from the 2016 Credit Agreement, along with additional funding of \$16.4 million of cash on hand, were used to repay outstanding borrowings under the Term Loan B and ABL credit facilities of \$309.2 million, to pay a 1% prepayment call premium under the Term Loan B facility, to settle outstanding interest accrued under the prior facility, and to pay loan fees which totaled \$2.8 million. In addition, we expensed \$8.1 million to write-off unamortized deferred financing fees and \$5.5 million of unamortized original issuer's discount associated with the Term Loan B and ABL credit facilities. The 2016 Credit Agreement was to mature in 2021 (5-year term) and required interest payments calculated, at our election and depending upon our Consolidated Leverage Ratio, at either a Base Rate plus an applicable margin (0.50% to 1.25%) or the LIBOR Rate plus an applicable margin (1.50% to 2.25%). We included deferred financing fees of \$2.8 million as a contra-liability account, and were amortizing this balance straight-line over the term of the facility.

On October 18, 2018, we amended and restated the 2016 Credit Agreement by entering into a \$325.0 million revolving credit facility (the "2018 Credit Facility"), under which we borrowed \$205.0 million. The proceeds from the 2018 Credit Facility, along with additional funding of \$10.0 million of cash on hand, were used to repay outstanding borrowings under the 2016 Credit Agreement of \$213.5 million, to settle outstanding interest accrued under the prior facility, and to pay loan fees which totaled \$1.0 million. In addition, we expensed \$1.1 million to write-off unamortized deferred financing fees associated with the 2016 Credit Agreement. The 2018 Credit Facility matures in 2023 (5-year term) and requires interest payments calculated, at our election and depending upon our Consolidated Leverage Ratio, at either a Base Rate plus an applicable margin (0.25% to 1.00%) or the LIBOR Rate plus an applicable margin (1.25% to 2.00%). We included deferred financing fees of \$1.5 million as a contra-liability account, and are amortizing this balance straight-line over the term of the facility.

The weighted average interest rate of borrowings outstanding for the twelve-month periods ended October 31, 2018 and 2017 was 3.76% and 2.95%, respectively. We were in compliance with our debt covenants as of October 31, 2018. For additional details of the Credit Agreement, see "Item 1A. Risk Factors" included elsewhere within this Annual Report on Form 10-K.

Analysis of Cash Flow

The following table summarizes our cash flow results for the years ended October 31, 2018, 2017 and 2016:

	Year Ended October 31,		
	2018	2017	2016
	(In millions)		
Cash flows provided by operating activities	\$ 104.6	\$ 79.8	\$ 87.3
Cash flows used for investing activities	\$ (26.1)	\$ (41.1)	\$ (282.1)
Cash flows (used for) provided by financing activities	\$ (65.8)	\$ (46.6)	\$ 195.4

Operating Activities

Cash provided by operating activities increased \$24.8 million for the year ended October 31, 2018 compared to the year ended October 31, 2017. Cash receipts were impacted favorably by higher net income along with a reduction of inventory in 2018 versus a build in 2017 and favorable changes in accounts payable and accrued liabilities. Cash provided by operating activities decreased \$7.5 million for the year ended October 31, 2017 compared to the year ended October 31, 2016. Despite an increase in net income, cash receipts and disbursements declined as a result of lower activity levels, primarily within our United States vinyl business. Although collection of receivables was favorable, investment in inventory levels grew due to a slower-than-expected busy season, which was exacerbated by the impact of the hurricanes in late 2017. Partially offsetting this decline was the collection of a tax receivable of \$1.2 million and lower interest costs under our debt facilities. Working capital was \$87.3 million, \$85.3 million and \$89.8 million as of October 31, 2018, 2017 and 2016, respectively. Working capital remained fairly consistent despite the decrease in activity levels in 2017.

Investing Activities

Cash used for investing activities decreased \$15.1 million in 2018 compared to 2017. In 2017, we paid \$8.5 million related to the HLP acquisition earn-out, with no corresponding cash payment in 2018. Our investment in capital expenditures declined \$8.1 million during 2018, which partially offset a decrease of \$1.5 million in proceeds from the sale of capital assets during the year. Cash used for investing activities decreased \$241.0 million in 2017 compared to 2016, as the 2016 results included an incremental \$237.4 million greater investment in acquisitions, as \$245.9 million was incurred in 2016 related to the Woodcraft acquisition and only \$8.5 million was paid in 2017 associated with the HLP earn-out. In addition, we invested an incremental \$2.7 million in capital equipment in 2016 relative to 2017.

At October 31, 2018, we had firm purchase commitments of approximately \$1.1 million for the purchase or construction of capital assets. We plan to fund these capital expenditures through cash from operations or borrowings under our revolving credit facility.

Financing Activities

Our cash used for financing activities for 2018 was \$65.8 million and related primarily to share repurchases of \$32.0 million, net debt repayments of \$29.5 million, and payment of dividends of \$7.0 million, and other spending of \$2.0 million, partially offset by funds received from the issuance of common stock in settlement of stock option exercises of \$4.7 million. In 2017, cash used for financing activities was \$46.6 million and related primarily to repayment of borrowings under our credit facility and payment of dividends of \$5.5 million, partially offset by funds received from the issuance of common stock in settlement of stock option exercises of \$8.0 million. For 2016, funds provided by financing activities of 195.4 million included net debt borrowings of \$209.7 million and cash received of \$3.4 million from stock issuances, partially offset by cash paid for debt issuance costs of \$11.4 million, cash paid for dividends of \$5.5 million, and \$0.8 million used for other financing activities.

Liquidity Requirements

Our strategy for deploying cash is to invest in organic growth opportunities, develop our infrastructure, and make strategic acquisitions. Other uses of cash include paying cash dividends to our shareholders and repurchasing our own stock. We have historically invested cash and cash equivalents in commercial paper with terms of three months or less. We did not have any investments during the years ended October 31, 2018 and 2017. We maintain cash balances in foreign countries which totaled \$15.7 million and \$9.0 million as of October 31, 2018 and 2017. During the year ended October 31, 2018, we repatriated \$2.8 million of foreign earnings from our insulating spacer division in the United Kingdom. We utilize cash flow from HLP to fund the operation in the United Kingdom. During the fourth quarter of 2018, we repaid a note arrangement implemented as part of the initial capitalization of the acquisition.

We believe that we have sufficient funds and adequate financial resources available to meet our anticipated liquidity needs. We expect to use our cash flow from operations to fund operations for the next twelve months and the foreseeable future. We believe these funds should be adequate to provide for our working capital requirements, capital expenditures, and dividends, while continuing to meet our debt service requirements.

Senior Credit Facility

We maintain our \$325.0 million 2018 Credit Facility, which contains a revolving credit facility, with Wells Fargo Bank, National Association, as Agent, Swingline Lender and Issuing Lender, and Bank of America, N.A. serving as Syndication Agent. The 2018 Credit Facility has a five-year term, maturing on October 18, 2023, and requires interest payments calculated, at our election and depending upon our Consolidated Leverage Ratio, at either a Base Rate plus an applicable margin or the LIBOR Rate plus an applicable margin. At the time of the initial borrowing, the applicable rate was LIBOR + 1.50%. In addition, we are subject to commitment fees for the unused portion of the 2018 Credit Facility. The applicable margin and commitment fees range from 0.45% to 2.30%, depending upon the type of loan and consolidated leverage ratio.

The 2018 Credit Facility provides for revolving credit commitments for a minimum principal amount of \$10.0 million, up to an aggregate amount of \$150.0 million, subject to the lender's discretion to elect or decline the incremental increase. We can also borrow up to the lesser of \$15.0 million or the revolving credit commitment, as defined, under a Swingline feature of the 2018 Credit Facility.

The 2018 Credit Facility contains a: (1) Consolidated Interest Coverage Ratio requirement whereby we must not permit the Consolidated Interest Coverage Ratio, as defined, to be less than 2.25 to 1.00, and (2) Consolidated Leverage Ratio requirement, whereby we must not permit the Consolidated Leverage Ratio, as defined, to be greater than 3.25 to 1.00.

In addition to maintaining these financial covenants, the 2018 Credit Facility also limits our ability to enter into certain business transactions, such as to incur indebtedness or liens, to acquire businesses or dispose of material assets, make restricted payments, pay dividends (limited to \$20.0 million per year) and to conduct other transactions as further defined in the 2018 Credit Facility. Some of these limitations, however, do not take effect so long as total leverage is less than or equal to 2.75 to 1.00 and available liquidity exceeds \$25 million. Substantially all of our domestic assets, with the exception of real property, are pledged as collateral for the 2018 Credit Facility.

Issuer Purchases of Equity Securities

On August 30, 2018, our Board of Directors approved a stock repurchase program that authorized the repurchase of up to \$60.0 million worth of shares of our common stock. Repurchases under the new program will be made in open market transactions or privately negotiated transactions, subject to market conditions, applicable legal requirements and other relevant factors. The program does not have an expiration date or a limit on the number of shares that may be purchased. During the year ended October 31, 2018, we purchased 1,900,000 shares at a cost of \$32.0 million under this program.

Contractual Obligations and Commercial Commitments

The following table summarizes our known contractual obligations and commitments as of October 31, 2018:

	Payments Due by Period				
	Total	2019	2020-2021	2022-2023	Thereafter
Contractual Obligations:	(In thousands)				
Long-term debt, including interest ⁽¹⁾	\$ 232,070	\$ 7,414	\$ 14,828	\$ 209,828	\$ —
Capital leases ⁽²⁾	17,043	1,523	1,960	1,683	11,877
Operating leases ⁽³⁾	49,651	8,407	12,152	8,818	20,274
Unconditional purchase obligations ⁽⁴⁾	17,761	17,761	—	—	—
Total contractual cash obligations⁽⁵⁾	\$ 316,525	\$ 35,105	\$ 28,940	\$ 220,329	\$ 32,151

⁽¹⁾ Interest on our long-term debt was computed using rates in effect at October 31, 2018.

⁽²⁾ Capital leases includes a related party capital lease arrangements at HLP for a warehouse acquired in February 2017.

⁽³⁾ Operating leases include facilities, light vehicles, forklifts, office equipment and other operating equipment.

⁽⁴⁾ The unconditional purchase obligations consist of commitments to buy miscellaneous parts, inventory, and expenditures related to capital projects in progress.

⁽⁵⁾ This table excludes tax reserves recorded in accordance with ASC Topic 740 "Income Taxes," as we are unable to reasonably estimate the timing of future cash flows related to these reserves.

During fiscal 2019, we expect to contribute approximately \$0.8 million to our pension plan to maintain our 100% funding threshold and meet our minimum contribution requirements. Pension contributions beyond 2019 cannot be determined since the amount of any contribution is heavily dependent on the future economic environment and investment returns on pension plan assets. Obligations are based on current and projected obligations of the plans, performance of the plan assets, if applicable, and the timing and amount of funding contributions. At October 31, 2018, we have recorded a long-term liability for deferred pension and postretirement benefits totaling \$4.2 million. We believe the effect of the plans on liquidity is not significant to our overall financial condition.

Our supplemental benefit plan and deferred compensation plan liabilities fluctuate based on changes in the market value of certain equity securities, including our common stock. As of October 31, 2018, our liability under the supplemental benefit plan and the deferred compensation plan was approximately \$4.0 million and \$3.5 million, respectively.

The following table reflects other commercial commitments or potential cash outflows that may result from a contingent event.

	Amount of Commitment Expiration per Period				
	Total	2018	2019-2020	2021-2022	Thereafter
Other Commercial Commitments:	(In thousands)				
Standby letters of credit	\$ 5,300	\$ 5,300	\$ —	\$ —	\$ —

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements, as such term is defined in the rules promulgated by the SEC, that we believe would be material to investors and for which it is reasonably likely to have a current or future effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources.

Effects of Inflation

We have experienced the impact of inflation on our cost of raw materials, labor, freight and overhead. While we utilize contractual price indexing along with periodic base price increases to minimize the effect of inflation on our results, we have not been able to fully recover all of the inflationary cost increases. We believe inflation has not had a significant effect on our earnings or financial position over the previous three fiscal years. We cannot provide assurance, however, that our results of operations and financial position will not be materially impacted by inflation in the future.

Critical Accounting Policies and Estimates

The preparation of our financial statements in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP) requires us to make estimates and assumptions that affect the reported amount of assets, liabilities, revenues and expenses and related disclosures of contingent assets and liabilities. Estimates and assumptions about future events and their effects cannot be perceived with certainty. Estimates may change as new events occur, as more experience is acquired, as additional information becomes available and as our operating environment changes. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances, and that we believe provide a basis for making judgments about the carrying value of assets and liabilities that are not readily available through open market quotes. We must use our judgment with regard to uncertainties in order to make these estimates. Actual results could differ from these estimates.

We believe the following are the most critical accounting policies used in the preparation of our consolidated financial statements as well as the significant judgments and uncertainties affecting the application of these policies. We consider an estimate to be critical if it is subjective and if changes in the estimate using different assumptions would result in a material impact to our financial position or results of operations.

Revenue Recognition

We recognize revenue when products are shipped and title has passed to the customer. Revenue is deemed to be realized or earned when the following criteria is met: (a) persuasive evidence that a contractual sales arrangement exists; (b) delivery has occurred; (c) the price to the buyer is fixed or determinable; and (d) collection is reasonably assured. Sales allowances and customer incentives are treated as reductions to revenue and are provided for based on historical experience and current estimates.

Allowance for Doubtful Accounts

We record trade accounts receivable at billed amounts, less an allowance for doubtful accounts. This allowance is established to estimate the risk of loss associated with our trade receivables which may arise due to the inability of our customers to pay or due to changes in circumstances. The allowance is maintained at a level that we consider appropriate based on factors that affect collectability, including: (a) historical trends of write-offs, recoveries and credit losses; (b) the credit quality of our customers; and (c) projected economic and market conditions. Different assumptions or changes in economic circumstances could result in changes to the allowance. Our historical bad debt expense has approximated 0.1% of sales for the years ended October 31, 2018, 2017 and 2016. If bad debt expense increased by 1% of net sales, the impact on operating results would have been a decrease in net income of \$9.2 million and \$6.4 million for the years ended October 31, 2018 and 2017, respectively, and an increase in net loss of \$3.1 million for the year ended October 31, 2016.

Business Combinations - Contingencies

We apply the acquisition method of accounting for business combinations in accordance with U.S. GAAP, which requires us to make use of estimates and judgments to allocate the purchase price paid for acquisitions to the fair value of the net assets and liabilities acquired. We use established valuation techniques and engage reputable valuation specialists to assist us with these valuations. However, there is a risk that we may not identify all pre-acquisition contingencies or that our estimates may not reflect the actual results when realized. We utilize a reasonable measurement period to record any adjustment related to the opening balance sheet (generally, less than one year). After the measurement period, changes to the opening balance sheet can result in the recognition of income or expense as period costs. To the extent these items stem from contingencies that existed at the balance sheet date, but are contingent upon the realization of future events, the cost is charged to expense at the time the future event becomes known. In November 2016, we settled an earn-out provision related to the HLP acquisition for \$8.5 million. We used a probability-weighted estimate to value this liability, discounted using our incremental borrowing rate. We recognized the change in this liability as income/expense over time to reflect the time value of money and changes in the probability weighting as to when the former owner would elect a measurement period pay-out. If our purchase accounting estimates are not correct, or if we do not recognize contingent assets or liabilities accurately, we may incur losses.

Impairment or Disposal of Long-Lived Assets

Property, Plant and Equipment and Intangible Assets with Defined Lives

We make judgments and estimates in conjunction with the carrying value of our long-term assets, including property, plant and equipment, and identifiable intangibles. These judgments may include the basis for capitalization, depreciation and amortization methods and the useful lives of the underlying assets. In accordance with U.S. GAAP, we review the carrying values of these assets for impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. We determine that the carrying amount is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. If the carrying value exceeds the sum of the undiscounted cash flows and after considering alternate uses for the asset, an impairment charge would be recorded in the period in which such review is performed. We measure the impairment loss as the amount by which the carrying amount of the long-lived asset exceeds its fair value. Fair value is determined by reference to quoted market prices in active markets, if available, or by calculating the discounted cash flows associated with the use and eventual disposition of the asset. Therefore, if there are indicators of impairment, we are required to make long-term forecasts of our future revenues and costs related to the assets subject to review. Forecasts require assumptions about demand for our products and future market conditions. Although there may be no indicators of impairment in the current period, unanticipated changes to assumptions or circumstances in future periods could result in an impairment charge in the period of the change. No impairment charges were incurred with regard to our property, plant and equipment for the years ended October 31, 2018, 2017 and 2016.

We monitor relevant circumstances, including industry trends, general economic conditions, and the potential impact that such circumstances might have on the valuation of our identifiable intangibles. Events and changes in circumstances that may cause a triggering event and necessitate such a review include, but are not limited to: a decrease in sales for certain customers, improvements or changes in technology, and/or a decision to phase-out a trademark or trade name. Such events could negatively impact the carrying value of our identifiable intangibles. It is possible that changes in such circumstances or in the numerous variables associated with the judgments, assumptions, and estimates made by us in assessing the appropriate valuation of our identifiable intangibles could require us to further write down a portion of our identifiable intangibles and record related non-cash impairment charges in the future. We apply a variety of techniques to establish the carrying value of our intangible assets, including the relief from royalty and excess current year earnings methods.

During October 2016 and continuing throughout 2017, we determined that a triggering event occurred which necessitated a review of our long-term assets as prescribed above (expected reduction in volume for our United States vinyl business and results below our forecasts for Woodcraft). Based on an undiscounted cash flow analysis, we determined that our property, plant and

equipment and defined-lived intangible assets were not impaired. However, with regard to our United States vinyl business, we recorded a change in accounting estimate associated with shortening the remaining useful lives of certain property, plant and equipment to be retired as part of the announced closures of several plants. We recognized incremental depreciation expense of \$4.3 million in 2017 as a result of the change in estimates. In addition, we shortened the life of several defined-lived intangible assets, which resulted in the recognition of incremental amortization expense of \$1.9 million for the year ended October 31, 2017. There have been no impairments or related expenses of property, plant and equipment and defined-lived intangibles during the year ended October 31, 2018.

Goodwill

In accordance with U.S. GAAP, we review various qualitative factors to determine whether we believe there are indicators of impairment associated with goodwill or other indefinite lived intangible assets. If no impairment is indicated, no additional testing is required. Otherwise, we perform a goodwill impairment test annually as of August 31, or more often if there are indicators of impairment due to changes in circumstances or the occurrence of certain events. The test for impairment of goodwill requires a two-step approach as prescribed in ASC Topic 350 “*Intangibles - Goodwill and Other*” (ASC 350). The first step of the impairment test is to compare the carrying value of each reportable unit, including goodwill, to the fair value as determined using various valuation methods or a weighting of several such methods. If the fair value exceeds the carrying value, no further testing is required and there is no impairment charge. If the carrying value exceeds the fair value, a second step of the goodwill impairment test is required, whereby we compare the implied fair value of goodwill to its carrying value. The implied fair value of goodwill is determined by allocating the fair value of a reporting unit to the assets and liabilities of that unit as if the reporting unit had been acquired in a business combination under which the consideration paid equals the calculated fair value of the reporting unit. The excess of the fair value of a reporting unit over the amounts assigned to its assets and liabilities is the implied fair value of goodwill. An impairment loss is recorded to the extent that the carrying amount of the goodwill exceeds the implied fair value of that goodwill for the particular reporting unit. We use the present value of future cash flows, discounted at our weighted average cost of capital, to determine fair value in combination with the market approach. Future cash flows are projected based upon our long-term forecasts by reportable unit and an estimated residual value. Our judgment is required in the estimation of future operating results and in determining the appropriate residual values of our reportable units. The residual values are determined by reference to an exchange transaction in an existing market for similar assets. Future operating results and residual values could reasonably differ from our estimates and a provision for impairment may be required in a future period depending upon such a change in circumstances or the occurrence of future events.

As of our annual testing date, August 31, 2018, we had five reporting units with goodwill balances: two reporting units included in our NA Engineered Components operating segment, two reporting units included in our EU Engineered Components operating segment, and one reporting unit included in our NA Cabinet Components operating segment. For the reporting units in our NA Engineered Components and our EU Engineered Components operating segments, we performed a qualitative assessment and determined that there were no indicators of impairment. Therefore, no additional goodwill impairment testing was deemed necessary for those units. For the reporting unit included in our NA Cabinet Components operating segment, we performed the first step of the goodwill impairment test at March 31, 2018, as our annual long-range planning effort produced lower forecasted results compared to the prior year's process, a potential indicator of impairment. We determined the fair value of this reportable unit exceeded its carrying value by approximately 4.5%. At August 31, 2018, additional qualitative factors were considered and the step-one analysis was updated. The determined fair value of this reportable unit continued to exceed the carrying value by 7.2%.

Restructuring

We account for restructuring costs in accordance with U.S. GAAP, whereby we accrue for one-time severance benefits pursuant to an approved plan of restructuring at the communication date, when affected employees have been notified of the potential severance and sufficient information has been provided for the employee to calculate severance benefits, in the event the employee is involuntarily terminated. In addition, we accrue costs associated with the termination of contractual commitments including operating leases at the time the lease is terminated pursuant to the lease provisions or in accordance with another agreement with the landlord. Otherwise, we continue to recognize operating lease expense through the cease-use date. After the cease-use date, we determine if our operating lease payments are at market. We assume sublet of the facility at the market rate. To the extent our lease obligations exceed the fair value rentals, we discount to arrive at the present value and record a liability. If the facility is not sublet, we expense the amount of the lease in the current period until sublet. For other costs directly related to the restructuring effort, such as equipment moving costs, we expense in the period incurred.

In October 2016, we announced the closure of three operating plants, two related to our United States vinyl operations, and one related to our kitchen and bathroom cabinet door business in Mexico. We expensed \$0.5 million pursuant to these restructuring efforts as of October 31, 2016, including an accrual for one-time severance cost of \$0.4 million included in accrued liabilities in the accompanying consolidated balance sheet. Our facility lease obligations were deemed to be at fair market value. In 2017, we

incurred costs related to these plant closures including equipment moving costs, additional employee termination and severance costs, retirements and inventory adjustments, operating lease costs, accelerated amortization and depreciation costs, and equipment lease termination costs. In addition, we incurred costs related to the closure of a kitchen and bathroom cabinet door plant in Lansing, Kansas. Restructuring costs totaled \$4.6 million for the year ended October 31, 2017. During the year ended October 31, 2018, we negotiated the exit from one of the vinyl extrusion plants, and the lease for the plant in Lansing, Kansas expired. During the year ended October 31, 2018, we incurred \$1.5 million of restructuring costs related to these leases, and expect to continue to incur costs related to the remaining vinyl plant during fiscal 2019 until such time we are able to sublet or otherwise negotiate an exit from the facility.

Income Taxes

We operate in various jurisdictions and therefore our income tax expense relates to income taxes in the United States, United Kingdom, Canada, and Germany, as well as local and state income taxes. We recognize the effect of a change in tax rates in the period of the change. We record the estimated future tax effects of temporary differences between the tax basis of assets and liabilities and the amounts reported in our consolidated balance sheets, as well as net operating losses and tax credit carry forward. We evaluate the carrying value of our net deferred tax assets and determine if our business will generate sufficient future taxable income to realize the net deferred tax assets. We perform this review for recoverability on a jurisdictional basis, whereby we consider both positive and negative evidence related to the likelihood of realization of the deferred tax assets. The weight given to the positive and negative evidence is commensurate with the extent to which the evidence can be objectively verified. We evaluate recoverability based on an estimate of future taxable income using the long-term forecasts we use to evaluate long-lived assets, goodwill and intangible assets for impairment, taking into consideration the future reversal of existing taxable temporary differences and reviewing our current financial operations. In the event that our estimates and assumptions indicate we will not generate sufficient future taxable income to realize our deferred tax assets, we will record a valuation allowance, to the extent indicated, to reduce our deferred tax assets to their realizable value.

Annually, we evaluate our tax positions to determine if there have been any changes in uncertain tax positions or if there has been a lapse in the statute of limitations with regard to such positions. Our liability for uncertain tax positions at October 31, 2018 and 2017 totaled \$0.6 million and related to certain state tax items regarding the interpretation of tax laws and regulations.

We believe we will have sufficient taxable income in the future to fully utilize our unreserved deferred tax assets recorded as of October 31, 2018. There is a risk that our estimates related to the future use of loss carry forwards and our ability to realize our deferred tax assets may not come to fruition, and that the results could materially impact our financial position and results of operations. We have recorded the benefit associated with the “patent box” deduction in the United Kingdom with regard to our operations at HLP. We believe that it is more likely than not that our deduction with regard to this position would be sustained upon examination. In addition, we recorded the effect of a statutory change in the deferred tax rate from 19% to 17% in the United Kingdom in 2017 results, which provided a discrete tax benefit of \$1.0 million during the period. Our deferred tax assets at October 31, 2018 and 2017 totaled \$19.8 million and \$28.0 million, respectively, against which we had recorded a valuation allowance of \$1.3 million and \$1.3 million, respectively.

Insurance

We manage our costs of workers’ compensation, group medical, property, casualty and other liability exposures through a combination of self-insurance retentions and insurance coverage with third-party carriers. Liabilities associated with our portion of this exposure are not discounted. We estimate our exposure by considering various factors which may include: (1) historical claims experience, (2) severity factors, (3) estimated claims incurred but not reported and (4) loss development factors, which are used to estimate how claims will develop over time until settled or closed. While we consider a number of factors in preparing our estimate of risk exposure, we must use our judgment to determine the amounts to accrue in our financial statements. Actual claims can differ significantly from estimated liabilities if future claims experience differs from historical experience, and if we determine that our assumptions used for analysis or our development factors are flawed. We do not recognize insurance recoveries until any contingencies relating to the claim have been resolved.

Inventory

We record inventory at the lower of cost or net realizable value. Inventories are valued using the first-in first-out (FIFO) and last-in first-out (LIFO) methods. We use the dollar-value link chain LIFO method, and the LIFO reserve is calculated on a consolidated basis in a single consolidated pool. We recorded an expense of \$0.3 million associated with a change in LIFO for the year ended October 31, 2018. Conversely, we recorded a benefit associated with the change in the LIFO reserve of approximately \$0.3 million for the year ended October 31, 2016. We did not record a LIFO reserve adjustment for the year ended October 31, 2017. When we integrate acquisitions into our business, we may value inventory utilizing either the LIFO or FIFO basis. Fixed costs related to excess manufacturing capacity have been expensed in the period, and therefore, are not capitalized into inventory. Inventory quantities are regularly reviewed and provisions for excess or obsolete inventory are recorded primarily based on our forecast of future demand and market conditions. Significant unanticipated changes to our forecasts or changes in the net realizable value of our inventory would require a change in the provision for excess or obsolete inventory. For the years ended October 31, 2018, 2017 and 2016, our inventory reserves excluding the LIFO reserve, are approximately 6%, 5%, and 6% of gross inventory, respectively. Assuming an increase in obsolescence equal to 1% of gross inventory, net income would have been reduced by \$1.0 million and \$0.7 million for the years ended October 31, 2018 and 2017, respectively, and net loss from continuing operations would have been increased by \$0.3 million in 2016.

Retirement Plans

We sponsor a defined benefit pension plan and an unfunded postretirement plan that provides health care and life insurance benefits for a limited pool of eligible retirees and dependents. The measurement of liabilities related to these plans is based on our assumptions related to future events, including expected return on plan assets, rate of compensation increases, and healthcare cost trend rates. The discount rate reflects the rate at which benefits could be effectively settled on the measurement date. We determine our discount rate using a RATE: Link Model whereby target yields are developed from bonds across a range of maturity points, and a curve is fitted to those targets. Spot rates (zero coupon bond yields) are developed from the curve and used to discount benefit payments associated with each future year. This model assumes spot rates will remain level beyond the 30-year point. We determine the present value of plan benefits by applying the discount rates to projected benefit cash flows. Actual pension plan asset investment performance, as well as other economic experience such as discount rate and demographic experience, will either reduce or increase unamortized pension losses at the end of any fiscal year, which ultimately affects future pension costs.

The effects of the decrease in selected assumptions, assuming no changes in benefit levels and no amortization of gains or losses for the pension plans in fiscal 2018, is shown below:

	Increase in Projected Benefit Obligation	Increase in Net Periodic Benefit Cost
Changes in Assumptions:	(Dollar amounts in thousands)	
1% decrease in discount rate	\$ 4,426	\$ 548
1% decrease in expected long-term rate of return on plan assets	N/A	\$ 309

As of October 31, 2018, our projected benefit obligation (PBO) and accumulated benefit obligation (ABO) exceeded the fair value of the plan assets by \$3.9 million and \$3.3 million, respectively. As a comparison, our PBO and ABO exceeded the fair value of plan assets by \$4.0 million and \$3.1 million, respectively, as of October 31, 2017. During fiscal 2018, we contributed \$0.8 million to the pension plan to continue to target a 100% funding threshold and to meet minimum contribution requirements. We expect to continue to fund at this level for fiscal 2019. Expected contributions are dependent on many variables, including the variability of the market value of the assets as compared to the obligation and other market or regulatory conditions. In addition, we take into consideration our business investment opportunities and our cash requirements. Accordingly, actual funding may differ greatly from current estimates.

Under U.S. GAAP, we are not required to immediately recognize the effects of a deviation between actual and assumed experience under our pension plan, or to revise our estimate as a result. This approach allows the favorable and unfavorable effects that fall within an acceptable range to be netted and disclosed as an unrecognized gain or loss. As of October 31, 2018 and 2017, a net actuarial loss of \$3.0 million and \$5.2 million, respectively, was included in our accumulated other comprehensive income (loss). There were no net prior service costs or transition obligations for the years ended October 31, 2018 and 2017. The effect on fiscal years after 2018 will depend on the actual experience of the plans.

Mortality assumptions used to determine the obligations for our pension plans are based on the RP-2006 base mortality table with MP-2018 mortality improvement scale.

Stock-Based Compensation

We have issued stock-based compensation in the form of stock options to directors, employees and officers, and non-vested restricted stock awards to certain key employees and officers. We apply the provisions of ASC Topic 718 “*Compensation - Stock Compensation*” (ASC 718), to determine the fair value of stock option awards on the date of grant using the Black-Scholes valuation model. We recognize the fair value as compensation expense on a straight-line basis over the requisite service period of the award based on awards ultimately expected to vest. Stock options granted to directors vest immediately while the stock options granted to our employees and officers typically vest ratably over a three-year period with service and continued employment as the vesting conditions. For new option grants to retirement-eligible employees, we recognize expense and vest immediately upon grant, consistent with the retirement vesting acceleration provisions of these grants. For employees near retirement age, we amortize such grants over the period from the grant date to the retirement-eligibility date if such period is shorter than the standard vesting schedule. For grants of non-vested restricted stock, we calculate the compensation expense at the grant date as the number of shares granted multiplied by the closing stock price of our common stock on the date of grant. This expense is recognized ratably over the vesting period. Our non-vested restricted stock grants to officers and employees cliff vest over a three-year period with service and continued employment as the only vesting criteria. Our fair value determination of stock-based payment awards on the date of grant using an option-pricing model is affected by our stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, our expected stock price volatility over the term of the awards, actual and projected employee stock option exercise behavior over the expected term, our dividend rate, risk-free rate and expectation with regards to forfeitures. Option-pricing models were developed for use in estimating the value of traded options that have no vesting or hedging restrictions and are fully transferable. Because our employee stock options have certain characteristics that are significantly different from traded options, and because changes in the subjective assumptions can materially affect the estimated value, the valuation models may not provide an accurate measure of the fair value of our employee stock options. Accordingly, that value may not be indicative of the fair value observed in a willing buyer/willing seller market transaction.

We have granted other awards which are linked to the performance of our common stock, but will settle in cash rather than the issuance of shares of our common stock. The value of these awards fluctuates with changes in our stock price, with the resulting gains or losses reflected in the period of the change. We have recorded current and non-current liabilities related to these awards reflected in our consolidated balance sheets at October 31, 2018 and 2017, included elsewhere within this Annual Report on Form 10-K.

In addition, we have granted performance share awards which settle in cash and shares. These awards have vesting criteria based on a market condition (relative total shareholder return) and an internal performance condition (earnings per share growth). We utilize a Monte Carlo simulation model to value the market condition and our stock price on the date of grant to value the internal performance condition. We bifurcate the liability and equity portion of the awards (amounts expected to settle in cash and shares, respectively) and recognize expense ratably over the vesting period of three years. We estimate that the performance measures will be met and shares will vest at target until the year of settlement (third year of cliff vesting). For the year ended October 31, 2018, we do not expect any shares to vest.

We also awarded performance restricted stock units to key employees and officers in December 2017. These awards cliff vest upon a three-year service period with the absolute total shareholder return of our common stock over this three-year term as the vesting criteria. The number of performance restricted stock units earned is variable depending on the metric achieved, and the settlement method is 100% in our common stock, with accrued dividends paid in cash at the time of vesting, assuming the shares had been outstanding throughout the performance period. To value the performance restricted stock units, we utilize a Monte Carlo simulation model to arrive at a grant-date fair value. This amount will be adjusted for forfeitures and expensed over the three-year term of the award with a credit to additional paid-in-capital. Similar to performance shares, the performance restricted stock units are not considered outstanding shares, do not have voting rights, and are excluded from diluted weighted-average shares used to calculate earnings per share until the performance criteria is probable to result in the issuance of contingent shares.

Recent Accounting Pronouncements

In May 2017, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2017-09, *Compensation - Stock Compensation (Topic 718)*, which provides guidance as to when changes in share-based payment awards under Topic 718 should be accounted for as a modification of the award. Essentially, the changes should be considered a modification unless specific criteria are met. This guidance becomes effective for annual periods and interim periods within those annual periods, beginning after December 15, 2017. We will adopt this guidance in Fiscal 2019. We do not expect this guidance to have a material impact on our consolidated financial statements.

In March 2017, the FASB issued ASU No. 2017-07, *Compensation - Retirement Benefits (Topic 715), Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. This update provides explicit guidance on how to present the service cost component and other components of net benefit cost in the income statement and allows only

the service cost component of net benefit cost to be eligible for capitalization. The amendments in this update are effective for annual periods beginning after December 15, 2017. We anticipate adopting ASU 2017-07 in fiscal 2019 and are currently evaluating the impact on our consolidated financial statements.

In January 2017, the FASB issued ASU 2017-04, *Intangibles - Goodwill and Other (Topic 350)*. This guidance simplifies the current two-step goodwill impairment test by eliminating the second step. Essentially, the entity would compare the fair value of a reporting unit with its carrying value amount and recognize an impairment charge for the amount by which the carrying value exceeds the fair value. The resulting loss would be limited to the amount of goodwill. This guidance also eliminates the requirement for a reporting unit with zero or negative carrying value to perform a qualitative assessment of goodwill and apply step-two of the goodwill impairment test if the qualitative assessment fails. Thus, the same impairment assessment will be applied to all reporting units (even if the carrying value is zero or negative). This guidance should be applied prospectively and becomes effective for public entities for the annual period, and interim periods within that year, beginning after December 15, 2019. We will adopt this guidance in Fiscal 2021. We are currently evaluating the impact that this guidance will have on our consolidated financial statements.

In January 2017, the FASB issued ASU 2017-01, *Business Combinations (Topic 805)*, which provides clarity when determining whether a set of assets and activities constitutes a business. Specifically, if substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or a group of similar identifiable assets, the set is not deemed to be a business. This guidance becomes effective for public entities for annual periods beginning after December 15, 2017. We will adopt this guidance in Fiscal 2019. We are currently evaluating the impact that this guidance will have on our consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230), Classification of Certain Cash Receipts and Cash Payments*. This amendment is intended to reduce diversity in practice as to how certain cash receipts and cash payments are presented and classified in the statement of cash flows by providing guidance for several specific cash flow issues. This guidance becomes effective for fiscal years beginning after December 15, 2017 and, therefore, we will adopt this pronouncement in fiscal 2019. We are currently evaluating the impact of this pronouncement on our consolidated financial statements.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326)*. This amendment replaces the incurred loss impairment methodology in current U.S. GAAP and requires that financial assets be measured on an amortized cost basis and presented at the net amount expected to be collected. This new methodology reflects expected credit losses (rather than probable credit losses) and requires consideration of a broader range of supportable information when determining these estimated credit losses, including relevant experience, current conditions and supportable forecasts to determine collectability. In addition, the amendment provides guidance with regard to the use of an allowance for credit losses for purchased financial assets and available-for-sale debt securities. This amendment becomes effective for fiscal years beginning after December 15, 2019, including interim periods within that fiscal year. We expect to adopt this amendment during fiscal 2021, with no material impact on our consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842): Amendments to the Accounting Standards Codification*. These amendments replace current guidance and require the recognition of lease assets and lease liabilities by lessees for those leases classified as operating leases under previous U.S. GAAP. The amendments apply to any entity that enters into leasing arrangements. This guidance becomes effective for fiscal years beginning after December 15, 2018, and, therefore, we will adopt this pronouncement in fiscal 2020. We are currently evaluating the impact of this pronouncement on our consolidated financial statements.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers*, which supersedes and replaces existing revenue recognition guidance, including industry specific guidance. This guidance prescribes a principles-based approach to revenue recognition under which revenue is recognized as goods and services are transferred to the customer in the amount the entity expects to be entitled to in exchange for those goods or services. In addition, this guidance requires additional disclosures regarding the nature, amount, timing and uncertainty of revenue from contracts with customers. We will adopt this guidance as of November 1, 2018 using the modified retrospective approach with a cumulative adjustment to retained earnings.

As of October 31, 2018, we have completed the evaluation of our revenue streams and have reviewed samples of customer contracts that we believe fairly represent contract traits that could be accounted for differently under amended guidance. We have evaluated the potential impact of the new revenue standard on each of the selected contracts including: (i) estimating the contract consideration under the new standard, (ii) identifying the performance obligations within the customer contracts, (iii) calculating the anticipated allocation of contract consideration to each performance obligation, (iv) determining the timing of revenue recognition for each performance obligation, and (v) determining the classification of the contract revenue for disclosure purposes.

Based on the contract reviews and evaluations performed to date, we do not anticipate any material impacts from implementing the amended guidance.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

The following discussion of our exposure to various market risks contains “forward looking statements” regarding our estimates, assumptions and beliefs concerning our exposure. Although we believe these estimates and assumptions are reasonable in light of information currently available to us, we cannot provide assurance that these estimates will not materially differ from actual results due to the inherent unpredictability of interest rates, foreign currency rates and commodity prices as well as other factors. We do not use derivative financial instruments for speculative or trading purposes.

Interest Rate Risk

Our outstanding debt bears interest at variable rates and accordingly is sensitive to changes in interest rates. Based upon the balances of the variable rate debt at October 31, 2018, a hypothetical 1.0% increase or decrease in interest rates could result in approximately \$2.0 million of additional pre-tax charges or credit to our operating results. This sensitivity pertains primarily to our outstanding Term Loan A and revolving credit facility borrowings outstanding under the Credit Agreement as of October 31, 2018.

Foreign Currency Rate Risk

Our international operations have exposure to foreign currency rate risks, primarily due to fluctuations in the Euro, the British Pound Sterling and the Canadian Dollar. From time to time, we enter into foreign exchange contracts associated with our operations to manage a portion of the foreign currency rate risk.

The notional and fair market values of these positions at October 31, 2018 and 2017, were as follows:

		Notional as indicated		Fair Value in \$	
		October 31, 2018	October 31, 2017	October 31, 2018	October 31, 2017
Foreign currency exchange derivatives:		(In thousands)			
Buy EUR, Sell USD	EUR	455	1,271	\$ 1	\$ 24
Sell CAD, Buy USD	CAD	229	320	—	1
Sell GBP, Buy USD	GBP	22	75	—	—
Buy EUR, Sell GBP	EUR	34	30	—	(1)
Buy USD, Sell EUR	USD	12	—	—	—

At October 31, 2018 and 2017, we held foreign currency derivative contracts hedging cross-border intercompany and commercial activity for our insulating glass spacer business. Although these derivatives hedge our exposure to fluctuations in foreign currency rates, we do not apply hedge accounting and therefore, the change in the fair value of these foreign currency derivatives is recorded directly to other income and expense in the accompanying consolidated statements of income (loss). To the extent the gain or loss on the derivative instrument offsets the gain or loss from the remeasurement of the underlying foreign currency balance, changes in exchange rates should have no effect. See Note 13, "Derivative Instruments", contained elsewhere herein this Annual Report on Form 10-K.

During the October 2018, we settled an unhedged foreign currency intercompany loan which facilitated the HLP acquisition. For the year ended October 31, 2018, we recorded a realized loss of less than \$0.1 million related to this foreign currency exposure. For the year ended October 31, 2017, we recorded a foreign currency gain of \$0.7 million, of which \$0.5 million was realized.

In July 2016, the United Kingdom voted to exit the European Union (commonly referred to as “Brexit”), which has impacted the valuation of the British Pound Sterling relative to other currencies used in our business, including our reporting currency, the United States Dollar. Although we do not know the long-term effects of this change, our operations have been impacted somewhat primarily with regard to the cost of materials purchased by our British subsidiaries from suppliers who ultimately source from outside the United Kingdom. We continue to monitor our exposure to changes in exchange rates.

Commodity Price Risk

We purchase polyvinyl resin (PVC) as the significant raw material consumed in the manufacture of vinyl extrusions. We have a monthly resin adjuster in place with a majority of our customers and our resin supplier that is adjusted based upon published industry indices for resin prices for the prior month. This adjuster effectively shares the base pass-through price changes of PVC with our customers commensurate with the market at large. Our long-term exposure to changes in PVC prices is somewhat mitigated due to the contractual component of the resin adjuster program. In addition, there is a level of exposure to short-term volatility due to the one month lag.

We also charge our customers a surcharge related to petroleum-based raw materials. The surcharge is intended to offset the rising cost of products which are highly correlated to the price of oil including butyl and other oil-based raw materials. The surcharge is in place with the majority of our customers who purchase these products and is adjusted monthly based upon the 90-day average published price for Brent crude. The oil-based raw materials that we purchase are subject to similar pricing schemes. As such, our long-term exposure to changes in oil-based raw material prices is significantly reduced under this surcharge program.

Similarly, Woodcraft includes a surcharge provision in the majority of its customer arrangements to insulate against significant fluctuations in the price for various hardwood products used as the primary raw material for kitchen and bathroom cabinet doors. Like our vinyl extrusion business, we are exposed to short-term volatility in wood prices due to a lag in the timing of price updates which generally could extend for up to three months.

From time to time, in the normal course of business, we may enter into firm price sales commitments with customers in which aluminum is an integral fabrication input. In an effort to protect cost of sales from the effects of changing prices of aluminum, we enter into firm price raw material purchase commitments, which are designated as "normal purchases" under Accounting Standards Codification Topic 815, *"Derivatives and Hedging."* As a result, firm price sales commitments are matched with firm price raw material purchase commitments so that changes in aluminum prices should have no effect. While we consider the derivative contracts to provide an economic hedge against changes in aluminum prices, the derivatives have not been designated as hedges in accordance with ASC 815 for accounting purposes. As such, any mark-to-market net gain or loss is recorded as a period cost with the offsetting amount reflected as an asset or liability on the balance sheet. During the year ended October 31, 2016, we incurred a gain of less than \$0.1 million on a forward purchase contract with a notional amount of approximately 1.4 million pounds of aluminum. There were no contracts outstanding as of October 31, 2016, and there were no such contracts utilized during the years ended October 31, 2018 and 2017. For additional details, see Note 13, "Derivative Instruments," contained elsewhere herein this Annual Report on Form 10-K.

Item 8. Financial Statements and Supplementary Data.

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Quanex Building Products Corporation

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders
Quanex Building Products Corporation

Opinion on the financial statements

We have audited the accompanying consolidated balance sheets of Quanex Building Products Corporation (a Delaware corporation) and subsidiaries (the “Company”) as of October 31, 2018 and 2017, the related consolidated statements of income (loss), comprehensive income (loss), stockholders’ equity, and cash flows for each of the three years in the period ended October 31, 2018, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of October 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended October 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), the Company’s internal control over financial reporting as of October 31, 2018, based on criteria established in the 2013 Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”), and our report dated December 11, 2018 expressed an unqualified opinion.

Basis for opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ GRANT THORNTON LLP

We have served as the Company's auditor since 2014.

Houston, Texas
December 11, 2018

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders
Quanex Building Products Corporation

Opinion on internal control over financial reporting

We have audited the internal control over financial reporting of Quanex Building Products Corporation (a Delaware corporation) and subsidiaries (the “Company”) as of October 31, 2018, based on criteria established in the 2013 Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 11, 2018, based on criteria established in the 2013 Internal Control-Integrated Framework issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), the consolidated financial statements of the Company as of and for the year ended October 31, 2018, and our report dated December 11, 2018 expressed an unqualified opinion on those financial statements.

Basis for opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and limitations of internal control over financial reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ GRANT THORNTON LLP

Houston, Texas
December 11, 2018

MANAGEMENT'S ANNUAL REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Management of the Company, including the Chief Executive Officer and Chief Financial Officer, is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended. The Company's internal control system was designed to provide reasonable assurance to management and the Company's Board of Directors regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

All internal control systems, no matter how well designed, have inherent limitations. A system of internal control may become inadequate over time because of changes in conditions, or deterioration in the degree of compliance with the policies or procedures. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Management assessed the effectiveness of the Company's internal control over financial reporting as of October 31, 2018 using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control — Integrated Framework (2013)*. Based on this assessment, management has concluded that, as of October 31, 2018, the Company's internal control over financial reporting was effective to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles based on such criteria.

Grant Thornton LLP, the Company's independent registered public accounting firm, has issued an attestation report on the effectiveness of the Company's internal control over financial reporting. This report appears on page 45.

QUANEX BUILDING PRODUCTS CORPORATION
CONSOLIDATED BALANCE SHEETS
As of October 31, 2018 and 2017

	October 31,	
	2018	2017
(In thousands, except share amounts)		
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 29,003	\$ 17,455
Accounts receivable, net of allowance for doubtful accounts of \$325 and \$333 (Note 3)	84,014	79,411
Inventories, net (Note 4)	69,365	87,529
Prepaid and other current assets	7,296	7,406
Total current assets	189,678	191,801
Property, plant and equipment, net of accumulated depreciation of \$288,607 and \$264,047 (Note 5)	201,370	211,131
Goodwill (Note 6)	219,627	222,194
Intangible assets, net (Note 6)	121,919	139,778
Other assets	9,255	8,975
Total assets	\$ 741,849	\$ 773,879
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 52,389	\$ 44,150
Accrued liabilities (Note 7)	45,968	38,871
Income taxes payable (Note 11)	2,780	2,192
Current maturities of long-term debt (Note 8)	1,224	21,242
Total current liabilities	102,361	106,455
Long-term debt (Note 8)	209,332	218,184
Deferred pension and postretirement benefits (Note 9)	4,218	4,433
Deferred income taxes (Note 11)	17,215	21,960
Liability for uncertain tax positions (Note 11)	606	591
Other liabilities	13,965	15,409
Total liabilities	347,697	367,032
Commitments and contingencies (Note 12)		
Stockholders' equity:		
Preferred stock, no par value, shares authorized 1,000,000; issued and outstanding - none	—	—
Common stock, \$0.01 par value, shares authorized 125,000,000; issued 37,433,817 and 37,508,877 respectively; outstanding 33,339,032 and 34,838,134, respectively	374	375
Additional paid-in-capital	254,678	255,719
Retained earnings	242,834	225,704
Accumulated other comprehensive loss	(30,705)	(25,076)
Less: Treasury stock at cost, 4,094,785 and 2,670,743 shares, respectively	(73,029)	(49,875)
Total stockholders' equity	394,152	406,847
Total liabilities and stockholders' equity	\$ 741,849	\$ 773,879

See notes to consolidated financial statements.

QUANEX BUILDING PRODUCTS CORPORATION
CONSOLIDATED STATEMENTS OF INCOME (LOSS)
For the Years Ended October 31, 2018, 2017 and 2016

	Year Ended October 31,		
	2018	2017	2016
	(In thousands, except per share amounts)		
Net sales	\$ 889,785	\$ 866,555	\$ 928,184
Cost and expenses:			
Cost of sales (excluding depreciation and amortization)	696,567	672,162	710,644
Selling, general and administrative	103,535	97,981	114,910
Restructuring charges	1,486	4,550	529
Depreciation and amortization	51,822	57,495	53,146
Asset impairment charges	—	—	12,602
Operating income	36,375	34,367	36,353
Non-operating (expense) income:			
Interest expense	(11,100)	(9,595)	(36,498)
Other, net	178	730	(5,479)
Income (loss) from continuing operations before income taxes	25,453	25,502	(5,624)
Income tax benefit (expense)	875	(6,819)	3,765
Net income (loss)	\$ 26,328	\$ 18,683	\$ (1,859)
Basic earnings (loss) per common share	\$ 0.76	\$ 0.55	\$ (0.05)
Diluted earnings (loss) per common share	\$ 0.75	\$ 0.54	\$ (0.05)
Weighted-average common shares outstanding:			
Basic	34,701	34,230	33,876
Diluted	35,025	34,837	33,876
Cash dividends per share	\$ 0.20	\$ 0.16	\$ 0.16

See notes to consolidated financial statements.

QUANEX BUILDING PRODUCTS CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
For the Years Ended October 31, 2018, 2017 and 2016

	Year Ended October 31,		
	2018	2017	2016
	(In thousands)		
Net income (loss)	\$ 26,328	\$ 18,683	\$ (1,859)
Other comprehensive income (loss):			
Foreign currency translation adjustments (loss) gain	(6,640)	11,524	(26,838)
Change in pension from net unamortized gain (loss) (pretax)	2,253	3,462	(2,864)
Change in pension from net unamortized gain (loss) tax (expense) benefit	(1,242)	(1,297)	986
Total other comprehensive (loss) income, net of tax	(5,629)	13,689	(28,716)
Comprehensive income (loss)	\$ 20,699	\$ 32,372	\$ (30,575)

See notes to consolidated financial statements.

QUANEX BUILDING PRODUCTS CORPORATION
CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
For the Years Ended October 31, 2018, 2017 and 2016

	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Treasury Stock		Total Stockholders' Equity
	Shares	Amount				Shares	Amount	
(In thousands, except share amounts)								
Balance at October 31, 2015	37,609,563	\$ 376	\$ 250,937	\$ 222,138	\$ (10,049)	(3,647,103)	\$ (68,107)	\$ 395,295
Net loss	—	—	—	(1,859)	—	—	—	(1,859)
Foreign currency translation adjustment	—	—	—	—	(26,838)	—	—	(26,838)
Change in pension from net unamortized gain (net of tax benefit of \$986)	—	—	—	—	(1,878)	—	—	(1,878)
Common dividends (\$0.16 per share)	—	—	—	(5,470)	—	—	—	(5,470)
Expense related to stock-based compensation	—	—	6,089	—	—	—	—	6,089
Stock options exercised	—	—	(106)	(637)	—	221,850	4,143	3,400
Tax benefit from share-based compensation	—	—	(146)	—	—	—	—	(146)
Restricted stock awards granted	—	—	(1,591)	(6)	—	85,500	1,597	—
Other	(49,314)	—	(643)	(119)	—	—	—	(762)
Balance at October 31, 2016	37,560,249	\$ 376	\$ 254,540	\$ 214,047	\$ (38,765)	(3,339,753)	\$ (62,367)	\$ 367,831
Net loss	—	—	—	18,683	—	—	—	18,683
Foreign currency translation adjustment	—	—	—	—	11,524	—	—	11,524
Change in pension from net unamortized gain (net of tax expense of \$1,297)	—	—	—	—	2,165	—	—	2,165
Common dividends (\$0.16 per share)	—	—	—	(5,516)	—	—	—	(5,516)
Expense related to stock-based compensation	—	—	5,189	—	—	—	—	5,189
Stock options exercised	—	—	(76)	(1,451)	—	507,660	9,480	7,953
Tax benefit from share-based compensation	—	—	(4)	—	—	—	—	(4)
Restricted stock awards granted	—	—	(1,752)	—	—	161,350	1,752	—
Performance share awards vested	—	—	(1,261)	—	—	—	1,261	—
Other	(51,372)	(1)	(917)	(59)	—	—	(1)	(978)
Balance at October 31, 2017	37,508,877	\$ 375	\$ 255,719	\$ 225,704	\$ (25,076)	(2,670,743)	\$ (49,875)	\$ 406,847
Net income	—	—	—	26,328	—	—	—	26,328
Foreign currency translation adjustment	—	—	—	—	(6,640)	—	—	(6,640)
Change in pension from net unamortized loss (net of tax expense of \$1,242)	—	—	—	—	1,011	—	—	1,011
Common dividends (\$0.20 per share)	—	—	—	(7,020)	—	—	—	(7,020)
Treasury shares purchased, at cost	—	—	—	—	—	(1,900,000)	(32,034)	(32,034)
Expense related to stock-based compensation	—	—	1,874	—	—	—	—	1,874
Stock options exercised	—	—	(149)	(2,141)	—	377,218	7,036	4,746
Restricted stock awards granted	—	—	(1,371)	—	—	73,400	1,371	—
Performance share awards vested	—	—	(473)	—	—	25,340	473	—
Other	(75,060)	(1)	(922)	(37)	—	—	—	(960)
Balance at October 31, 2018	37,433,817	\$ 374	\$ 254,678	\$ 242,834	\$ (30,705)	(4,094,785)	\$ (73,029)	\$ 394,152

See notes to consolidated financial statements.

QUANEX BUILDING PRODUCTS CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOW
For the Years Ended October 31, 2018, 2017 and 2016

	Year Ended October 31,		
	2018	2017	2016
	(In thousands)		
Operating activities:			
Net income (loss)	\$ 26,328	\$ 18,683	\$ (1,859)
Adjustments to reconcile net income (loss) to cash provided by operating activities:			
Depreciation and amortization	51,822	57,495	53,146
(Gain) loss on disposition of capital assets	(142)	1,528	(20)
Stock-based compensation	1,874	5,189	6,089
Deferred income tax	(5,631)	(112)	(8,469)
Charge for deferred loan costs and debt discount	1,064	—	16,022
Asset impairment charges	—	—	12,602
Other, net	135	1,741	339
Changes in assets and liabilities, net of effects from acquisitions:			
(Increase) decrease in accounts receivable	(5,550)	5,378	796
Decrease (increase) in inventory	17,530	(3,240)	5,346
Decrease in other current assets	217	186	2,503
Increase (decrease) in accounts payable	8,325	(4,893)	(2,273)
Increase (decrease) in accrued liabilities	6,892	(7,521)	2,033
Increase (decrease) in income taxes	676	4,670	(365)
Increase (decrease) in deferred pension and postretirement benefits	2,038	(271)	588
(Decrease) increase in other long-term liabilities	(523)	1,382	956
Other, net	(444)	(437)	(93)
Cash provided by operating activities	104,611	79,778	87,341
Investing activities:			
Acquisitions, net of cash acquired	—	(8,497)	(245,904)
Capital expenditures	(26,484)	(34,564)	(37,243)
Proceeds from disposition of capital assets	432	1,937	1,044
Cash used for investing activities	(26,052)	(41,124)	(282,103)
Financing activities:			
Borrowings under credit facility	268,500	53,500	634,800
Repayments of credit facility borrowings	(296,250)	(98,875)	(422,875)
Debt issuance costs	(1,001)	—	(11,435)
Repayments of other long-term debt	(1,798)	(2,722)	(2,185)
Common stock dividends paid	(7,020)	(5,516)	(5,470)
Issuance of common stock	4,746	7,953	3,400
Payroll tax paid to settle shares forfeited upon vesting of stock	(960)	(976)	(787)
Purchase of treasury stock	(32,034)	—	—
Cash (used for) provided by financing activities	(65,817)	(46,636)	195,448
Effect of exchange rate changes on cash and cash equivalents	(1,194)	(89)	1,715
Increase (decrease) in cash and cash equivalents	11,548	(8,071)	2,401
Cash and cash equivalents at beginning of period	17,455	25,526	23,125
Cash and cash equivalents at end of period	\$ 29,003	\$ 17,455	\$ 25,526

See notes to consolidated financial statements.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Nature of Operations, Basis of Presentation and Significant Accounting Policies

Nature of Operations

Quanex Building Products Corporation is a component supplier to original equipment manufacturers (OEMs) in the building products industry. These components can be categorized as window and door (fenestration) components and kitchen and bath cabinet components. Examples of fenestration components include: (1) energy-efficient flexible insulating glass spacers, (2) extruded vinyl profiles, (3) window and door screens, and (4) precision-formed metal and wood products. We also manufacture cabinet doors and other components for OEMs in the kitchen and bathroom cabinet industry. In addition, we provide certain other non-fenestration components and products, which include solar panel sealants, trim moldings, vinyl decking, fencing, water retention barriers, and conservatory roof components. We have organized our business into three reportable business segments. For additional discussion of our reportable business segments, including the transfer of two wood-manufacturing plants from the NA Engineered Components segment to the NA Cabinet Component segment, see Note 18, "Segment Information." We use low-cost production processes and engineering expertise to provide our customers with specialized products for their specific window, door, and cabinet applications. We believe these capabilities provide us with unique competitive advantages. We serve a primary customer base in North America and the United Kingdom, and also serve customers in international markets through our operating plants in the United Kingdom and Germany, as well as through sales and marketing efforts in other countries.

Unless the context indicates otherwise, references to "Quanex", the "Company", "we", "us" and "our" refer to the consolidated business operations of Quanex Building Products Corporation and its subsidiaries.

Basis of Presentation and Principles of Consolidation

Our consolidated financial statements have been prepared by us in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP). We consolidate our wholly-owned subsidiaries and eliminate intercompany sales and transactions. We have no cost or equity investments in companies that are not wholly-owned. In our opinion, these audited financial statements contain all adjustments necessary to fairly present our financial position, results of operations and cash flows for the periods presented.

Use of Estimates

In preparing financial statements, we make informed judgments and estimates that affect the reported amounts of assets and liabilities as of the date of the financial statements and affect the reported amounts of revenues and expenses during the reporting period. We review our estimates on an ongoing basis, including those related to impairment of long lived assets and goodwill, contingencies and income taxes. Changes in facts and circumstances may result in revised estimates and actual results may differ from these estimates. During the year ended October 31, 2017, we recorded a change in estimate related to certain assets involved in restructuring activities, as more fully described under the caption "Restructuring."

A summary of our significant accounting policies consistently applied in the preparation of the accompanying consolidated financial statements follows:

Revenue Recognition

We recognize revenue when products are shipped and when title has passed to the customer. Revenue is deemed to be realized or earned when the following criteria are met: (a) persuasive evidence that a contractual sales arrangement exists; (b) delivery has occurred; or when title passes to the buyers; (c) the price to the buyer is fixed or determinable; and (d) collection is reasonably assured. Sales allowances and customer incentives, including volume discounts or rebates, are treated as reductions to revenue and are provided for based on historical experience, current estimates or contract terms.

Cash and Cash Equivalents

Cash equivalents include all highly liquid investments with an original maturity of three months or less. Such securities with an original maturity which exceeds three months are deemed to be short-term investments. We maintain cash and cash equivalents at several financial institutions, which at times may not be federally insured or may exceed federally insured limits. We have not experienced any losses in such accounts and believe we are not exposed to any significant credit risks on such accounts.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Concentration of Credit Risk and Allowance for Doubtful Accounts

Certain of our businesses or product lines are largely dependent on a relatively few large customers. Although we believe we have an extensive customer base, the loss of one of these large customers or if such customers were to incur a prolonged period of decline in business, our financial condition and results of operations could be adversely affected. For the years ended October 31, 2018 and 2017, no customers provided more than 10% of our consolidated net sales. For the year ended October 31, 2016, one customer provided 10% of our consolidated sales.

We have established an allowance for doubtful accounts to estimate the risk of loss associated with our accounts receivable balances. Our policy for determining the allowance is based on factors that affect collectability, including: (a) historical trends of write-offs, recoveries and credit losses; (b) the credit quality of our customers; and (c) projected economic and market conditions. We believe our allowance is adequate to absorb any known or probable losses as of October 31, 2018.

Business Combinations

We apply the acquisition method of accounting for business combinations in accordance with U.S. GAAP, which requires us to make use of estimates and judgments to allocate the purchase price paid for acquisitions to the fair value of the assets and liabilities acquired. We account for contingent assets and liabilities at fair value on the acquisition date, and record changes to fair value associated with these assets and liabilities as a period cost as incurred. We use established valuation techniques and engage reputable valuation specialists to assist us with these valuations.

Inventory

We record inventory at the lower of cost or market value. Inventories are valued using the first-in first-out (FIFO) and last-in first-out (LIFO) methods, although LIFO is only used at two of our plant locations currently. We use the dollar-value link chain LIFO method, and the LIFO reserve is calculated on a consolidated basis in a single consolidated pool. The businesses that we acquire and integrate into our operations may value inventories using either the LIFO or FIFO method. Fixed costs related to excess manufacturing capacity are evaluated and expensed in the period, to insure that inventory is properly capitalized. Inventory quantities are regularly reviewed and provisions for excess or obsolete inventory are recorded primarily based on our forecast of future demand and our estimates regarding current and future market conditions. Significant unanticipated variances to our forecasts could require a change in the provision for excess or obsolete inventory, resulting in a charge to net income during the period of the change.

Long-Lived Assets

Property, Plant and Equipment and Intangible Assets with Defined Lives

We make judgments and estimates related to the carrying value of property, plant and equipment, intangible assets with defined lives, and long-lived assets, which include determining when to capitalize costs, the depreciation and amortization methods to use and the useful lives of these assets. We evaluate these assets for impairment when there are indicators that the carrying values of these assets might not be recoverable. Such indicators of impairment may include changes in technology, significant market fluctuations, historical losses or loss of a significant customer, or other changes in circumstances that could affect the assets' ability to generate future cash flows. When we evaluate these assets for impairment, we compare the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset to its carrying value. If the carrying value exceeds the sum of the undiscounted cash flows, and there is no alternative use for the asset, we determine that the asset is impaired. To measure the impairment charge, we compare the carrying amount of the long-lived asset to its fair value, as determined by quoted market prices in active markets, if available, or by discounting the projected future cash flows using our incremental borrowing rate. This calculation of fair value requires us to develop and employ long-term forecasts of future operating results related to these assets. These forecasts are based on assumptions about demand for our products and future market conditions. Future events and unanticipated changes to these assumptions could require a provision for impairment, resulting in a charge to net income during the period of the change.

We monitor relevant circumstances, including industry trends, general economic conditions, and the potential impact that such circumstances might have on the valuation of our identifiable intangible assets with finite lives. Events and changes in circumstances that may cause a triggering event and necessitate such a review include, but are not limited to: a decrease in sales for certain customers, improvements or changes in technology, and/or a decision to discontinue the use of a trademark or trade name, or allow a patent to lapse. Such events could negatively impact the fair value of our identifiable intangible assets. In such circumstances, we may evaluate the underlying assumptions and estimates made by us in order to assess the appropriate valuation of these identifiable intangible assets and compare to the carrying value of the assets. We may be required to write down these

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

identifiable intangible assets and record a non-cash impairment charge. When we originally value our intangible assets, we use a variety of techniques to establish the carrying value of the assets, including the relief from royalty method, excess current year earnings method and income method.

Changes in market conditions during the fourth quarter of 2016 and throughout 2017 impacted our long-term forecasts of future operating results with regard to the reduction of significant sales volume to a large customer of our United States vinyl operations, and lower-than-expected operating performance of our North American Cabinet Components business. We determined that these conditions were indicators of triggering events which necessitated an evaluation of certain long-term assets utilized in these businesses for potential impairment. We compared the projected undiscounted cash flows we expected to realize associated with these assets over the remaining useful lives of the primary operating assets to the net book value of the long-term assets, including goodwill, and determined that these assets were not impaired. Therefore, we did not record an impairment charge related to property, plant and equipment or intangible assets with defined lives during the years ended October 31, 2017 and 2016. There were no indicators of triggering events noted for the year ended October 31, 2018.

Software development costs, including costs incurred to purchase third-party software, are capitalized when we have determined that the technology is capable of meeting our performance requirements, and we have authorized funding for the project. We cease capitalization of software costs when the software is substantially complete and is ready for its intended use. The software is then amortized over its estimated useful life. When events or circumstances indicate the carrying value of internal use software might not be recoverable, we assess the recoverability of these assets by comparing the carrying value of the asset to the undiscounted future cash flows expected to be generated from the asset's use, consistent with the methodology to test other property, plant and equipment for impairment.

Property, plant and equipment is stated at cost and is depreciated using the straight-line method over the estimated useful lives of the assets. We capitalize betterments which extend the useful lives or significantly improve the operational efficiency of assets. We expense repair and maintenance costs as incurred.

The estimated useful lives of our primary asset categories at October 31, 2018 were as follows:

	<u>Useful Life (in Years)</u>
Land improvements	7 to 25
Buildings	25 to 40
Building improvements	5 to 20
Machinery and equipment	2 to 15

Leasehold improvements are depreciated over the shorter of their estimated useful lives or the term of the lease.

Goodwill

We use the acquisition method to account for business combinations and, to the extent that the purchase price exceeds the fair value of the net assets acquired, we record goodwill. In accordance with U.S. GAAP, we are required to evaluate our goodwill on a qualitative basis to determine if there are indicators of impairment. If there are no indicators, no further analysis is deemed necessary. However, if there are indicators of impairment or if events or circumstances indicate there may be a potential impairment, we perform an annual goodwill impairment test as of August 31, or more frequently if indicators of impairment exist. This impairment test requires a two-step approach as prescribed in ASC Topic 350 "Intangibles - Goodwill and Other" (ASC 350). The first step of the impairment test requires us to compare the fair value of each reporting unit to its carrying value including goodwill. To determine fair value of our reporting units, we use multiple valuation techniques including a discounted cash flow analysis, using the applicable weighted average cost of capital, in combination with a market approach. This test requires us to make assumptions about the future growth of our business and the market in general, as well as other variables such as the level of investment in capital expenditure, growth in working capital requirements and the terminal or residual value of our reporting units beyond the periods of estimated annual cash flows. We use a third-party valuation firm to assist us with this analysis. If the fair value of each reporting unit exceeds its carrying value, no further testing is required. Otherwise, we perform the second step of the impairment test whereby we compare the implied fair value of goodwill to its carrying value. The implied fair value of goodwill is determined by applying the acquisition method of accounting for a business combination to the reporting unit as if it were acquired. Under this method, the fair value of the reporting unit is deemed to be the purchase price. The assets and liabilities are recorded at their fair value and the remaining excess of fair value is the implied value of goodwill. An impairment loss is recorded to the extent that the carrying amount of the reporting unit goodwill exceeds the implied fair value of that goodwill. Our estimates of future cash flows and the residual values could differ from actual cash flows which may require a provision for impairment in a future period.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

At our annual testing date, August 31, 2018, we had five reporting units with goodwill balances: two reporting units included in our NA Engineered Components operating segment, two reporting units included in our EU Engineered Components operating segment, and one reporting unit included in our NA Cabinet Components operating segment. We performed a qualitative assessment of the two reportable units in the NA Engineered Components segment and the two reportable units in the EU Engineered Components segment. This review included an analysis of historical goodwill test results, operating results relative to forecast, projected results over the next five years, and other measures and concluded that there were no indicators of potential impairment associated with these reportable units. Therefore, no additional testing was deemed necessary. For the reporting unit included in our NA Cabinet Components segment, we performed the first step of the goodwill impairment test at March 31, 2018, as our annual long-range planning effort produced lower forecasted results compared to the prior year's process, a potential indicator of impairment. We determined that the fair value of the net assets of this reporting unit exceeded the carrying value by approximately 4.5%. These results included the contribution and net assets of two wood-manufacturing plants transferred from the NA Engineered Components segment to the NA Cabinet Components segment during 2018. As of August 31, 2018, with the assistance of a third-party valuation firm, we updated this step-one analysis and determined that the fair value of the reportable unit continued to exceed its carrying value by 7.2%. Therefore, goodwill was not deemed impaired and no further testing was deemed necessary.

Restructuring

We accrue one-time severance costs pursuant to an approved plan of restructuring at the communication date, when affected employees have been notified of the potential severance and sufficient information has been provided for the employee to calculate severance benefits, in the event the employee is involuntarily terminated. In addition, we accrue costs associated with the termination of contractual commitments including operating leases at the time the lease is terminated pursuant to the lease provisions or in accordance with another agreement with the landlord. Otherwise, we continue to recognize operating lease expense through the cease-use date. After the cease-use date, we determine if our operating lease payments are at market. We assume sublet of the facility at the market rate. To the extent our lease obligations exceed the fair value rentals, we discount to arrive at the present value and record a liability. If the facility is not sublet, we expense the amount of the sublet in the current period. For other costs directly related to the restructuring effort, such as equipment moving costs, we expense in the period incurred.

In October 2016, we announced the closure of three operating plants, two related to our United States vinyl operations, and one related to our kitchen and bathroom cabinet door business in Mexico. We expensed \$0.5 million pursuant to these restructuring efforts during the year ended October 31, 2016. In September 2017, we closed a kitchen and bathroom cabinet door plant in Lansing, Kansas. We expensed \$4.6 million associated with our restructuring efforts for the year ended October 31, 2017, including cost of equipment moves, employee termination costs and severance, professional fees and operating lease costs. Our facility lease obligations were deemed to be at fair market value. We negotiated the exit of one of the vinyl facilities during September 2018, and the lease of the cabinet door plant expired during fiscal 2018. We incurred \$1.5 million of expenses related to operating leases costs during the year ended October 31, 2018, and we expect to incur costs related to the operating leases for the remaining vinyl facility during fiscal 2019 until we are able to sublet or otherwise exit the lease.

In addition, we evaluated the remaining depreciable lives of property, plant and equipment that has been abandoned, displaced or otherwise disposed as a result of the plant closures. We recorded a change in estimate associated with the remaining useful lives of these assets which resulted in an increase in depreciation expense of \$4.3 million and \$1.0 million for the years ended October 31, 2017 and 2016, respectively. Furthermore, we evaluated the remaining service lives of intangible assets with defined lives associated with our United States vinyl extrusion business and recorded a change in estimate associated with the remaining useful lives of a customer relationship intangible and a utility process intangible asset resulting in an increase in amortization expense of \$1.9 million and \$0.3 million for the years ended October 31, 2017 and 2016, respectively. We did not incur similar increases in depreciation or amortization expenses related to restructuring activities during the year ended October 31, 2018.

Insurance

We manage our exposure to losses for workers' compensation, group medical, property, casualty and other insurance claims through a combination of self-insurance retentions and insurance coverage with third-party carriers. We record undiscounted liabilities associated with our portion of these exposures, which we estimate by considering various factors such as our historical claims experience, severity factors and estimated claims incurred but not reported, for which we have developed loss development factors, which are estimates as to how claims will develop over time until closed. While we consider a number of factors in preparing the estimates, sensitive assumptions using significant judgment are made in determining the amounts that are accrued in the financial statements. Actual claims could differ significantly from these estimated liabilities, depending on future claims experience. We do not record insurance recoveries until any contingencies relating to the claim have been resolved.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Retirement Plans

We sponsor a defined benefit pension plan and an unfunded postretirement plan that provides health care and life insurance benefits for a limited pool of eligible retirees and dependents. To measure our liabilities associated with these plans, we make assumptions related to future events, including expected return on plan assets, rate of compensation increases, and healthcare cost trend rates. The discount rate reflects the rate at which benefits could be effectively settled on the measurement date. We determine our discount rate using a RATE: Link Model whereby target yields are developed from bonds across a range of maturity points, and a curve is fitted to those targets. Spot rates (zero coupon bond yields) are developed from the curve and used to discount benefit payments associated with each future year. Actual pension plan asset investment performance, as well as other economic experience such as discount rate and demographic experience, will either reduce or increase unamortized pension losses at the end of any fiscal year, which ultimately affects future pension costs.

Warranty Obligations

We accrue warranty obligations when we recognize revenue for certain products. Our provision for warranty obligations is based on historical costs incurred for such obligations and is adjusted, where appropriate, based on current conditions and factors. Our ability to estimate our warranty obligations is subject to significant uncertainties, including changes in product design and our overall product sales mix.

Income Taxes

We record the estimated future tax effects of temporary differences between the tax basis of assets and liabilities and the amounts reported in our consolidated balance sheets, as well as net operating losses and tax credit carry forwards. We evaluate the carrying value of the net deferred tax assets and determine whether we will be able to generate sufficient future taxable income to realize our deferred tax assets. We perform this review for recoverability on a jurisdictional basis, whereby we consider both positive and negative evidence related to the likelihood of realization of the deferred tax assets. The weight given to the positive and negative evidence is commensurate with the extent to which the evidence can be objectively verified. Cumulative losses in recent years is a significant piece of negative evidence that is difficult to overcome in determining that a valuation allowance is not needed against deferred tax assets. Thus, it is generally difficult for positive evidence regarding projected future taxable income exclusive of reversing taxable temporary differences to outweigh objective negative evidence of recent financial reporting losses. We recorded net income for the years ended October 31, 2018 and 2017 and a net loss for the year ended October 31, 2016. We have recorded pre-tax cumulative income from continuing operations of \$45.3 million for the three-year period ended October 31, 2018. We believe we will fully realize our deferred tax assets, net of a recorded valuation allowance. We project future taxable income using the same forecasts used to test long-lived assets and intangibles for impairment, scheduling out the future reversal of existing taxable temporary differences and reviewing our most recent financial operations. In the event the estimates and assumptions indicate we will not generate sufficient future taxable income to realize our deferred tax assets, we record a valuation allowance against a portion of our deferred tax assets.

We evaluate our on-going tax positions to determine if it is more-likely-than-not we will be successful in defending such positions if challenged by taxing authorities. To the extent that our tax positions do not meet the more-likely-than-not criteria, we record a liability for uncertain tax positions. We have recorded a liability for uncertain tax positions which stem from certain state tax items related to the interpretation of tax laws and regulations. We continue to evaluate our positions regarding various state tax interpretations at each reporting date, until the applicable statute of limitations lapse.

On December 22, 2017, the Tax Cuts and Jobs Act (the Act) was signed into law. The Act reduced our federal income tax statutory rate from 35.0% to 23.3% for the fiscal year ended October 31, 2018. We have re-measured our deferred income tax assets and liabilities and have recorded a provisional tax expense for the one-time mandatory transition tax on deemed repatriation of previously tax-deferred and unremitted foreign earnings. Provisional tax expense will be finalized during the one year "measurement period" allowed by Staff Accounting Bulletin No. 118. For further details of the impact of the Act, see Note 11, "Income Taxes."

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Derivative Instruments

We have historically used financial and commodity-based derivative contracts to manage our exposure to fluctuations in foreign currency exchange rates and aluminum prices. All derivatives are measured at fair value on a recurring basis and the methodology and classifications are discussed further in Note 13, "Derivative Instruments." We have not designated the derivative instruments we use as cash flow hedges under ASC Topic 815 "Derivatives and Hedging" (ASC 815). Therefore, all gains and losses, both realized and unrealized, are recognized in the consolidated statements of income (loss) in the period of the change as the underlying assets and liabilities are marked-to-market. We do not enter into derivative instruments for speculative or trading purposes. As such, these instruments are considered economic hedges, and are reflected in the operating activities section of the consolidated statements of cash flow.

Foreign Currency Translation

Our consolidated financial statements are presented in our reporting currency, the United States Dollar. Our German and United Kingdom operations are measured using the local currency as the functional currency. The assets and liabilities of our foreign operations which are denominated in other currencies are translated to United States Dollars using the prevailing exchange rates as of the balance sheet date. Revenues and expenses are translated at the average exchange rates for the applicable period. The resulting translation adjustments are recorded as a component of accumulated other comprehensive loss on the consolidated balance sheets.

Occasionally, we enter into transactions that are denominated in currencies other than our functional currency. At each balance sheet date, we translate these asset or liability accounts to our functional currency and record unrealized transaction gains or losses. When these assets or liabilities settle, we record realized transaction gains or losses. These realized and unrealized gains or losses are included in the accompanying consolidated statements of income (loss) under the caption, "Other, net."

Stock-Based Compensation

We have issued stock-based compensation in the form of stock options to directors, employees and officers, and non-vested restricted stock awards to certain key employees and officers. We apply the provisions of ASC Topic 718 "Compensation - Stock Compensation" (ASC 718), to determine the fair value of stock option awards on the date of grant using the Black-Scholes valuation model. We recognize the fair value as compensation expense on a straight-line basis over the requisite service period of the award based on awards ultimately expected to vest. Stock options granted to directors vest immediately while the stock options granted to our employees and officers typically vest ratably over a three-year period with service and continued employment as the vesting conditions. For new option grants to retirement-eligible employees, we recognize expense and vest immediately upon grant, consistent with the retirement vesting acceleration provisions of these grants. For employees near retirement age, we amortize such grants over the period from the grant date to the retirement-eligibility date if such period is shorter than the standard vesting schedule. For grants of non-vested restricted stock, we calculate the compensation expense at the grant date as the number of shares granted multiplied by the closing stock price of our common stock on the date of grant. This expense is recognized ratably over the vesting period. Our non-vested restricted stock grants to officers and employees cliff vest over a three-year period with service and continued employment as the only vesting criteria. Our fair value determination of stock-based payment awards on the date of grant using an option-pricing model is affected by our stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, our expected stock price volatility over the term of the awards, actual and projected employee stock option exercise behavior over the expected term, our dividend rate, risk-free rate and expectation with regards to forfeitures. Option-pricing models were developed for use in estimating the value of traded options that have no vesting or hedging restrictions and are fully transferable. Because our employee stock options have certain characteristics that are significantly different from traded options, and because changes in the subjective assumptions can materially affect the estimated value, the valuation models may not provide an accurate measure of the fair value of our employee stock options. Accordingly, that value may not be indicative of the fair value observed in a willing buyer/willing seller market transaction.

We have granted other awards which are linked to the performance of our common stock, but will settle in cash rather than the issuance of shares of our common stock. The value of these awards fluctuates with changes in our stock price, with the resulting gains or losses reflected in the period of the change. We have recorded current and non-current liabilities related to these awards reflected in the accompanying consolidated balance sheets at October 31, 2018 and 2017. See Note 15, "Stock-based Compensation."

In addition, we have granted performance share units which settle in cash and shares upon vesting. These awards have vesting criteria based on a market condition (relative total shareholder return) and an internal performance condition (earnings per share growth). We utilize a Monte Carlo simulation model to value the market condition and our stock price on the date of grant to value

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

the internal performance condition. We bifurcate the liability and equity portion of the awards (amounts expected to settle in cash and shares, respectively) and recognize expense ratably over the vesting period of three years.

We have also granted performance restricted stock units which settle in shares upon vesting. These awards cliff vest upon a three-year service period with the performance of our common stock as the vesting criteria. We utilized a Monte Carlo simulation model to arrive at a grant-date value of these performance restricted stock units. This amount, which is settled in our common stock, is expensed over the three-year term of the award with a credit to additional paid-in-capital.

Treasury Stock

We use the cost method to record treasury stock purchases whereby the entire cost of the acquired shares of our common stock is recorded as treasury stock (at cost). When we subsequently reissue these shares, proceeds in excess of cost upon the issuance of treasury shares are credited to additional paid in capital, while any deficiency is charged to retained earnings.

Earnings per Share Data

We calculate basic earnings per share based on the weighted average number of our common shares outstanding for the applicable period. We calculate diluted earnings per share based on the weighted average number of our common shares outstanding for the period plus all potentially dilutive securities using the treasury stock method, whereby we assume that all such shares are converted into common shares at the beginning of the period, if deemed to be dilutive. If we incur a loss from continuing operations, the effects of potentially dilutive common stock equivalents (stock options and unvested restricted stock awards) are excluded from the calculation of diluted earnings per share because the effect would be anti-dilutive. Performance shares and performance restricted stock units are excluded from contingent shares for purposes of calculating diluted weighted average shares until the performance measure criteria is probable and shares are likely to be issued.

Supplemental Cash Flow Information

The following table summarizes our supplemental cash flow information for the years ended October 31, 2018, 2017 and 2016:

	Year Ended October 31,		
	2018	2017	2016
	(In thousands)		
Cash paid for interest	\$ 7,890	\$ 9,019	\$ 14,594
Cash paid for income taxes	4,217	3,334	3,004
Cash received for income tax refunds	95	1,167	1,949
<i>Noncash investing and financing activities:</i>			
Investment in capital leases	799	16,846	—
Increase (decrease) in capitalized expenditures in accounts payable and accrued liabilities	264	392	(32)
Debt discount on Term Loan B	—	—	6,200

Related Party Transactions

We lease several operating facilities from a company that is directly owned by the former owner of our United Kingdom-based vinyl extrusion business, who was our employee until his retirement in October 2018. See Note 2, "Acquisitions and Dispositions". In addition to the leases with our employee, our related party transactions also included purchases of less than \$0.1 million and sales of approximately \$0.1 million. Accounts payable and accounts receivable as of October 31, 2018 included less than \$0.1 million of activity from related party transactions.

Subsequent Events

We have evaluated events occurring after the balance sheet date for possible disclosure as a subsequent event through the date the financial statements were issued.

2. Acquisitions and Dispositions

Woodcraft

On November 2, 2015, we completed a merger of QWMS, Inc., a Delaware corporation which was a newly-formed and wholly-owned Quanex subsidiary, and WII Holding, Inc. (WII), a Delaware corporation. Upon satisfaction or waiver of conditions

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

set forth in the merger agreement, QWMS, Inc. merged with and into WII, and WII became our wholly-owned subsidiary, and, as a result, we acquired all the subsidiaries of WII (referred to collectively as Woodcraft). Woodcraft is a manufacturer of cabinet doors and other components to OEMs in the kitchen and bathroom cabinet industry. At the time of purchase, Woodcraft operated 12 plants within the United States and one in Mexico. On October 31, 2016, we announced the closure of the Woodcraft plant in Mexico and subsequently closed a plant in Lansing, Kansas in September 2017. We paid \$245.9 million in cash, net of cash acquired and including certain holdbacks with regard to potential indemnity claims, and received less than \$0.1 million from the seller as a working capital true-up, resulting in goodwill totaling \$113.7 million. We believe this acquisition expanded our business into a new segment of the building products industry, which is experiencing growth and which is less susceptible to the impact of seasonality due to inclement weather.

The purchase price was allocated to the fair value of the assets acquired and liabilities assumed, as indicated in the table below.

	As of Date of Opening Balance Sheet	
	(In thousands)	
Net assets acquired:		
Accounts receivable	\$	23,944
Inventory		29,552
Prepaid and other current assets		4,081
Property, plant and equipment		63,154
Goodwill		113,747
Intangible assets		62,900
Other non-current assets		24
Accounts payable		(4,620)
Accrued expenses		(9,492)
Deferred income tax liabilities, net		(37,386)
Net assets acquired	\$	245,904
Consideration:		
Cash, net of cash and cash equivalents acquired	\$	245,904

We used recognized valuation techniques to determine the fair value of the assets and liabilities, including the income approach for customer relationships, with a discount rate that reflects the risk of the expected future cash flows. Intangible assets related to the Woodcraft acquisition as of November 2, 2015 included \$62.8 million of customer relationships and other intangibles of less than \$0.1 million, with original estimated useful lives of 12 years and 1 year, respectively. These intangible assets are being amortized on a straight-line basis. The goodwill balance is not deductible for tax purposes. Woodcraft is allocated entirely to our North American Cabinet Components reportable business segment.

HLP

On June 15, 2015, we acquired the outstanding ownership shares of Flamstead Holdings Limited, an extruder of vinyl lineal products and manufacturer of other plastic products incorporated and registered in England and Wales, for \$131.7 million in cash, net of cash acquired, debt assumed of \$7.7 million and contingent consideration of \$10.3 million, resulting in goodwill on the transaction of approximately \$61.3 million. Following a pre-sale reorganization and purchase, Flamstead Holdings Limited owned 100% of the ownership shares of the following subsidiaries: HL Plastics Limited, Vintage Windows Limited, Wegoma Machinery Sales Limited (renamed in 2016 as Avantek Machinery), and Liniar Limited (collectively referred to as "HLP") each of which is registered in England and Wales. The purchase price was allocated to the fair value of the assets acquired and liabilities assumed. The agreement contained an earn-out provision which was calculated as a percentage of earnings before interest, tax and depreciation and amortization for a specified period, as defined in the purchase agreement. Pursuant to this earn-out provision, the former owner could select a base year upon which to calculate the earn-out (one of the next three succeeding twelve-month periods ended July 31). In August 2016, the former owner selected the twelve-month period ended July 31, 2016 as the measurement period for the earn-out calculation. On November 7, 2016, we paid \$8.5 million to settle the earn-out.

We assumed operating leases associated with the HLP acquisition for which our lessors are entities that were either wholly-owned subsidiaries or affiliates of Flamstead Holdings Limited prior to the pre-acquisition reorganization, and in which a former

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

owner, who is now our employee, has an ownership interest. These leases include our primary operating facilities, a finished goods warehouse and a mixing plant. The lease for the manufacturing plant has a 20-year term which began in 2007, the lease for the warehouse has a 15-year term which began in 2012, and the lease for the mixing plant has a 13.5-year term which began in 2013. We recorded rent expense of approximately \$1.3 million, \$1.2 million and \$1.3 million for the years ended October 31, 2018, 2017 and 2016, respectively. Future commitments of \$9.9 million under these lease arrangements are included in our operating lease commitments disclosed in Note 12, "Commitments and Contingencies."

On February 20, 2017, we entered into a capital lease arrangement with the same related party to purchase a new warehouse facility at HLP. This capital lease resulted in a non-cash increase in property, plant and equipment and a corresponding increase in debt, as more fully described at Note 8, "Debt and Capital Lease Obligations - Other Debt Instruments", included herewith.

3. Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable consisted of the following as of October 31, 2018 and 2017:

	October 31,	
	2018	2017
(In thousands)		
Trade receivables	\$ 83,828	\$ 79,221
Other	511	523
Total	\$ 84,339	\$ 79,744
Less: Allowance for doubtful accounts	325	333
Accounts receivable, net	\$ 84,014	\$ 79,411

The changes in our allowance for doubtful accounts were as follows:

	Year Ended October 31,		
	2018	2017	2016
(In thousands)			
Beginning balance as of November 1, 2017, 2016 and 2015, respectively	\$ 333	\$ 251	\$ 673
Bad debt expense (benefit)	46	131	(67)
Amounts written off	(54)	(49)	(371)
Recoveries	—	—	16
Balance as of October 31,	\$ 325	\$ 333	\$ 251

4. Inventories

Inventories consisted of the following at October 31, 2018 and 2017:

	October 31,	
	2018	2017
(In thousands)		
Raw materials	\$ 41,584	\$ 50,472
Finished goods and work in process	31,727	40,087
Supplies and other	1,794	2,655
Total	\$ 75,105	\$ 93,214
Less: Inventory reserves	5,740	5,685
Inventories, net	\$ 69,365	\$ 87,529

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The changes in our inventory reserve accounts were as follows for the years ended October 31, 2018, 2017 and 2016:

	Year Ended October 31,		
	2018	2017	2016
	(In thousands)		
Beginning balance as of November 1, 2017, 2016 and 2015, respectively	\$ 5,685	\$ 4,994	\$ 8,106
Charged to cost of sales	1,501	1,296	8
Write-offs	(1,415)	(661)	(3,048)
Other	(31)	56	(72)
Balance as of October 31,	<u>\$ 5,740</u>	<u>\$ 5,685</u>	<u>\$ 4,994</u>

Our inventories at October 31, 2018 and 2017 were valued using the following costing methods:

	October 31,	
	2018	2017
	(In thousands)	
LIFO	\$ 4,273	\$ 4,444
FIFO	65,092	83,085
Total	<u>\$ 69,365</u>	<u>\$ 87,529</u>

For inventories valued using the LIFO method, replacement cost exceeded the LIFO value by approximately \$1.4 million as of October 31, 2018 and 2017. During the fiscal year ended October 31, 2018, we increased the LIFO reserve and recorded a corresponding increase to cost of sales of approximately \$0.3 million. This resulted in the liquidation of two LIFO layers and a corresponding benefit of less than \$0.1 million to cost of sales. During the year ended October 31, 2016, we reduced the LIFO reserve and recorded a corresponding decrease to cost of sales of approximately \$0.3 million. We did not record a LIFO adjustment for the year ended October 31, 2017, and we did not liquidate any LIFO layers during the years ended October 31, 2017 or 2016.

We record LIFO reserve adjustments as corporate expenses so that our chief operating decision maker can review the operations of our operating segments on a consistent FIFO or weighted-average basis. We calculate our LIFO reserve adjustments on a consolidated basis in a single pool using the dollar-value link chain method.

For our business acquisitions which have inventory balances, we integrate these operations and allow the use of either the LIFO or FIFO costing method. The inventory costing methods selected by these acquired businesses depends upon the facts and circumstances that exist at the time, and may include expected inventory quantities and expected future pricing levels. We perform this evaluation for each business acquired individually.

5. Property, Plant and Equipment

Property, plant and equipment consisted of the following at October 31, 2018 and 2017:

	October 31,	
	2018	2017
	(In thousands)	
Land and land improvements	\$ 10,366	\$ 10,491
Buildings and building improvements	98,212	96,622
Machinery and equipment	371,106	354,197
Construction in progress	10,293	13,868
Property, plant and equipment, gross	<u>489,977</u>	<u>475,178</u>
Less: Accumulated depreciation	288,607	264,047
Property, plant and equipment, net	<u>\$ 201,370</u>	<u>\$ 211,131</u>

Depreciation expense for the years ended October 31, 2018, 2017, and 2016 was \$35.6 million, \$39.1 million and \$36.2 million, respectively.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Assets recorded under capital leases had a historical cost of \$22.2 million and \$24.3 million, respectively, and accumulated depreciation of \$3.4 million and \$2.8 million, respectively as of October 31, 2018 and 2017. Depreciation expense related to these assets totaled \$1.1 million, \$2.0 million and \$0.8 million for the periods ended October 31, 2018, 2017, and 2016, respectively. Refer to Note 8, "Debt and Capital Lease Obligations" for additional information on capital leases.

If there are indicators of potential impairment, we evaluate our property, plant and equipment for recoverability over the remaining useful lives of the assets. We did not incur impairment losses associated with these assets for the years ended October 31, 2018, 2017, and 2016. See further discussion at Note 1, "Nature of Operations, Basis of Presentation and Significant Accounting Policies - Long-Lived Assets - Property, Plant and Equipment and Intangible Assets with Defined Lives."

6. Goodwill and Intangible Assets

Goodwill

The change in the carrying amount of goodwill for the years ended October 31, 2018 and 2017 was as follows:

	Year Ended October 31,	
	2018	2017
(In thousands)		
Beginning balance as of November 1, 2017 and 2016	\$ 222,194	\$ 217,035
Foreign currency translation adjustment	(2,567)	5,159
Balance as of October 31,	<u>\$ 219,627</u>	<u>\$ 222,194</u>

At our annual testing date, August 31, 2018, we had five reportable units with goodwill balances. Two of these units were included in our NA Engineered Components segment and had goodwill balances of \$35.9 million and \$2.8 million, two units were included in our EU Engineered Components segment with goodwill balances of \$50.2 million and \$17.0 million, and our NA Cabinet Components segment had one unit with a goodwill balance of \$113.7 million. We determined our goodwill was not impaired at October 31, 2018. The results of our goodwill impairment testing in August 2018 is more fully described at Note 1, "Nature of Operations, Basis of Presentation and Significant Accounting Policies - Long-Lived Assets - Goodwill." For the year ended October 31, 2016, we recorded an impairment charge of \$12.6 million associated with the remaining goodwill of our United States vinyl operations within the NA Engineered Components segment.

Identifiable Intangible Assets

Amortizable intangible assets consisted of the following as of October 31, 2018 and 2017:

	October 31, 2018	October 31, 2018		October 31, 2017	
	Remaining Weighted Average Useful Life	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
(In thousands)					
Customer relationships	11 years	\$ 153,704	\$ 59,332	\$ 155,230	\$ 48,479
Trademarks and trade names	11 years	55,583	32,668	56,058	29,509
Patents and other technology	3 years	22,278	17,646	22,624	16,146
Total		<u>\$ 231,565</u>	<u>\$ 109,646</u>	<u>\$ 233,912</u>	<u>\$ 94,134</u>

We do not estimate a residual value associated with these intangible assets. During October 2016 and throughout 2017, we determined that triggering events occurred which necessitated a review of our long-term assets. Based on an undiscounted cash flow analysis, we determined that our defined-lived intangible assets were not impaired. In addition, we shortened the life of several defined-lived intangible assets, which resulted in the recognition of incremental amortization expense of \$1.9 million and \$0.3 million for the years ended October 31, 2017 and 2016, respectively. We did not incur any corresponding incremental amortization expense during the year ended October 31, 2018. See additional disclosure at Note 1, "Nature of Operations, Basis of Presentation and Significant Accounting Policies - Restructuring."

During the year ended October 31, 2018, we retired fully amortized identifiable assets of \$0.3 million related to patents and other technology. During the year ended October 31, 2017, we retired fully amortized identifiable intangible assets of \$2.4 million, primarily related to patents and other technology, including such assets associated with the restructuring mentioned above.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The aggregate amortization expense associated with identifiable intangible assets for the years ended October 31, 2018, 2017, and 2016 was \$16.2 million, \$18.4 million and \$16.9 million, respectively.

Estimated remaining amortization expense, assuming current intangible balances and no new acquisitions, for future fiscal years ending October 31, is as follows (in thousands):

	Estimated Amortization Expense
2019	\$ 15,282
2020	14,226
2021	12,506
2022	11,883
2023	11,136
Thereafter	56,886
Total	\$ 121,919

We did not incur impairment losses related to our identifiable intangible assets during the years ended October 31, 2018, 2017, and 2016.

7. Accrued Liabilities

Accrued liabilities consisted of the following at October 31, 2018 and 2017:

	October 31,	
	2018	2017
	(In thousands)	
Payroll, payroll taxes and employee benefits	\$ 28,202	\$ 16,733
Accrued insurance and workers compensation	3,095	3,591
Sales allowances	6,514	9,070
Deferred compensation (current portion)	153	669
Deferred revenue	287	625
Warranties	148	168
Audit, legal, and other professional fees	2,170	2,096
Accrued taxes	2,286	2,656
Other	3,113	3,263
Accrued liabilities	\$ 45,968	\$ 38,871

8. Debt and Capital Lease Obligations

Long-term debt consisted of the following at October 31, 2018 and 2017:

	October 31,	
	2018	2017
	(In thousands)	
Revolving Credit Facility	\$ 195,000	\$ 84,000
Term Loan A	—	138,750
Capital lease obligations	17,043	18,764
Unamortized deferred financing fees	\$ (1,487)	\$ (2,088)
Total debt	\$ 210,556	\$ 239,426
Less: Current maturities of long-term debt	1,224	21,242
Long-term debt	\$ 209,332	\$ 218,184

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Revolving Credit Facility

On November 2, 2015, we entered into a \$310.0 million Term Loan Credit Agreement and a \$100.0 million ABL Credit Agreement (collectively the “2015 Credit Facilities”) with Wells Fargo, National Association, as Agent, and Bank of America, N.A. serving as Syndication Agent. The term loan portion of the 2015 Credit Facilities was to mature on November 2, 2022, and required quarterly principal payments equal to 0.25% of the aggregate borrowings. Interest was computed, at our election, based on a Base Rate plus applicable margin of 4.25%, or LIBOR plus applicable margin of 5.25% (with the stipulation that LIBOR could not be less than 1%). The term loan provided for incremental term loan commitments for a minimum principal amount of \$25.0 million, up to an aggregate amount of \$50.0 million, to the extent that such borrowings did not cause the Consolidated Senior Secured Leverage Ratio to exceed 3.00 to 1.00. The term loan agreement permitted prepayment of the term loan of at least an aggregate amount of \$5.0 million, or any whole multiple of \$1.0 million, in excess thereof without penalty, except if such prepayment was made on or before November 2, 2016, we would pay a fee equal to 1% of such prepayment. The ABL portion of the 2015 Credit Facilities was to mature on November 2, 2020 with no stated principal repayment terms prior to maturity. Borrowing capacity and availability was determined based upon the dollar equivalent of certain working capital items including receivables and inventory, subject to eligibility as determined by Wells Fargo, National Association, as Administrative Agent, up to the facility maximum of \$100.0 million. Interest was computed, at our election, on a grid as the Base Rate plus an Applicable Margin, as defined in the agreement, or LIBOR plus an Applicable Margin. The Applicable Margin applied for the duration of the 2015 Credit Facilities was 0.50% for Base Rate loans and 1.50% for LIBOR Rate loans. In addition, the ABL portion of the 2015 Credit Facilities required payment of a commitment fee (unused line fee) based on the average revolver usage. The unused line fee of 0.375% was applied for the duration of the 2015 Credit Facilities.

On July 29, 2016, we refinanced and retired the 2015 Credit Facilities and entered into a \$450.0 million credit agreement comprising a \$150.0 million Term Loan A and a \$300.0 million revolving credit facility (collectively, the “2016 Credit Agreement”), with Wells Fargo Bank, National Association, as Agent, Swingline Lender and Issuing Lender, and Bank of America, N.A. serving as Syndication Agent. The 2016 Credit Agreement had a five-year term, maturing on July 29, 2021, and required interest payments calculated, at our election and depending upon our Consolidated Leverage Ratio, at either a Base Rate plus an applicable margin or the LIBOR Rate plus an applicable margin. At the time of the initial borrowing, the applicable rate was LIBOR + 2.00%. In addition, we were subject to commitment fees for the unused portion of the 2016 Credit Agreement.

The applicable margin and commitment fees are outlined in the following table:

Pricing Level	Consolidated Leverage Ratio	Commitment Fee	LIBOR Rate Loans	Base Rate Loans
I	Less than or equal to 1.50 to 1.00	0.200%	1.50%	0.50%
II	Greater than 1.50 to 1.00, but less than or equal to 2.25 to 1.00	0.225%	1.75%	0.75%
III	Greater than 2.25 to 1.00, but less than or equal to 3.00 to 1.00	0.250%	2.00%	1.00%
IV	Greater than 3.00 to 1.00	0.300%	2.25%	1.25%

In the event of default, outstanding borrowings would accrue interest at the Default Rate, as defined, whereby the obligations will bear interest at a per annum rate equal to 2% above the total per annum rate otherwise applicable.

The term loan portion of the 2016 Credit Agreement required quarterly principal payments on the last business day of each fiscal quarter in accordance with a stated repayment schedule. Required aggregate principal repayments totaled \$15.0 million for the succeeding twelve-month period, and were included in the accompanying consolidated balance sheet under the caption “Current Maturities of Long-term Debt.” No stated principal payments were required under the revolving credit portion of the 2016 Credit Agreement, except upon maturity. We were required to make mandatory prepayments of “excess cash flow” as defined in the agreement if our Consolidated Leverage Ratio was less than 2.25 to 1.00.

The 2016 Credit Agreement provided for incremental term loan or revolving credit commitments for a minimum principal amount of \$10.0 million, up to an aggregate amount of \$150.0 million, subject to the lender's discretion to elect or decline the incremental increase. We could also borrow up to the lesser of \$15.0 million or the revolving credit commitment, as defined, under a Swingline feature of the Credit Agreement. We were permitted to prepay the term loan under the Credit Agreement, without premium or penalty, in aggregate principal amounts of \$1.0 million or whole multiples of \$0.5 million in excess thereof.

The 2016 Credit Agreement contained a: (1) Consolidated Fixed Charge Coverage Ratio requirement whereby we could not permit the Consolidated Fixed Charge Coverage Ratio, as defined, to be less than 1.10 to 1.00, and (2) Consolidated Leverage Ratio requirement, as summarized by period in the following table:

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Period	Maximum Ratio
Closing Date through January 30, 2017	3.50 to 1.00
January 31, 2017 through January 30, 2018	3.25 to 1.00
January 31, 2018 and thereafter	3.00 to 1.00

In addition to maintaining these financial covenants, the 2016 Credit Agreement also limited our ability to enter into certain business transactions, such as to incur indebtedness or liens, to acquire businesses or dispose of material assets, make restricted payments, pay dividends (limited to \$10.0 million per year) and other transactions as further defined in the Credit Agreement. Substantially all of our domestic assets, with the exception of real property, were utilized as collateral for the Credit Agreement.

We utilized the funding from the 2016 Credit Agreement, along with additional funding of \$16.4 million of cash on hand, to repay outstanding borrowings under the 2015 Credit Facilities of \$309.2 million, to pay a 1% prepayment call premium under the Term Loan B portion thereof, to settle outstanding interest accrued under the prior facility, and to pay loan fees associated with the 2016 Credit Agreement which totaled \$2.8 million. In addition to the 1% prepayment call premium fee, we expensed \$8.1 million to write-off unamortized deferred financing fees and \$5.5 million of unamortized original issuer's discount associated with the 2015 Credit Facilities.

On October 18, 2018, we amended and extended the 2016 Credit Agreement by entering into a \$325.0 million revolving credit facility (the "2018 Credit Facility"), with Wells Fargo Bank, National Association, as Agent, Swingline Lender and Issuing Lender, and Bank of America, N.A. serving as Syndication Agent. The 2018 Credit Facility has a five-year term, maturing on October 18, 2023, and required interest payments calculated, at our election and depending upon our Consolidated Leverage Ratio, at either a Base Rate plus an applicable margin or the LIBOR Rate plus an applicable margin. At the time of the initial borrowing, the applicable rate was LIBOR + 1.50%. In addition, we are subject to commitment fees for the unused portion of the 2018 Credit Facility.

The applicable margin and commitment fees are outlined in the following table:

Pricing Level	Consolidated Leverage Ratio	Commitment Fee	LIBOR Rate Loans	Base Rate Loans
I	Less than or equal to 1.50 to 1.00	0.200%	1.25%	0.25%
II	Greater than 1.50 to 1.00, but less than or equal to 2.25 to 1.00	0.225%	1.50%	0.50%
III	Greater than 2.25 to 1.00, but less than or equal to 3.00 to 1.00	0.250%	1.75%	0.75%
IV	Greater than 3.00 to 1.00	0.300%	2.00%	1.00%

In the event of default, outstanding borrowings accrue interest at the Default Rate, as defined, whereby the obligations will bear interest at a per annum rate equal to 2% above the total per annum rate otherwise applicable.

The 2018 Credit Facility provided for incremental revolving credit commitments for a minimum principal amount of \$10.0 million, up to an aggregate amount of \$150.0 million, subject to the lender's discretion to elect or decline the incremental increase. We can also borrow up to the lesser of \$15.0 million or the revolving credit commitment, as defined, under a Swingline feature of the Credit Agreement.

The 2018 Credit Facility contains a: (1) Consolidated Interest Coverage Ratio requirement whereby we must not permit the Consolidated Interest Coverage Ratio, as defined, to be less than 2.25 to 1.00, and (2) Consolidated Leverage Ratio requirement whereby we must not permit the Consolidated Leverage Ratio, as defined, must be greater than 3.25 to 1.00.

In addition to maintaining these financial covenants, the 2018 Credit Facility also limits our ability to enter into certain business transactions, such as to incur indebtedness or liens, to acquire businesses or dispose of material assets, make restricted payments, pay dividends (limited to \$20.0 million per year) and other transactions as further defined in the 2018 Credit Facility. Some of these limitations, however, do not take effect so long as total leverage is less than or equal to 2.75 to 1.00 and available liquidity exceeds \$25 million. Substantially all of our domestic assets, with the exception of real property were utilized as collateral for the Credit Agreement.

We utilized initial borrowings of \$205.0 million from the 2018 Credit Facility, along with additional funding of \$10.0 million of cash on hand, to repay outstanding borrowings under the 2016 Credit Agreement of \$213.5 million, to settle outstanding interest accrued and loan fees under the prior facility, and to pay loan fees associated with the 2018 Credit Agreement which totaled \$1.0 million. We expensed \$1.1 million of unamortized deferred financing fees associated with the 2016 Credit Agreement, while

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

deferring the remaining \$0.5 million of unamortized deferred financing fees attributable to the remaining lenders from the previous facility over the life of the 2018 Credit Facility.

As of October 31, 2018, we had \$195.0 million of borrowings outstanding under the Credit Agreement (reduced by unamortized debt issuance costs of \$1.5 million), \$5.3 million of outstanding letters of credit and \$17.0 million outstanding under capital leases. We had \$124.7 million available for use under the Credit Agreement at October 31, 2018. The borrowings outstanding as of October 31, 2018 under the Credit Agreement accrue interest at 3.80% per annum, and our weighted average borrowing rate for borrowings outstanding during the years ended October 31, 2018 and 2017 was 3.76% and 2.95%, respectively. We were in compliance with our debt covenants as of October 31, 2018.

Other Debt Instruments

During the year ended October 31, 2017, we fully repaid \$0.4 million related to the City of Richmond, Kentucky, Industrial Building Revenue Bonds, which had annual installment payments due through October 2020. Interest was payable monthly at a variable rate, which ranged from 0.7% to 1.3% during the fiscal year ended October 31, 2017. The average interest rate during each of the fiscal years ended October 31, 2017 and 2016 was 1.0% and 0.5%, respectively.

Historically, we have maintained certain capital lease obligations related to equipment purchases. On February 20, 2017, we entered into a capital lease for warehouse space at HLP with a related-party company that is owned by our employee, the former owner of HLP. This new warehouse was anticipated at the time of the HLP acquisition in June 2015, and the lease was negotiated at arms-length. The lease accrues interest at 3.57% per annum, and extends for a twenty-year period through the year 2036. We recorded the leased asset at inception at fair value of \$16.6 million and recorded a corresponding liability for our obligation under this lease. The accompanying statement of cash flows as of October 31, 2017 excludes these assets and related obligations as non-cash investing and financing activities. We are recognizing interest expense using the effective interest method over the term. Our cash commitments under this lease are £0.9 million per year for an aggregate of £17.8 million (or approximately \$23.6 million). The cost and accumulated depreciation of property, plant and equipment under capital leases at October 31, 2018 was \$22.2 million and \$3.4 million, respectively, including \$16.3 million and \$1.4 million, respectively, related to this warehouse lease. These obligations accrue interest at an average rate of 3.59%, and extend through the year 2036.

The table below presents the scheduled maturity dates of our long-term debt outstanding (excluding deferred loan costs of \$1.5 million) at October 31, 2018 (in thousands):

	<u>Revolving Credit Facility</u>	<u>Capital Leases and Other Obligations</u>	<u>Aggregate Maturities</u>
2019	\$ —	\$ 1,523	\$ 1,523
2020	—	1,076	1,076
2021	—	884	884
2022	—	876	876
2023	195,000	807	195,807
Thereafter	—	11,877	11,877
Total	\$ 195,000	\$ 17,043	\$ 212,043

9. Retirement Plans

We have a number of retirement plans covering substantially all employees. We provide both defined benefit and defined contribution plans. In general, an employee's coverage for retirement benefits depends on the location of employment.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Defined Benefit Plan

We have a non-contributory, single employer defined benefit pension plan that covers the majority of our domestic employees, excluding the Woodcraft employees who are not currently participating. Effective January 1, 2007, we amended this defined benefit pension plan to include a cash balance formula for all new salaried employees hired on or after January 1, 2007 and for any non-union employees who were not participating in a defined benefit plan prior to January 1, 2007. All participating salaried employees hired after January 1, 2007, are eligible to receive credits equivalent to 4% of their annual eligible wages. Some of the employees at the time of the amendment were “grandfathered” and are eligible to receive credits ranging up to 6.5% based upon a percentage of benefits received under our defined benefit plan prior to this amendment of the pension plan. Additionally, every year the participants will receive an interest related credit on their respective balance equivalent to the prevailing 30-year Treasury rate. For employees who were participating in this plan prior to January 1, 2007, the benefit formula is a more traditional formula for retirement benefits, whereby the plan pays benefits to employees upon retirement, using a formula which considers years of service and pensionable compensation prior to retirement. Of our pension plan participants, 99% have their benefit determined pursuant to the cash balance formula.

The Medicare Prescription Drug, Improvement and Modernization Act of 2003 (the “Act”) was signed into law on December 8, 2003. This Act introduces a Medicare prescription-drug benefit beginning in 2006 as well as a federal subsidy to sponsors of retiree health care plans that provide a benefit at least “actuarially equivalent” to the Medicare benefit. We concluded that our plans are at least “actuarially equivalent” to the Medicare benefit. For those who are otherwise eligible for the subsidy, we have not included this subsidy per the Act in our benefit calculations. The impact to net periodic benefit cost and to benefits paid did not have a material impact on the consolidated financial statements.

Funded Status and Net periodic Benefit Cost

The changes in benefit obligations and plan assets, and our funded status (reported in deferred pension and postretirement benefits on the consolidated balance sheets) were as follows:

	October 31,	
	2018	2017
	(In thousands)	
Change in Benefit Obligation:		
Beginning balance as of November 1, 2017 and 2016, respectively	\$ 38,323	\$ 36,892
Service cost	3,908	3,794
Interest cost	1,130	859
Actuarial gain	(4,296)	(318)
Benefits paid	(2,551)	(2,263)
Administrative expenses	(555)	(641)
Projected benefit obligation at October 31,	<u>\$ 35,959</u>	<u>\$ 38,323</u>
Change in Plan Assets:		
Beginning balance as of November 1, 2017 and 2016, respectively	\$ 34,340	\$ 29,210
Actual return on plan assets	66	4,434
Employer contributions	764	3,600
Benefits paid	(2,551)	(2,263)
Administrative expenses	(555)	(641)
Fair value of plan assets at October 31,	<u>\$ 32,064</u>	<u>\$ 34,340</u>
Non current liability - Funded Status	\$ (3,895)	\$ (3,983)

As of October 31, 2018 and 2017, included in our accumulated comprehensive loss was a net actuarial loss of \$3.0 million and \$5.2 million, respectively. There were no net prior service costs or transition obligations for the years ended October 31, 2018 and 2017.

As of October 31, 2018 and 2017, the accumulated benefit obligation was \$35.4 million and \$37.4 million, respectively. The accumulated benefit obligation is the present value of pension benefits (whether vested or unvested) attributed to employee service rendered before the measurement date, and based on employee service and compensation prior to that date. The accumulated benefit obligation differs from the projected benefit obligation in that it includes no assumption about future compensation levels.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The net periodic benefit cost for the years ended October 31, 2018, 2017 and 2016, was as follows:

	Year Ended October 31,		
	2018	2017	2016
	(In thousands)		
Service cost	\$ 3,908	\$ 3,794	\$ 3,712
Interest cost	1,130	859	828
Expected return on plan assets	(2,172)	(1,863)	(1,617)
Amortization of net loss	64	574	384
Net periodic benefit cost	<u>\$ 2,930</u>	<u>\$ 3,364</u>	<u>\$ 3,307</u>

The changes in plan assets and projected benefit obligations which were recognized in our other comprehensive loss for the years ended October 31, 2018, 2017 and 2016 were as follows:

	Year Ended October 31,		
	2018	2017	2016
	(In thousands)		
Net (gain) loss arising during the period	\$ (2,189)	\$ (2,888)	\$ 3,556
Less: Amortization of net loss	\$ 64	\$ 574	\$ 384
Total recognized in other comprehensive loss	<u>\$ (2,253)</u>	<u>\$ (3,462)</u>	<u>\$ 3,172</u>

As of October 31, 2016, we recorded a \$0.3 million pre-tax benefit associated with our postretirement benefit plan, described below at "Other Plans."

Measurement Date and Assumptions

We generally determine our actuarial assumptions on an annual basis, with a measurement date of October 31. The following table presents our assumptions for pension benefit calculations for the years ended October 31, 2018, 2017 and 2016:

	For the Year Ended October 31,					
	2018	2017	2016	2018	2017	2016
Weighted Average Assumptions:	Benefit Obligation			Net Periodic Benefit Cost		
Discount rate	4.44%	3.68%	3.41%	4.44%	3.66%	3.92%
Rate of compensation increase	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Expected return on plan assets	n/a	n/a	n/a	6.50%	6.50%	6.50%

The discount rate was used to calculate the present value of the projected benefit obligation for pension benefits. The rate reflects the amount at which benefits could be effectively settled on the measurement date. We used a RATE: Link Model whereby target yields are developed from bonds across a range of maturity points, and a curve is fitted to those targets. Spot rates (zero coupon bond yields) are developed from the curve and used to discount benefit payments associated with each future year. This model assumes spot rates will remain level beyond the 30-year point. We determine the present value of plan benefits by applying the discount rates to projected benefit cash flows.

The expected return on plan assets was used to determine net periodic pension expense. The rate of return assumptions were based on projected long-term market returns for the various asset classes in which the plans were invested, weighted by the target asset allocations. We review the return assumption at least annually. The rate of compensation increase represents the long-term assumption for expected increases in salaries.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Plan Assets

The following tables provide our target allocation for the year ended October 31, 2018, as well as the actual asset allocation by asset category and fair value measurements as of October 31, 2018 and 2017:

	<u>Target Allocation</u>	<u>Actual Allocation</u>	
	<u>October 31, 2018</u>	<u>October 31, 2018</u>	<u>October 31, 2017</u>
Equity securities	60.0%	61.0%	60.0%
Fixed income	40.0%	39.0%	40.0%
		<u>Fair Value Measurements at</u>	
		<u>October 31, 2018</u>	<u>October 31, 2017</u>
		(In thousands)	
Money market fund		\$ 597	\$ 204
Large capitalization		\$ 8,362	\$ 10,972
Small capitalization		2,559	4,102
International equity		6,385	3,756
Other		1,913	1,695
Equity securities		\$ 19,219	\$ 20,525
High-quality core bond		\$ 9,736	\$ 6,801
High-quality government bond		1,251	3,407
High-yield bond		1,261	3,403
Fixed income		\$ 12,248	\$ 13,611
Total securities ⁽¹⁾		\$ 32,064	\$ 34,340

⁽¹⁾ Quoted prices in active markets for identical assets (Level 1).

Inputs and valuation techniques used to measure the fair value of plan assets vary according to the type of security being valued. All of the equity and debt securities held directly by the plans were actively traded and fair values were determined based on quoted market prices.

Our investment objective for defined benefit plan assets is to meet the plans' benefit obligations, while minimizing the potential for future required plan contributions. The investment strategies focus on asset class diversification, liquidity to meet benefit payments and an appropriate balance of long-term investment return and risk. Target ranges for asset allocations are determined by matching the actuarial projections of the plans' future liabilities and benefit payments with expected long-term rates of return on the assets, taking into account investment return volatility and correlations across asset classes. Plan assets are diversified across several investment managers and are generally invested in liquid funds that are selected to track broad market equity and bond indices. Investment risk is carefully controlled with plan assets rebalanced to target allocations on a periodic basis and monitoring of performance of investment managers relative to the investment guidelines established with each investment manager.

Expected Benefit Payments and Funding

Our pension funding policy is to make the minimum annual contributions required pursuant to the plan. We accelerated contributions to target a 100% funding threshold. Additionally, we consider funding annual requirements early in the fiscal year to potentially maximize the return on assets. For the fiscal years ended October 31, 2018, 2017 and 2016, we made total pension contributions of \$0.8 million, \$3.6 million and \$3.7 million, respectively.

During fiscal 2019, we expect to contribute approximately \$0.8 million to the pension plan to reach targeted funding levels and meet minimum contribution requirements. This expected contribution level will be dependent on many variables, including the market value of the assets compared to the obligation, as well as other market or regulatory conditions. In addition, we consider the cash requirements of our business investment opportunities. Accordingly, actual funding amounts and the timing of such funding may differ from current estimates.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The following table presents the total benefit payments expected to be paid to participants by year, which includes payments funded from our assets, as well as payments paid from the plan for the year ended October 31, (in thousands):

	Pension Benefits	
2019	\$	2,488
2020		2,516
2021		2,724
2022		2,898
2023		3,031
2024 - 2028		16,304
Total	\$	29,961

Defined Contribution Plan

We also sponsor a defined contribution plan into which we and our employees make contributions. We merged a predecessor plan sponsored by Woodcraft into our defined contribution plan effective January 1, 2017. We match 50% up to the first 5% of employee annual salary deferrals under our existing plan. Beginning January 1, 2018, the plan was amended to provide the same match to Woodcraft employees. Prior to January 1, 2018, we matched 35% up to the first 5% of employee deferrals for employees who participated in the predecessor Woodcraft plan. We do not offer our common stock as a direct investment option under these plans. For the years ended October 31, 2018, 2017 and 2016, we contributed approximately \$2.6 million, \$2.4 million and \$2.2 million for these plans, respectively.

Other Plans

Under our postretirement benefit plan, we provide certain healthcare and life insurance benefits for a small number of eligible retired employees who were employed prior to January 1, 1993. Certain employees may become eligible for those benefits if they reach normal retirement age while working for us. We continue to fund benefit costs on a pay-as-you-go basis. The table below indicates the amount of these liabilities included in the accompanying consolidated balance sheets:

	October 31, 2018		October 31, 2017	
	(In thousands)			
Accrued liabilities	\$	49	\$	49
Deferred pension and postretirement benefits		323		450
Total	\$	372	\$	499

We also have supplemental benefit plans covering certain executive officers and a non-qualified deferred compensation plan covering members of the Board of Directors and certain key employees. Our liability under the supplemental benefit plan was approximately \$3.4 million as of October 31, 2018 and 2017, and our liability under the deferred compensation plan was approximately \$3.5 million and \$4.0 million, respectively. As of October 31, 2018 and 2017, the current portion of these liabilities was recorded under the caption "Accrued Liabilities," and the long-term portion was included under the caption "Other Liabilities" in the accompanying balance sheets.

10. Warranty Obligations

We accrue warranty obligations as we recognize revenue associated with certain products. We make provisions for our warranty obligations based upon historical experience of costs incurred for such obligations adjusted, as necessary, for current conditions and factors. There are significant uncertainties and judgments involved in estimating our warranty obligations, including changing product designs, differences in customer installation processes and future claims experience which may vary from historical claims experience. Therefore, the ultimate amount we incur as warranty costs in the near and long-term may not be consistent with our current estimate.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

A reconciliation of the activity related to our accrued warranty, including both the current and long-term portions (reported in accrued liabilities and other liabilities, respectively, on the accompanying consolidated balance sheets) follows:

	Year Ended October 31,	
	2018	2017
	(In thousands)	
Beginning balance as of November 1, 2017, and 2016, respectively	\$ 323	\$ 446
Provision for warranty expense	4	41
Change in accrual for preexisting warranties	(16)	(121)
Warranty costs paid	(16)	(43)
Total accrued warranty	\$ 295	\$ 323
Less: Current portion of accrued warranty	148	168
Long-term portion at October 31,	\$ 147	\$ 155

11. Income Taxes

We provide for income taxes on taxable income at the statutory rates applicable. The following table summarizes the components of income tax (benefit) expense from continuing operations for the years ended October 31, 2018, 2017 and 2016:

	Year Ended October 31,		
	2018	2017	2016
	(In thousands)		
Current			
Federal	\$ 983	\$ 1,991	\$ 1,309
State and local	417	873	154
Non-United States	3,356	4,067	3,241
Total current	4,756	6,931	4,704
Deferred			
Federal	(5,903)	1,860	(5,932)
State and local	670	(450)	(712)
Non-United States	(398)	(1,522)	(1,825)
Total deferred	(5,631)	(112)	(8,469)
Total income tax (benefit) expense	\$ (875)	\$ 6,819	\$ (3,765)

The following table reconciles our effective income tax rate to the federal statutory rate for the years ended October 31, 2018, 2017 and 2016:

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

	Year Ended October 31,		
	2018	2017	2016
United States tax at statutory rate	23.3 %	35.0 %	35.0 %
State and local income tax	3.4	1.7	7.4
Non-United States income tax	(1.6)	(9.1)	32.0
Deferred rate impact	—	(4.1)	15.2
General business credits	(0.4)	(0.5)	6.4
Transaction costs	—	—	(17.0)
Change in valuation allowance	(0.1)	(0.6)	(0.9)
Other permanent differences	(0.3)	3.3	(5.8)
Deferred rate impact of enactment of tax reform	(30.5)	—	—
Tax impact of stock based compensation	(0.5)	—	—
Impact of deemed repatriation	4.8	—	—
Return to actual adjustments	(1.5)	1.0	(5.4)
Effective tax rate	(3.4)%	26.7 %	66.9 %

On December 22, 2017, the Tax Cuts and Jobs Act (the Act) was signed into law. The Act reduced our federal income tax statutory rate from 35.0% to 23.3% for the fiscal year ending October 31, 2018. Discrete items contributing to the income tax benefit included \$7.7 million for the re-measurement of our deferred income tax assets and liabilities due to the decrease in the federal corporate income tax rate, a benefit of \$0.2 million for the true up of our accruals and related deferred taxes from prior year filings and settled tax audits, and a benefit of \$0.2 million related to the vesting or exercise of equity-based compensation awards, partially offset by a tax expense of \$1.2 million for the one-time mandatory transition tax on deemed repatriation of previously tax-deferred and unremitted foreign earnings.

The United States statutory rate of 23.3% reflects the period November 1, 2017 to December 31, 2017 at the previous 35.0% rate and the period January 1, 2018 to October 31, 2018 at the new 21.0% rate.

Given the significance of the Act, the SEC staff issued Staff Accounting Bulletin No. 118 (SAB 118), which allows registrants to record provisional amounts during a one year “measurement period”. During the measurement period, impacts of the Act are expected to be recorded at the time a reasonable estimate for all or a portion of the effects can be made, and provisional amounts can be recognized and adjusted as information becomes available, prepared or analyzed. In accordance with SAB 118, a company must reflect the income tax effects of those aspects of the Act for which the accounting under ASC 740 is complete. To the extent that a company’s accounting for certain income tax effects of the Tax Act is incomplete but it is able to determine a reasonable estimate, it must record a provisional estimate in the financial statements. If a company cannot determine a provisional estimate to be included in the financial statements, it should continue to apply ASC 740 on the basis of the provisions of the tax laws that were in effect immediately before the enactment of the Act.

As of October 31, 2018, we have not completed the accounting for the tax effects of the Act. However, we have made an initial assessment of the Act and recorded a discrete net benefit of \$6.5 million. We believe that our assessment of the re-measurement of our deferred income tax assets and liabilities to be complete, while we consider our tax expense related to the one-time mandatory transition tax on deemed repatriation of previously tax-deferred and unremitted foreign earnings and our tax benefit of stock based compensation to be provisional. At this time, our estimate does not reflect changes in current interpretations of compensation deduction limitations, effects of any state tax law changes and uncertainties regarding interpretations that may arise as a result of federal tax reform. Any additional impact of the enactment of the Act will be recorded as they are identified during the one-year measurement period provided for in SAB 118.

In light of the Act, we repatriated \$2.8 million of excess cash from our insulating glass spacer division in the United Kingdom during the twelve months ended October 31, 2018. This was repatriation of excess cash that was a portion of the one-time mandatory transition tax discussed above. Management has determined that the earnings of our foreign subsidiaries are not required as a source of funding for United States operations and we intend to indefinitely reinvest the funds at October 31, 2018 in our foreign jurisdictions. We will continue to evaluate our foreign cash position and may repatriate additional foreign earnings in the future. With the exception of the one-time mandatory transition tax on deemed repatriation of previously tax-deferred and unremitted foreign earnings, we do not anticipate any material tax impact from any potential repatriation of previously unremitted foreign

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

earnings. If the investment in our foreign subsidiaries were completely realized, we could incur an estimated residual United States tax liability of \$0.1 million.

The decrease in the 2017 effective tax rate is due primarily to a greater proportion of United States taxable income in relation to foreign taxable income for the year. The United States tax rate is generally higher than the foreign tax rate. The effective rate is also lower due to a change over a period of three years in the deferred tax rate, primarily in the United Kingdom, from 19% to 17%. The foreign tax rate differential and the mix of earnings by jurisdiction also impacted the rate in 2016. The increase in the 2016 effective tax rate benefit was due primarily to a greater proportion of foreign taxable income in relation to United States taxable income for the year. The overall change in the 2016 effective rate was also impacted by transaction costs and a change in the deferred rate in the United Kingdom from 20% to 19%.

Significant components of our net deferred tax liabilities and assets were as follows:

	October 31,	
	2018	2017
	(In thousands)	
Deferred tax assets:		
Employee benefit obligations	\$ 9,910	\$ 12,731
Accrued liabilities and reserves	1,609	2,409
Pension and other benefit obligations	1,872	2,968
Inventory	843	1,614
Loss and tax credit carry forwards	3,716	8,098
Other	119	194
Total gross deferred tax assets	18,069	28,014
Less: Valuation allowance	1,275	1,304
Total deferred tax assets, net of valuation allowance	16,794	26,710
Deferred tax liabilities:		
Property, plant and equipment	10,577	16,128
Goodwill and intangibles	23,432	32,542
Total deferred tax liabilities	34,009	48,670
Net deferred tax liabilities	\$ 17,215	\$ 21,960

At October 31, 2018, state operating loss carry forwards totaled \$41.8 million. The majority of these losses begin to expire in 2025. Tax credits available to offset future tax liabilities totaled \$4.1 million and are expected to be utilized within the next twelve months. We evaluate tax benefits of operating losses and tax credit carry forwards on an ongoing basis, including a review of historical and projected future operating results, the eligible carry forward period and other circumstances. We have recorded a valuation allowance for certain state net operating losses as of October 31, 2018 and 2017, totaling \$1.3 million (\$0.6 million net of federal taxes) for the respective periods. In assessing the need for a valuation allowance, we consider both positive and negative evidence related to the likelihood of realization of the deferred tax assets.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The following table reconciles the change in the unrecognized income tax benefit associated with uncertain tax positions for the years ended October 31, 2018, 2017 and 2016 (in thousands):

	Unrecognized Income Tax Benefits
Balance at October 31, 2015	\$ 564
Additions for tax positions related to the current year	—
Additions for tax positions related to the prior year	15
Balance at October 31, 2016	\$ 579
Additions for tax positions related to the current year	—
Additions for tax positions related to the prior year	12
Balance at October 31, 2017	\$ 591
Additions for tax positions related to the current year	—
Additions for tax positions related to the prior year	15
Balance at October 31, 2018	\$ 606

As of October 31, 2018, our unrecognized tax benefit (UTB) relates to certain state tax items regarding the interpretation of tax laws and regulations. In January 2015, we reassessed our unrecognized tax benefit related to the 2008 spin-off of Quanex from a predecessor company and recognized the full benefit of the tax positions taken. This reduced the liability for uncertain tax positions by \$4.1 million and increased deferred income taxes (non-current assets) by \$6.8 million and resulted in a non-cash increase in retained earnings of \$10.1 million, with an increase in income tax benefit of \$0.8 million. At October 31, 2018, \$0.6 million is recorded as a liability for uncertain tax positions. The disallowance of the UTB would not materially affect the annual effective tax rate.

We, along with our subsidiaries, file income tax returns in the United States and various state jurisdictions as well as in the United Kingdom, Germany and Canada. In certain jurisdictions the statute of limitations has not yet expired. We generally remain subject to examination of our United States income tax returns for 2015 and subsequent years. We generally remain subject to examination of our various state and foreign income tax returns for a period of four to five years from the date the return was filed. The state impact of any federal changes remains subject to examination by various states for a period of up to one year after formal notification to the state of the federal change.

Judgment is required in assessing the future tax consequences of events that have been recognized in our financial statements or tax returns. The final outcome of the future tax consequences of legal proceedings, if any, as well as the outcome of competent authority proceedings, changes in regulatory tax laws, or interpretation of those tax laws could impact our financial statements. We are subject to the effect of these matters occurring in various jurisdictions. We do not believe any of the UTB at October 31, 2018 will be recognized within the next twelve months.

The acquisition of Woodcraft in November 2015 established a net noncurrent deferred tax liability of \$37.4 million primarily reflecting the book to tax basis difference in intangibles, fixed assets and inventory. The acquisition of Flamstead Holdings, Ltd in June 2015 established a noncurrent deferred tax liability of \$13.2 million reflecting the book to tax basis difference in intangibles, fixed assets and inventory at the then current United Kingdom tax rate of 20%. The HLP noncurrent deferred tax liability has been subsequently adjusted to the expected rate of 17%.

12. Commitments and Contingencies

Operating Leases and Purchase Obligations

We have operating leases for certain real estate and equipment used in our business. Rental expense for the years ended October 31, 2018, 2017 and 2016 was \$9.5 million, \$10.5 million and \$10.3 million, respectively.

We are a party to non-cancelable purchase obligations primarily for door hardware, primary and secondary steel and primary and secondary aluminum used in our manufacturing processes, as well as expenditures related to capital projects in progress. We paid \$5.2 million and \$4.5 million pursuant to these arrangements for the years ended October 31, 2018 and 2017, respectively. These obligations total \$16.7 million and \$11.9 million at October 31, 2018 and 2017, respectively, and extend through fiscal 2018. Future amounts paid pursuant to these arrangements will depend, to some extent, on our usage.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The following table presents future minimum rental payments under operating leases with remaining terms in excess of one year at October 31, 2018 (in thousands):

	Operating Leases
2019	\$ 8,407
2020	6,776
2021	5,376
2022	4,528
2023	4,290
Thereafter	20,274
Total	\$ 49,651

Asset Retirement Obligation

We maintain an asset retirement obligation associated with a leased facility in Kent, Washington. We have estimated our future cash flows associated with this asset retirement obligation and recorded an asset and corresponding liability. We are depreciating the asset and accreting the liability over a seven year term, to culminate in an asset retirement obligation of \$2.2 million as of February 2020.

Remediation and Environmental Compliance Costs

Under applicable state and federal laws, we may be responsible for, among other things, all or part of the costs required to remove or remediate wastes or hazardous substances at locations we, or our predecessors, have owned or operated. From time to time, we also have been alleged to be liable for all or part of the costs incurred to clean up third-party sites where there might have been an alleged improper disposal of hazardous substances. At present, we are not involved in any such matters.

From time to time, we incur routine expenses and capital expenditures associated with compliance with existing environmental regulations, including control of air emissions and water discharges, and plant decommissioning costs. We have not incurred any material expenses or capital expenditures related to environmental matters during the past three fiscal years, and do not expect to incur a material amount of such costs in fiscal 2019. While we will continue to have future expenditures related to environmental matters, any such amounts are impossible to reasonably estimate at this time. Based upon our experience to date, we do not believe that our compliance with environmental requirements will have a material adverse effect on our operations, financial condition or cash flows.

Litigation

From time to time, we, along with our subsidiaries, are involved in various litigation matters arising in the ordinary course of our business, including those arising from or related to contractual matters, commercial disputes, intellectual property, personal injury, environmental matters, product performance or warranties, product liability, insurance coverage and personnel and employment disputes.

We regularly review with legal counsel the status of all ongoing proceedings, and we maintain insurance against these risks to the extent deemed prudent by our management and to the extent such insurance is available. However, there is no assurance that we will prevail in these matters or that our insurers will accept full coverage of these matters, and we could, in the future, incur judgments, enter into settlements of claims, or revise our expectations regarding the outcome or insurability of matters we face, which could materially impact our results of operations.

We have been and are currently party to multiple claims, some of which are in litigation, relating to alleged defects in a commercial sealant product that was manufactured and sold during the 2000's. During the years ended October 31, 2018 and 2017, our insurance carrier reimbursed fees and expenses originally incurred as part of our defense of these various commercial sealant claims totaling \$0.5 million and \$4.0 million, respectively. While we believe that our product was not defective and that we would prevail in these commercial sealant product claims if taken to trial, the timing, ultimate resolution and potential impact of these claims is not currently determinable. Nevertheless, after taking into account all currently available information, including our defenses, the advice of our counsel, and the extent and currently-expected availability of our existing insurance coverage, we believe that the eventual outcome of these commercial sealant claims will not have a material adverse effect on our overall financial condition, results of operations or cash flows, and we have not recorded any accrual with regard to these claims.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

13. Derivative Instruments

Our derivative activities are subject to the management, direction, and control of the Chief Financial Officer and Chief Executive Officer. Certain transactions in excess of specified levels require further approval from the Board of Directors.

The nature of our business activities requires the management of various financial and market risks, including those related to changes in foreign currency exchange rates and aluminum scrap prices. We have historically used foreign currency forwards and options to mitigate or eliminate certain of those risks at our subsidiaries. We use foreign currency contracts to offset fluctuations in the value of accounts receivable and payable balances that are denominated in currencies other than the United States Dollar, including the Euro, British Pound Sterling and Canadian Dollar. Currently, we do not enter into derivative transactions for speculative or trading purposes. We are exposed to credit loss in the event of nonperformance by the counterparties to our derivative transactions. We attempt to mitigate this risk by monitoring the creditworthiness of our counterparties and limiting our exposure to individual counterparties. In addition, we have established master netting agreements in certain cases to facilitate the settlement of gains and losses on specific derivative contracts.

We have not designated any of our derivative contracts as hedges for accounting purposes in accordance with the provisions under the Accounting Standards Codification topic 815 "Derivatives and Hedging" (ASC 815). Therefore, changes in the fair value of these contracts and the realized gains and losses are recorded in the consolidated statements of income (loss) for the years ended October 31, 2018, 2017 and 2016 were as follows (in thousands):

Derivatives Not Designated as Hedging Instruments	Location of (Loss) or Gain:	Year Ended October 31,		
		2018	2017	2016
Foreign currency derivatives	Other, net	\$ (11)	\$ (88)	\$ 77

We have chosen not to offset any of our derivative instruments in accordance with the provisions of ASC 815. Therefore, the assets and liabilities are presented on a gross basis on our accompanying consolidated balance sheets. Less than \$0.1 million of fair value related to foreign currency derivatives was included in prepaid and other current assets as of the years ended October 31, 2018 and 2017, and less than \$0.1 million of fair value related to foreign currency derivatives was included in accrued liabilities as of October 31, 2017.

The following table summarizes the notional amounts and fair value of outstanding derivative contracts at October 31, 2018 and 2017 (in thousands):

		Notional as indicated		Fair Value in \$	
		October 31, 2018	October 31, 2017	October 31, 2018	October 31, 2017
Foreign currency derivatives:					
Buy EUR, Sell USD	EUR	455	1,271	\$ 1	\$ 24
Sell CAD, Buy USD	CAD	229	320	—	1
Sell GBP, Buy USD	GBP	22	75	—	—
Buy EUR, Sell GBP	EUR	34	30	—	(1)
Buy USD, Sell EUR	USD	12	—	—	—

For the classification in the fair value hierarchy, see Note 14, "Fair Value Measurement of Assets and Liabilities", included herewith.

14. Fair Value Measurement of Assets and Liabilities

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy distinguishes between (1) market participant assumptions developed based on market data obtained from independent sources (observable inputs) and (2) an entity's own assumptions about market participant assumptions developed based on the best information available in the circumstances (unobservable inputs). The fair value hierarchy consists of three broad levels, which gives the highest priority to Level 1 and the lowest priority to Level 3. The three levels of the fair value hierarchy are described below:

- Level 1 - Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

- Level 2 - Inputs other than quoted prices included within Level 1 that are observable for the asset or liability either directly or indirectly including quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; inputs other than quoted prices that are observable for the asset or liability (e.g., interest rates) and inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- Level 3 - Inputs that are both significant to the fair value measurement and unobservable.

As of October 31, 2018 and 2017, foreign currency derivatives were the only instruments being measured on a recurring basis. Less than \$0.1 million of foreign currency derivatives were included in total assets as of October 31, 2018 and less than \$0.1 million of foreign currency derivatives were included in total assets and total liabilities as of October 31, 2017. All of our derivative contracts are valued using quoted market prices from brokers or exchanges and are classified within Level 2 of the fair value hierarchy.

As of October 31, 2018 and 2017, we had approximately \$2.4 million of certain property, plant and equipment that was recorded at fair value on a non-recurring basis and classified as Level 3. The fair value was based on broker opinions.

Carrying amounts reported on the balance sheet for cash, cash equivalents, accounts receivable and accounts payable approximate fair value due to the short-term maturity of these instruments. Our outstanding debt is variable rate debt that re-prices frequently, thereby limiting our exposure to significant changes in interest rate risk. As a result, the fair value of our debt instruments approximates carrying value at October 31, 2018 and 2017 (Level 3 measurement).

15. Stock-Based Compensation

We have established and maintain an Omnibus Incentive Plan (2008 Plan) that provides for the granting of restricted stock awards, stock options, restricted stock units, performance share awards, performance restricted stock units, and other stock-based and cash-based awards. The 2008 Plan is administered by the Compensation and Management Development Committee of the Board of Directors.

The aggregate number of shares of common stock authorized for grant under the 2008 Plan is 7,650,000 as approved by the shareholders. Any officer, key employee and/or non-employee director is eligible for awards under the 2008 Plan. We grant restricted stock units to non-employee directors on the first business day of each fiscal year. Annually, pending approval by the Compensation & Management Development Committee of our Board of Directors in December, we grant a mix of stock options, restricted stock awards, performance shares and/or performance restricted stock units to officers, management and key employees. Occasionally, we may make additional grants to key employees at other times during the year.

Restricted Stock Awards

Restricted stock awards are granted to key employees and officers annually, and typically cliff vest over a three-year period with service and continued employment as the only vesting criteria. The recipient of the restricted stock awards is entitled to all of the rights of a shareholder, except that the awards are nontransferable during the vesting period. The fair value of the restricted stock award is established on the grant date and then expensed over the vesting period resulting in an increase in additional paid-in-capital. Shares are generally issued from treasury stock at the time of grant.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

A summary of non-vested restricted stock awards activity during the years ended October 31, 2018, 2017 and 2016, follows:

	Restricted Stock Awards	Weighted Average Grant Date Fair Value per Share
Non-vested at October 31, 2015	293,000	\$ 18.71
Granted	85,500	19.21
Vested	(102,000)	17.84
Forfeited	(9,800)	18.97
Non-vested at October 31, 2016	266,700	19.19
Granted	93,800	19.46
Vested	(73,100)	17.67
Forfeited	(3,100)	19.65
Non-vested at October 31, 2017	284,300	19.66
Granted	73,400	20.70
Vested	(111,800)	20.16
Forfeited	(28,700)	19.66
Non-vested at October 31, 2018	217,200	\$ 19.76

The total weighted average grant-date fair value of restricted stock awards that vested during the years ended October 31, 2018, 2017 and 2016 was \$2.3 million, \$1.3 million and \$1.8 million, respectively. As of October 31, 2018, total unrecognized compensation cost related to unamortized restricted stock awards totaled \$1.6 million. We expect to recognize this expense over the remaining weighted average period of 1.7 years.

Stock Options

Historically, stock options have been awarded to key employees, officers and non-employee directors. Effective May 2015, the director compensation structure was revised to eliminate the grant of stock options to non-employee directors. Additionally, stock options were not awarded during the year ended October 31, 2018. Key employee and officer stock options typically vest ratably over a three-year period with service and continued employment as the vesting conditions. Our stock options may be exercised up to a maximum of ten years from the date of grant. The fair value of the stock options is determined on the grant date and expensed over the vesting period resulting in an increase in additional paid-in-capital.

We use the Black-Scholes pricing model to estimate the fair value of our stock options. A description of the methodology for the valuation assumptions follows:

- *Expected Volatility* – For stock options granted prior to July 1, 2013, we used an estimate of the historical volatility of a selected peer group. Effective July 1, 2013, we determined that we had sufficient historical data to calculate the volatility of our common stock since our spin-off in April 2008. We believe there has been uncertainty in the United States equities market over the past several years and that uncertainty has contributed to volatility in equities in general. We expect this volatility to continue over the foreseeable future. Therefore, we believe that our historical volatility is a proxy for expected volatility. We have not excluded any of our historical data from the volatility calculation, and we are not aware of any specific significant factors which might impact our future volatility.
- *Expected Term* – For stock options granted prior to July 1, 2013, we determined the expected term using historical information of our former parent company prior to the spin-off in 2008, with regards to option vesting, exercise behavior and contractual expiration, as we believed that this employee group was the most similar to our employee group. Separate groups of employees that have similar historical exercise behavior were considered separately. Effective July 1, 2013, we determined that we had sufficient historical data to estimate our expected term using our own data with regards to the exercise behavior, cancellations, retention patterns and remaining contractual terms. When analyzing these patterns and variables, we considered the stratification of the awards (large grants to relatively few employees versus smaller grants to many others), the age of certain employees with larger grants, the historical exercise behavior of the employee group, and fluctuations/volatility of our underlying common stock, as to whether the stock options are expected to be out-of-the-money. For our directors, stock options vested immediately, and, as such, the expected term approximated the contractual term, after adjusting for historical forfeitures. We believe our estimates are reasonable given these factors.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

- *Risk-Free Rate* – We base the risk-free rate on the yield at the date of grant of a zero-coupon United States Treasury bond whose maturity period equals the option’s expected term.
- *Expected Dividend Yield* – We base the expected dividend yield on our historical dividend payment of approximately \$0.16 per share.

The following table summarizes the assumptions used to estimate the fair value of our stock options granted during the years ended October 31, 2017 and 2016.

	Year Ended October 31,	
	2017	2016
Weighted-average expected volatility	34.7%	37.1%
Weighted-average expected term (in years)	5.7	5.4
Risk-free interest rate	2.0%	1.7%
Expected dividend yield over expected term	1.0%	1.0%
Weighted average grant date fair value	\$6.25	\$6.32

The following table summarizes our stock option activity for the years ended October 31, 2018, 2017 and 2016.

	Stock Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (000s)
Outstanding at October 31, 2015	2,352,188	\$ 16.46	5.4	\$ 6,672
Granted	297,900	19.23		
Exercised	(221,850)	15.43		
Forfeited/Expired	(42,018)	19.78		
Outstanding at October 31, 2016	2,386,220	16.84	5.1	\$ 2,384
Granted	292,600	19.45		
Exercised	(507,660)	15.67		
Forfeited/Expired	(18,402)	19.90		
Outstanding at October 31, 2017	2,152,758	17.44	5.2	\$ 9,700
Granted	—	—		
Exercised	(377,218)	12.58		
Forfeited/Expired	(21,884)	19.28		
Outstanding at October 31, 2018	1,753,656	18.47	5.0	\$ 51
Vested or expected to vest at October 31, 2018	1,753,656	18.47	5.0	\$ 51
Exercisable at October 31, 2018	1,477,746	\$ 18.30	4.4	\$ 51

Intrinsic value is the amount by which the market price of the common stock on the date of exercise exceeds the exercise price of the stock option. For the years ended October 31, 2018, 2017 and 2016, the total intrinsic value of our stock options that were exercised totaled \$2.9 million, \$3.1 million and \$1.0 million, respectively. The total fair value of stock options vested during the years ended October 31, 2018, 2017 and 2016, was \$1.5 million, \$1.8 million and \$1.9 million, respectively. As of October 31, 2018, total unrecognized compensation cost related to stock options was \$0.2 million. We expect to recognize this expense over the remaining weighted average vesting period of 1.0 years.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Restricted Stock Units

Restricted stock units may be awarded to key employees and officers from time to time, and annually to non-employee directors. The non-employee director restricted stock units vest immediately but are payable only upon the director's cessation of service unless an election is made by the non-employee director to settle and pay the award on an earlier specified date. Restricted stock units awarded to employees and officers typically cliff vest after a three-year period with service and continued employment as the vesting conditions. Restricted stock units are not considered outstanding shares and do not have voting rights, although the holder does receive a cash payment equivalent to the dividend paid, on a one-for-one basis, on our outstanding common shares. Once the vesting criteria is met, each restricted stock unit is payable to the holder in cash based on the market value of one share of our common stock. Accordingly, we record a liability for the restricted stock units on our balance sheet and recognize any changes in the market value during each reporting period as compensation expense.

During the years ended October 31, 2018, 2017 and 2016, 18,050, 24,560 and 20,445 restricted stock units, respectively, were granted and immediately vested with corresponding weighted average grant date fair value of \$21.85, \$15.65 and \$19.56, respectively. As of October 31, 2018, 2017 and 2016, there were no non-vested restricted stock units. We did not make any payments to settle restricted stock units during the years ended October 31, 2018, 2017 and 2016.

Performance Share Awards

We have granted performance share awards to key employees and officers annually in December. In addition, we awarded performance shares in January 2016 to a new officer. These awards cliff vest after a three-year period with service and performance measures such as relative total shareholder return (R-TSR) and earnings per share (EPS) growth as vesting conditions. The number of performance share awards earned is variable depending on the metrics achieved. The settlement method is 50% in cash and 50% in our common stock.

To account for the performance share awards, we have bifurcated the portion subject to a market condition (relative total shareholder return) and the portion subject to an internal performance measure (earnings per share growth). We have further bifurcated these awards based on the settlement method, as the portion expected to settle in stock (equity component) and the portion expected to settle in cash (liability component).

To value the shares subject to the market condition, we utilized a Monte Carlo simulation model to arrive at a grant-date fair value. This amount will be expensed over the three-year term of the award with a credit to additional paid-in-capital. To value the shares subject to the internal performance measure, we used the value of our common stock on the date of grant as the grant-date fair value per share. This amount will be expensed over the three-year term of the award, with a credit to additional paid-in-capital, and could fluctuate depending on the number of shares ultimately expected to vest based on our assessment of the probability that the performance conditions will be achieved. For both performance conditions, the portion of the award expected to settle in cash will be recorded as a liability and will be marked to market over the three-year term of the award, and could fluctuate depending on the number of shares ultimately expected to vest. Depending on the achievement of the performance conditions, 0% to 200% of the awarded performance shares may ultimately vest.

The following table summarizes our performance share grants and the grant date fair value for the EPS and R-TSR performance metrics:

Grant Date	Grant Date Fair Value			
	Shares Awarded	EPS	R-TSR	Forfeited
December 2, 2015	158,100	\$ 19.31	\$ 23.72	18,936
January 25, 2016	4,300	17.46	26.65	—
November 30, 2016	186,500	19.45	26.61	17,940
December 7, 2017	146,500	\$ 20.70	\$ 21.81	12,848

On December 3, 2017, 123,600 shares vested pursuant to the December 2013 grant, resulting in the issuance of 25,340 shares of common stock and a cash payment of \$0.6 million. The November 2016 grant includes a return on invested capital (ROIC) metric which, if achieved, could enhance the number of shares that are ultimately issued but cannot exceed the maximum (200%). Due to the uncertainty with regard to achieving this metric, no value has been assigned. In the event and at such time the metric is deemed achievable, compensation expense will begin to be recognized through the remaining vesting period. For the year ended October 31, 2018, we recorded a decrease in compensation expense of \$0.9 million, which reflects a decrease in the number of shares expected to vest in December 2018 associated with the December 2, 2015 performance share grant. For the years ended

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

October 31, 2017 and 2016, we recorded \$3.0 million and \$2.7 million of compensation expense related to these performance share awards.

Performance share awards are not considered outstanding shares and do not have voting rights, although dividends are accrued over the performance period and will be payable in cash based upon the number of performance shares ultimately earned.

Performance shares are excluded from diluted weighted-average shares used to calculate earnings per share until the performance criteria is probable to result in the issuance of contingent shares. We evaluate the probability of the performance share vesting within one year of the vesting date. As of October 31, 2018, we have deemed no performance share awards to vest from our December 2, 2015 performance share award. For the years ended October 31, 2017 and 2016, there were 25,338 and 67,550 shares, respectively, related to performance shares that were potentially dilutive and considered in the diluted weighted average shares calculations. No contingent shares related to performance shares are included in diluted weighted average shares for the year ended October 31, 2018.

Performance Restricted Stock Units

We awarded performance restricted stock units to key employees and officers in December 2017. These awards cliff vest upon a three-year service period with the absolute total shareholder return of our common stock over this three-year term as the vesting criteria. The number of performance restricted stock units earned is variable depending on the metric achieved, and the settlement method is 100% in our common stock, with accrued dividends paid in cash at the time of vesting, assuming the shares had been outstanding throughout the performance period.

To value the performance restricted stock units, we utilized a Monte Carlo simulation model to arrive at a grant-date fair value. This amount will be adjusted for forfeitures and expensed over the three-year term of the award with a credit to additional paid-in-capital. Depending on the achievement of the performance conditions, a minimum of 0% and a maximum of 150% of the awarded performance restricted stock units may vest. Specifically, the awards vest on a continuum with the following Absolute Total Shareholder Return (A-TSR) milestones:

Vesting Level	Vesting Criteria	Percentage of Award Vested
Level 1	A-TSR greater than or equal to 50%	150%
Level 2	A-TSR less than 50% and greater than or equal to 20%	100%
Level 3	A-TSR less than 20% and greater than or equal to -20%	50%
Level 4	A-TSR less than -20%	—%

On December 7, 2017, we awarded 78,200 performance restricted stock units with a grant date fair value of \$17.76 per share. During the year ended October 31, 2018, 6,889 of the performance restricted stock units were forfeited.

Similar to performance shares, the performance restricted stock units are not considered outstanding shares, do not have voting rights, and are excluded from diluted weighted-average shares used to calculate earnings per share until the performance criteria is probable to result in the issuance of contingent shares.

The following table summarizes amounts expensed as selling, general and administrative expense related to restricted stock awards, stock options, restricted stock units, performance share awards and performance restricted stock units for the years ended October 31, 2018, 2017 and 2016 (in thousands):

	Year Ended October 31,		
	2018	2017	2016
Restricted stock awards	\$ 1,462	\$ 1,810	\$ 1,911
Stock options	467	1,820	2,486
Restricted stock units	(364)	855	161
Performance share awards	(944)	3,001	2,703
Performance restricted stock units	401	—	—
Total compensation expense	1,022	7,486	7,261
Income tax effect	(35)	1,999	4,858
Net compensation expense	<u>\$ 1,057</u>	<u>\$ 5,487</u>	<u>\$ 2,403</u>

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

16. Stockholders' Equity

As of October 31, 2018, our authorized capital stock consists of 125,000,000 shares of common stock, at par value of \$0.01 per share, and 1,000,000 shares of preferred stock, with no par value. As of October 31, 2018 and 2017, we had 37,433,817 and 37,508,877 shares of common stock issued, respectively, and 33,339,032 and 34,838,134 shares of common stock outstanding, respectively. There were no shares of preferred stock issued or outstanding at October 31, 2018 and 2017.

Stock Repurchase Program and Treasury Stock

On August 30, 2018, our Board of Directors approved a stock repurchase program that authorized the repurchase of up to \$60.0 million worth of shares of our common stock. Repurchases under the new program will be made in open market transactions or privately negotiated transactions, subject to market conditions, applicable legal requirements and other relevant factors. The program does not have an expiration date or a limit on the number of shares that may be purchased. During the year ended October 31, 2018, we purchased 1,900,000 shares at a cost of \$32.0 million under this program.

We record treasury stock purchases under the cost method whereby the entire cost of the acquired stock is recorded as treasury stock. Shares are generally issued from treasury stock at the time of grant of restricted stock awards, upon the exercise of stock options, and upon the vesting of performance shares and performance restricted stock units. On the subsequent issuance of treasury shares, we record proceeds in excess of cost as an increase in additional paid in capital. A deficiency of such proceeds relative to costs would be applied to reduce paid-in-capital associated with prior issuances to the extent available, with the remainder recorded as a charge to retained earnings. We recorded a charge to retained earnings of \$2.1 million and \$1.5 million in the years ended October 31, 2018 and 2017, respectively.

For a summary of treasury stock activity for the years ended October 31, 2018, 2017 and 2016, refer to the *Consolidated Statement of Stockholders' Equity* located elsewhere herein.

17. Other Income (Expense)

Other income (expense) included under the caption "Other, net" on the accompanying consolidated statements of income (loss), consisted of the following (in thousands):

	Year Ended October 31,		
	2018	2017	2016
Foreign currency transaction gains (losses)	\$ 113	\$ 713	\$ (5,457)
Foreign currency exchange derivative (losses) gains	(11)	(88)	77
Interest income	69	86	106
Other	7	19	(205)
Other income (expense)	<u>\$ 178</u>	<u>\$ 730</u>	<u>\$ (5,479)</u>

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

18. Segment Information

We present three reportable business segments: (1) North American Engineered Components segment (“NA Engineered Components”), comprising four operating segments primarily focused on the fenestration market in North America including vinyl profiles, insulating glass (IG) spacers, screens & other fenestration components; (2) European Engineered Components segment (“EU Engineered Components”), comprising our United Kingdom-based vinyl extrusion business, manufacturing vinyl profiles & conservatories, and the European insulating glass business manufacturing IG spacers; and (3) North American Cabinet Components segment (“NA Cabinet Components”), comprising Woodcraft and two wood manufacturing plants. We maintain a grouping called Unallocated Corporate & Other, which includes transaction expenses, stock-based compensation, long-term incentive awards based on the performance of our common stock and other factors, certain severance and legal costs not deemed to be allocable to all segments, depreciation of corporate assets, interest expense, other, net, income taxes and inter-segment eliminations, and beginning in 2018, executive incentive compensation and medical expense fluctuations relative to planned costs as determined during the annual planning process. Other general and administrative costs associated with the corporate office are allocated to the reportable segments, based upon a relative measure of profitability in order to more accurately reflect each reportable business segment's administrative costs. We allocate corporate expenses to businesses acquired mid-year from the date of acquisition. The accounting policies of our operating segments are the same as those used to prepare the accompanying consolidated financial statements. Corporate general and administrative expenses allocated during the years ended October 31, 2018, 2017 and 2016 were \$18.7 million, \$17.0 million and \$19.1 million, respectively.

ASC Topic 280-10-50, “*Segment Reporting*” (ASC 280) permits aggregation of operating segments based on factors including, but not limited to: (1) similar nature of products serving the building products industry, primarily the fenestration business; (2) similar production processes, although there are some differences in the amount of automation amongst operating plants; (3) similar types or classes of customers, namely the primary OEMs; (4) similar distribution methods for product delivery, although the extent of the use of third-party distributors will vary amongst the businesses; (5) similar regulatory environment; and (6) converging long-term economic similarities.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Segment information for the years ended October 31, 2018, 2017 and 2016 was as follows (in thousands):

	NA Eng. Comp.	EU Eng. Comp.	NA Cabinet Comp.	Unallocated Corp. & Other	Total
Year Ended October 31, 2018					
Net sales	\$ 485,366	\$ 159,973	\$ 249,813	\$ (5,367)	\$ 889,785
Depreciation and amortization	27,248	9,607	14,401	566	51,822
Operating income (loss)	31,484	12,702	3,248	(11,059)	36,375
Capital expenditures	13,929	5,450	6,965	140	26,484
Total assets	\$ 239,915	\$ 214,704	\$ 272,313	\$ 14,917	\$ 741,849
Year Ended October 31, 2017					
Net sales	\$ 474,878	\$ 147,963	\$ 248,808	\$ (5,094)	\$ 866,555
Depreciation and amortization	34,308	8,833	13,811	543	57,495
Operating income (loss)	26,311	13,673	4,128	(9,745)	34,367
Capital expenditures	18,822	7,841	7,349	552	34,564
Total assets	\$ 258,315	\$ 219,622	\$ 285,457	\$ 10,485	\$ 773,879
Year Ended October 31, 2016					
Net sales	\$ 538,249	\$ 150,203	\$ 248,119	\$ (8,387)	\$ 928,184
Depreciation and amortization	29,793	9,339	13,453	561	53,146
Operating income (loss)	34,229	13,225	5,475	(16,576)	36,353
Capital expenditures	\$ 22,114	\$ 6,141	\$ 8,709	\$ 279	\$ 37,243

The following table summarizes the change in the carrying amount of goodwill by segment for the years ended October 31, 2018 and 2017 (in thousands):

	NA Eng. Comp.	EU Eng. Comp.	NA Cabinet Comp.	Unallocated Corp. & Other	Total
Balance as of October 31, 2016	\$ 38,712	\$ 64,576	\$ 113,747	\$ —	\$ 217,035
Foreign currency translation adjustment	—	5,159	—	—	5,159
Balance as of October 31, 2017	\$ 38,712	\$ 69,735	\$ 113,747	\$ —	\$ 222,194
Foreign currency translation adjustment	—	(2,567)	—	—	(2,567)
Balance as of October 31, 2018	\$ 38,712	\$ 67,168	\$ 113,747	\$ —	\$ 219,627

For further details of Goodwill, see Note 6, "Goodwill & Intangible Assets", located herewith.

We did not allocate non-operating expense or income tax expense to the reportable segments. The following table reconciles operating income (loss) as reported above to net income (loss) for the years ended October 31, 2018, 2017 and 2016:

	Year Ended October 31,		
	2018	2017	2016
	(in thousands)		
Operating income	\$ 36,375	\$ 34,367	\$ 36,353
Interest expense	(11,100)	(9,595)	(36,498)
Other, net	178	730	(5,479)
Income tax benefit (expense)	875	(6,819)	3,765
Income (loss) from continuing operations	\$ 26,328	\$ 18,683	\$ (1,859)

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Geographic Information

Our manufacturing facilities and all long-lived assets are located in the United States, United Kingdom and Germany. We attribute our net sales to a geographic region based on the location of the customer. The following tables provide information concerning our net sales for the years ended October 31, 2018, 2017 and 2016, and our long-lived assets as of October 31, 2018 and 2017 (in thousands):

<i>Net Sales:</i>	Year Ended October 31,		
	2018	2017	2016
United States	\$ 676,776	\$ 667,063	\$ 724,045
Europe	159,652	148,370	150,710
Canada	23,610	24,442	24,141
Asia	18,584	17,028	20,404
Other foreign countries	11,163	9,652	8,884
Total net sales	<u>\$ 889,785</u>	<u>\$ 866,555</u>	<u>\$ 928,184</u>

<i>Long-lived assets, net</i>	Year Ended October 31,	
	2018	2017
United States	\$ 384,595	\$ 404,732
Germany	16,507	20,052
United Kingdom	141,814	148,319
Total long-lived assets, net	<u>\$ 542,916</u>	<u>\$ 573,103</u>

Long-lived assets, net includes: property, plant and equipment, net; goodwill; and intangible assets, net.

Product Sales

We produce a wide variety of products that are used in the fenestration industry, including window spacer systems; extruded vinyl products; metal fabrication; and astragals, thresholds and screens. In addition, we produce certain non-fenestration products, including: kitchen and bath cabinet doors and components, flooring and trim moldings, solar edge tape, plastic decking, fencing, water retention barriers, conservatory roof components, and other products.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The following table summarizes our product sales for the years ended October 31, 2018, 2017 and 2016 into general groupings to provide additional information to our shareholders.

	Year Ended October 31,		
	2018	2017	2016
(in thousands)			
NA Engineered Components:			
United States - fenestration	\$ 412,000	\$ 399,694	\$ 444,571
International - fenestration	39,309	34,279	38,439
United States - non-fenestration	18,211	25,263	36,986
International - non-fenestration	15,846	15,642	18,253
	<u>\$ 485,366</u>	<u>\$ 474,878</u>	<u>\$ 538,249</u>
EU Engineered Components:			
United States - fenestration	\$ —	\$ 303	\$ 412
International - fenestration	135,415	129,140	134,631
International - non-fenestration	24,558	18,520	15,160
	<u>\$ 159,973</u>	<u>\$ 147,963</u>	<u>\$ 150,203</u>
NA Cabinet Components:			
United States - fenestration	\$ 14,596	\$ 17,083	\$ 21,779
United States - non-fenestration	232,990	229,550	223,664
International - non-fenestration	2,227	2,175	2,676
	<u>\$ 249,813</u>	<u>\$ 248,808</u>	<u>\$ 248,119</u>
Unallocated Corporate & Other			
Eliminations	\$ (5,367)	\$ (5,094)	\$ (8,387)
	<u>\$ (5,367)</u>	<u>\$ (5,094)</u>	<u>\$ (8,387)</u>
Net sales	<u>\$ 889,785</u>	<u>\$ 866,555</u>	<u>\$ 928,184</u>

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

19. Earnings (Loss) Per Share

We compute basic earnings (loss) per share by dividing net income (loss) by the weighted average number of common shares outstanding during the period. Diluted earnings per common and potential common shares include the weighted average of additional shares associated with the incremental effect of dilutive employee stock options, non-vested restricted stock as determined using the treasury stock method prescribed by U.S. GAAP and contingent shares associated with performance share awards, if dilutive.

The computation of basic and diluted earnings per share for the years ended October 31, 2018 and 2017 follows (in thousands, except per share data):

	Year Ended October 31, 2018			Year Ended October 31, 2017		
	Net Income from Continuing Operations	Weighted Average Shares	Per Share	Net Income from Continuing Operations	Weighted Average Shares	Per Share
Basic earnings per common share	\$ 26,328	34,701	\$ 0.76	\$ 18,683	34,230	\$ 0.55
<i>Effect of dilutive securities:</i>						
Stock options	—	198		—	446	
Restricted stock	—	126		—	138	
Performance shares	—	—		—	23	
Diluted earnings per common share	\$ 26,328	35,025	\$ 0.75	\$ 18,683	34,837	\$ 0.54

Basic and diluted loss per share was \$0.05 for the twelve months ended October 31, 2016. The computation of diluted earnings per share excludes outstanding stock options and other common stock equivalents when their inclusion would be anti-dilutive. During the twelve-month period ended October 31, 2016, 378,542 shares of common stock equivalents, 152,227 shares of restricted stock and 67,550 contingent shares related to performance share awards and performance restricted stock units were excluded from the computation of diluted earnings per share.

For the years ended October 31, 2018, 2017 and 2016, we had 1,000,356, 686,650; and 807,372 securities, respectively, that were potentially dilutive in future earnings per share calculations. Such dilution will be dependent on the excess of the market price of our stock over the exercise price and other components of the treasury stock method.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

20. Unaudited Quarterly Data

Selected quarterly financial data for the years ended October 31, 2018 and 2017 was as follows (amounts in thousands, except per share amounts):

For the Quarter Ended	January 31, 2018	April 30, 2018	July 31, 2018	October 31, 2018
Net sales	\$ 191,666	\$ 214,212	\$ 239,821	\$ 244,086
Cost of sales (excluding depreciation and amortization)	154,440	168,741	185,610	187,776
Depreciation and amortization	13,273	13,310	12,691	12,548
Operating (loss) income	(489)	8,136	17,087	11,641
Net income	\$ 4,947	\$ 4,136	\$ 10,753	\$ 6,492
Basic earnings per share	0.14	0.12	0.31	0.19
Diluted earnings per share	0.14	0.12	0.31	0.19
Cash dividends paid per common share	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.08

For the Quarter Ended	January 31, 2017	April 30, 2017	July 31, 2017	October 31, 2017
Net sales	\$ 195,096	\$ 209,133	\$ 229,367	\$ 232,959
Cost of sales (excluding depreciation and amortization)	154,947	162,132	176,758	178,325
Depreciation and amortization	15,406	14,380	13,915	13,794
Operating (loss) income	(3,841)	4,625	17,352	16,231
Net (loss) income	\$ (3,726)	\$ 1,462	\$ 10,215	\$ 10,732
Basic (loss) earnings per share	(0.11)	0.04	0.30	0.31
Diluted (loss) earnings per share	(0.11)	0.04	0.29	0.31
Cash dividends paid per common share	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04

Quarterly earnings (loss) per share results may not sum to the consolidated earnings per share results on the accompanying consolidated statements of income (loss) due to rounding and changes in weighted average shares during the respective periods.

21. New Accounting Guidance Adopted

In February 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2018-02, *Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*. This amendment requires disclosure of the accounting policy for releasing income tax effects from accumulated other comprehensive income. It also provides an option for entities to reclassify the income tax effects of the Tax Cuts and Jobs Act from accumulated other comprehensive income to retained earnings. We elected to early adopt this ASU effective November 1, 2017. We record income tax effects related to our unrecognized pension obligations in accumulated other comprehensive income as discussed in our Annual Report on Form 10-K for the year ended October 31, 2017. We have not elected to reclassify the income tax effects of the Tax Cuts and Jobs Act from accumulated other comprehensive income to retained earnings.

In March 2016, the FASB issued ASU 2016-09, *Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*. This guidance prescribes the presentation of excess tax benefits or deficiencies derived from book and tax timing differences associated with stock-based compensation arrangements and certain related statement of cash flow implications. We adopted the provisions of ASU 2016-09 effective November 1, 2017, as noted below with no significant impact on our consolidated financial statements.

- Excess tax benefits or deficiencies for share-based payments are to be recorded in the income tax provision, rather than as an adjustment to additional paid-in-capital. We made this change on a prospective basis;
- Cash flows related to excess tax benefits or deficiencies are included in net cash provided by operating activities rather than as a financing activity. We adopted this change retrospectively, which resulted in an increase to net cash provided by operating activities and a corresponding decrease to net cash provided by financing activities of \$0.2 million and \$0.1 million for the years ended October 31, 2017 and 2016, respectively;

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

- Cash paid to taxing authorities when withholding shares from an employee's vesting or exercise of equity-based compensation awards for tax-withholding purposes is to be classified as net cash used in financing activities rather than as an operating activity. We adopted this change retrospectively, which resulted in an increase to net cash provided by operating activities and a corresponding decrease to net cash provided by financing activities of \$1.0 million and \$0.8 million for the years ended October 31, 2017 and 2016, respectively;
- We elected to continue to withhold shares associated with stock-based compensation vesting or exercises to satisfy the minimum statutory tax withholding requirements, rather than electing to withhold at a higher rate; and
- We elected to continue to estimate forfeitures rather than account for forfeitures as they occur.

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842): Amendments to the Accounting Standards Codification*. These amendments replace current guidance and require the recognition of lease assets and lease liabilities by lessees for those leases classified as operating leases under previous U.S. GAAP. The amendments apply to any entity that enters into leasing arrangements. This guidance becomes effective for fiscal years beginning after December 15, 2018, and, therefore, we will adopt this pronouncement in fiscal 2020. We are currently evaluating the impact of this pronouncement on our consolidated financial statements.

In July 2015, the FASB issued ASU No. 2015-11, *Inventory (Topic 330): Simplifying the Measurement of Inventory*. This amendment simplifies the subsequent measurement of inventories by replacing the lower of cost or market revaluation method with the lower of cost and net realizable value test. This guidance is applicable to all inventories measured using methods other than last-in first-out method and the retail inventory method. We adopted the provisions of ASU 2016-09 effective November 1, 2017, with no material impact on our consolidated financial statements.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers*, which supersedes and replaces existing revenue recognition guidance, including industry specific guidance. This guidance prescribes a principles-based approach to revenue recognition under which revenue is recognized as goods and services are transferred to the customer in the amount the entity expects to be entitled to in exchange for those goods or services. In addition, this guidance requires additional disclosures regarding the nature, amount, timing and uncertainty of revenue from contracts with customers. We will adopt this guidance as of November 1, 2018 using the modified retrospective approach with a cumulative adjustment to retained earnings.

As of October 31, 2018, we have completed the evaluation of our revenue streams and have reviewed samples of customer contracts that we believe fairly represent contract traits that could be accounted for differently under amended guidance. We have evaluated the potential impact of the new revenue standard on each of the selected contracts including: (i) estimating the contract consideration under the new standard, (ii) identifying the performance obligations within the customer contracts, (iii) calculating the anticipated allocation of contract consideration to each performance obligation, (iv) determining the timing of revenue recognition for each performance obligation, and (v) determining the classification of the contract revenue for disclosure purposes. Based on the contract reviews and evaluations performed to date, we do not anticipate any material impacts from implementing the amended guidance.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including the Chief Executive Officer and Chief Financial Officer, we have evaluated the effectiveness of our disclosure controls and procedures pursuant to Rules 13a-15(e) under the Securities Exchange Act of 1934 (1934 Act) as of October 31, 2018. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of October 31, 2018, the disclosure controls and procedures are effective.

Management's Annual Report on Internal Control over Financial Reporting

Refer to Management's Annual Report on Internal Control over Financial Reporting located in "*Part 2, Item 8. Financial Information*" of this Annual Report on Form 10-K.

Auditor's Report Relating to Effectiveness of Internal Control over Financial Reporting

Refer to the Report of Independent Registered Public Accounting Firm located in "*Part 2, Item 8. Financial Information*" in this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

There have been no changes in internal controls over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the 1934 Act) during the most recent fiscal quarter that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

Item 9B. Other Information.

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Pursuant to General Instruction G(3) to Form 10-K, the information on "Directors, Executive Officers and Corporate Governance" is incorporated herein by reference from the Registrant's Definitive Proxy Statement relating to the 2019 Annual Meeting of Stockholders of Quanex Building Products Corporation or an amendment to this Form 10-K, which is to be filed with the SEC pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended, within 120 days after the close of the fiscal year ended October 31, 2018.

Item 11. Executive Compensation.

Pursuant to General Instruction G(3) to Form 10-K, the information on "Executive Compensation" is incorporated herein by reference from the Registrant's Definitive Proxy Statement relating to the 2019 Annual Meeting of Stockholders of Quanex Building Products Corporation or an amendment to this Form 10-K, which is to be filed with the SEC pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended, within 120 days after the close of the fiscal year ended October 31, 2018.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Pursuant to General Instruction G(3) to Form 10-K, the information on "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters" is incorporated herein by reference from the Registrant's Definitive Proxy Statement relating to the 2019 Annual Meeting of Stockholders of Quanex Building Products Corporation or an amendment to this Form 10-K, which is to be filed with the SEC pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended, within 120 days after the close of the fiscal year ended October 31, 2018.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

Pursuant to General Instruction G(3) to Form 10-K, the information on "Certain Relationships and Related Transactions, and Director Independence" is incorporated herein by reference from the Registrant's Definitive Proxy Statement relating to the 2019 Annual Meeting of Stockholders of Quanex Building Products Corporation or an amendment to this Form 10-K, which is to be filed with the SEC pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended, within 120 days after the close of the fiscal year ended October 31, 2018.

Item 14. Principal Accountant Fees and Services.

Pursuant to General Instruction G(3) to Form 10-K, the information on "Principal Accountant Fees and Services" is incorporated herein by reference from the Registrant's Definitive Proxy Statement relating to the 2019 Annual Meeting of Stockholders of Quanex Building Products Corporation or an amendment to this Form 10-K, which is to be filed with the SEC pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended, within 120 days after the close of the fiscal year ended October 31, 2018.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

1. Financial Statements

The financial statements included in this report are listed in the Index to Financial Statements located elsewhere in this Annual Report on Form 10-K.

2. Financial Statement Schedules

Schedules for which provision is made in the applicable accounting regulations of the SEC are either not required under the related instructions or inapplicable.

3. Exhibits

The exhibits required to be filed pursuant to Item 15(b) of Form 10-K are listed in the Exhibit Index filed herewith, which Exhibit Index is incorporated herein by reference. Exhibits 10.1 through 10.48 listed in the Exhibit Index filed herewith, are management or compensatory plans or arrangements required to be filed as exhibits to this Annual Report on Form 10-K pursuant to Item 15(b) thereof.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

QUANEX BUILDING PRODUCTS CORPORATION

Date: December 11, 2018

/s/ Brent L. Korb

Brent L. Korb

Senior Vice President – Finance and Chief Financial Officer
(Principal Financial Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Name	Title	Date
<u>/s/ William C. Griffiths</u> William C. Griffiths	Chairman of the Board, President and Chief Executive Officer	December 11, 2018
<u>/s/ Susan F. Davis</u> Susan F. Davis	Director	December 11, 2018
<u>/s/ LeRoy D. Nosbaum</u> LeRoy D. Nosbaum	Director	December 11, 2018
<u>/s/ Joseph D. Rupp</u> Joseph D. Rupp	Director	December 11, 2018
<u>/s/ Curtis M. Stevens</u> Curtis M. Stevens	Director	December 11, 2018
<u>/s/ Robert R. Buck</u> Robert R. Buck	Director	December 11, 2018
<u>/s/ Brent L. Korb</u> Brent L. Korb	Senior Vice President—Finance and Chief Financial Officer (Principal Financial Officer)	December 11, 2018

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EXHIBIT INDEX

Exhibit Number	Description of Exhibits
2.1	Distribution Agreement among Quanex Corporation, Quanex Building Products LLC and Quanex Building Products Corporation (incorporated by reference to Exhibit 10.1 to Quanex Corporation's Current Report on Form 8-K (Reg. No. 001-05725) filed with the Commission on December 24, 2007).
2.2	Agreement and Plan of Merger, dated as of January 31, 2011, by and among Quanex Building Products Corporation, QSB Inc., Lauren Holdco Inc., Lauren International, Inc. and Kevin E. Gray, as agent for the shareholders of Lauren Holdco Inc., filed as Exhibit 2.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913) as filed with the Securities and Exchange Commission on February 2, 2011, and incorporated herein by reference.
2.3	Limited Liability Company Interest Purchase Agreement dated February 7, 2014, by and among Quanex Building Products Corporation, Nichols Aluminum, LLC and Aleris International Inc., filed as Exhibit 2.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913) as filed with the Securities and Exchange Commission on February 10, 2014, and incorporated herein by reference.
2.4	First Amendment to Limited Liability Company Interest Purchase Agreement dated April 1, 2014, by and among Quanex Building Products Corporation, Nichols Aluminum, LLC and Aleris International Inc., filed as Exhibit 10.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913) as filed with the Securities and Exchange Commission on April 7, 2014, and incorporated herein by reference.
2.5	Share Purchase Agreement dated June 15, 2015 by and among R.L. Hartshorn and others, and Quanex Building Products Corporation, filed as Exhibit 2.1 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on June 16, 2015, and incorporated herein by reference.
2.6	Agreement and Plan of Merger, dated as of August 30, 2015, by and among Quanex Building Products Corporation, QWMS, Inc., WII Holding, Inc., and Olympus Growth Fund IV, L.P. solely in its capacity as the representative of the stockholders of WII Holding, Inc. filed as Exhibit 2.1 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on August 30, 2015, and incorporated herein by reference.
3.1	Restated Certificate of Incorporation of the Registrant dated as of March 4, 2016, filed as Exhibit 3.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913) as filed with the Securities and Exchange Commission on March 7, 2016, and incorporated herein by reference.
3.2	Third Amended and Restated Bylaws of the Registrant dated as of March 4, 2016, filed as Exhibit 3.2 of the Registrant's Quarterly Report on Form 10-Q (Reg. No. 001-33913) for the quarter ended July 31, 2016, and incorporated herein by reference.
4.1	Form of Registrant's common stock certificate, filed as Exhibit 4.1 of Amendment No. 1 to the Registrant's Registration Statement on Form 10 (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on February 14, 2008, and incorporated herein by reference.
4.2	Credit Agreement dated as of October 18, 2018, by and among the Company; the lenders party thereto; and Wells Fargo Bank, National Association, as Agent; filed as Exhibit 10.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913) as filed with the Securities and Exchange Commission on October 18, 2018, and incorporated herein by reference.
†10.1	Quanex Building Products Corporation Amended and Restated 2008 Omnibus Incentive Plan, filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913) as filed with the Securities and Exchange Commission on February 28, 2014, and incorporated herein by reference.
†10.2	Quanex Building Products Corporation Deferred Compensation Plan as amended, filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (Reg. No. 001-33913) for the quarter ended January 31, 2014, as filed with the Securities and Exchange Commission on March 6, 2014, and incorporated herein by reference.
†10.3	Quanex Building Products Corporation Restoration Plan, filed as Exhibit 10.8 of Amendment No. 4 to the Registrant's Registration Statement on Form 10 (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on March 17, 2008, and incorporated herein by reference.
†10.4	Quanex Building Products Corporation Supplemental Employees Retirement Plan, filed as Exhibit 10.9 of Amendment No. 4 to the Registrant's Registration Statement on Form 10 (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on March 17, 2008, and incorporated herein by reference.

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Exhibit Number	Description of Exhibits
†10.5	Form of Severance Agreement between the Registrant and certain of its executive officers, filed as Exhibit 10.5 of Amendment No. 1 to the Registrant's Registration Statement on Form 10 (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on February 14, 2008, and incorporated herein by reference.
†10.6	Form of Change in Control Agreement between the Registrant and certain of its executive officers, filed as Exhibit 10.6 of Amendment No. 1 to the Registrant's Registration Statement on Form 10 (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on February 14, 2008, and incorporated herein by reference.
†10.7	Form of Indemnity Agreement between the Registrant and each of its independent directors, effective September 2, 2008, filed as Exhibit 10.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on August 29, 2008, and incorporated herein by reference.
†10.8	Form of Indemnity Agreement between the Registrant and each of its officers, effective September 2, 2008, filed as Exhibit 10.2 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on August 29, 2008, and incorporated herein by reference.
†10.9	Agreement between Quanex Building Products Corporation and William C. Griffiths, effective July 9, 2013, filed as Exhibit 10.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on July 9, 2013, and incorporated herein by reference.
†10.10	Change in Control Agreement between Quanex Building Products Corporation and William C. Griffiths, effective July 9, 2013, filed as Exhibit 10.2 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on July 9, 2013, and incorporated herein by reference.
†10.11	Indemnity Agreement between Quanex Building Products Corporation and William C. Griffiths, effective July 9, 2013, the form of which is filed as Exhibit 10.2 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on August 29, 2008, and incorporated herein by reference.
†10.12	Form of Stock Option Agreement for Employees under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.13	Form of Stock Option Agreement for Section 16 Officers under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.14	Form of Stock Option Agreement for Key Leaders under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.3 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.15	Form of Stock Option Agreement for Non-Employee Directors under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.4 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.16	Form of Restricted Stock Award Agreement for Employees under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.5 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.17	Form of Restricted Stock Award Agreement for Section 16 Officers under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.6 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.18	Form of Restricted Stock Award Agreement for Key Leaders under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.7 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.

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Exhibit Number	Description of Exhibits
<u>†10.19</u>	<u>Form of Restricted Stock Award Agreement for Non-Employee Directors under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.8 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.</u>
<u>†10.20</u>	<u>Form of Restricted Stock Unit Award Agreement for Employees under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.9 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.</u>
<u>†10.21</u>	<u>Form of Restricted Stock Unit Award Agreement for Section 16 Officers under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.10 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.</u>
<u>†10.22</u>	<u>Form of Restricted Stock Unit Award Agreement for Key Leaders under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.11 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.</u>
<u>†10.23</u>	<u>Form of Restricted Stock Unit Award Agreement for Non-Employee Directors under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.12 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.</u>
<u>†10.24</u>	<u>Amended Form of Performance Share Award Agreement for Employees under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on December 7, 2015, and incorporated herein by reference.</u>
<u>†10.25</u>	<u>Amended Form of Performance Share Award Agreement for Section 16 Officers under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on December 7, 2015, and incorporated herein by reference.</u>
<u>†10.26</u>	<u>Amended Form of Performance Share Award Agreement for Key Leaders under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.3 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on December 7, 2015, and incorporated herein by reference.</u>
<u>†10.27</u>	<u>Form of Performance Share Award Agreement for Non-Employee Directors the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.16 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.</u>
<u>†10.28</u>	<u>Amended Form of Performance Unit Award Agreement for Employees under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.4 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on December 7, 2015, and incorporated herein by reference.</u>
<u>†10.29</u>	<u>Amended Form of Performance Unit Award Agreement for Section 16 Officers under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.5 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on December 7, 2015, and incorporated herein by reference.</u>
<u>†10.30</u>	<u>Amended Form of Performance Unit Award Agreement for Key Leaders under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.6 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on December 7, 2015, and incorporated herein by reference.</u>
<u>†10.31</u>	<u>Form of Performance Unit Award Agreement for Non-Employee Directors under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.20 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.</u>

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Exhibit Number	Description of Exhibits
†10.32	Form of Stock Appreciation Right Agreement for Employees under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.21 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.33	Form of Stock Appreciation Right Agreement for Section 16 Officers under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.22 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.34	Form of Stock Appreciation Right Agreement for Key Leaders under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.23 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.35	Form of Stock Appreciation Right Agreement for Non-Employee Directors under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.24 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.36	Form of Other Stock Based Award Agreement under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.25 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.37	Amended Form of Annual Incentive Award Agreement under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.7 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on December 7, 2015, and incorporated herein by reference.
†10.38	Agreement between Quanex Building Products Corporation and Scott Zuehlke, effective January 25, 2016, filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on January 27, 2016, and incorporated herein by reference.
†10.39	Change in Control Agreement between Quanex Building Products Corporation and Scott Zuehlke, effective January 25, 2016, filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on January 27, 2016, and incorporated herein by reference.
†10.40	Indemnity Agreement between Quanex Building Products Corporation and Scott Zuehlke, effective January 25, 2016, the form of which is filed as Exhibit 10.2 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on August 29, 2008, and incorporated herein by reference.
10.41	Lease dated February 9, 2016, between Garner Properties Ltd. and HL Plastics Limited, filed as Exhibit 10.44 to the Registrant's Annual Report on Form 10-K (Reg. No. 001-33913) for the year ended October 31, 2016, as filed with the Securities and Exchange Commission on December 16, 2016, and incorporated herein by reference.
10.42	Amended and Completely Restated Lease Agreement dated August 25, 2016, between Lauren Real Estate Holding LLC and Quanex IG Systems, Inc., filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on August 26, 2016, and incorporated herein by reference.
†10.43	Amended and Restated Employee Stock Purchase Plan, as amended and restated effective April 1, 2017, filed as Annex A to the Registrant's Definitive Proxy Statement on Schedule 14A for its 2017 Annual Meeting of Stockholders (Reg. No 001-33919), as filed with the Securities and Exchange Commission on January 31, 2017, and incorporated herein by reference.
†10.44	Agreement between Quanex Building Products Corporation and George Wilson, effective August 1, 2017, filed as Exhibit 10.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33919) as filed with the Securities and Exchange Commission on July 27, 2017.
†10.45	Change in Control Agreement between Quanex Building Products Corporation and George Wilson, effective August 1, 2017, filed as Exhibit 10.2 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33919) as filed with the Securities and Exchange Commission on July 27, 2017.

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Exhibit Number	Description of Exhibits
†10.46	Form of Indemnity Agreement between Quanex Building Products Corporation and George Wilson, effective August 1, 2017, in the form filed as Exhibit 10.2 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on August 29, 2008, and incorporated herein by reference.
†10.47	Form of Key Leader Stock Settled Performance Restricted Stock Units Award Agreement filed as Exhibit 10.50 to the Registrant's Annual Report on Form 10-K (Reg. No. 001-33913) for the year ended October 31, 2017, as filed with the Securities and Exchange Commission on December 12, 2017, and incorporated herein by reference.
†10.48	Form of Section 16 Officer Stock Settled Performance Restricted Stock Units Award Agreement filed as Exhibit 10.51 to the Registrant's Annual Report on Form 10-K (Reg. No. 001-33913) for the year ended October 31, 2017, as filed with the Securities and Exchange Commission on December 12, 2017, and incorporated herein by reference.
10.49	Share Repurchase Agreement by and among Praesidium Investment Management Company LLC, Quanex Building Products Corporation, Kevin Oram and Peter Uddo, effective October 9, 2018, filed as Exhibit 10.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913) as filed with the Securities and Exchange Commission on October 12, 2018, and incorporated herein by reference.
*21.1	Subsidiaries of the Registrant.
*23.1	Consent of Grant Thornton LLP.
*31.1	Certification by chief executive officer pursuant to Rule 13a-14(a)/15d-14(a).
*31.2	Certification by chief financial officer pursuant to Rule 13a-14(a)/15d-14(a).
*32	Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
*101.INS	XBRL Instance Document
*101.SCH	XBRL Taxonomy Extension Schema Document
*101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
*101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
*101.LAB	XBRL Taxonomy Extension Label Linkbase Document
*101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Filed herewith

† Management Compensation or Incentive Plan

As permitted by Item 601(b)(4)(iii)(A) of Regulation S-K, the Registrant has not filed with this Annual Report on Form 10-K certain instruments defining the rights of holders of long-term debt of the Registrant and its subsidiaries because the total amount of securities authorized under any of such instruments does not exceed 10% of the total assets of the Registrant and its subsidiaries on a consolidated basis. The Registrant agrees to furnish a copy of any such agreements to the Securities and Exchange Commission upon request.

SUBSIDIARIES OF QUANEX BUILDING PRODUCTS CORPORATION

Quanex Homeshield LLC
Mikron Industries, Inc.
Mikron Washington LLC
Quanex IG Systems, Inc.
Edgetech Europe GmbH
Quanex Screens LLC
Edgetech (UK) LTD.
Flamstead Holdings Limited
HL Plastics Ltd.
Woodcraft Industries, Inc.
Brentwood Acquisition Corp.
Primewood, Inc.

LOCATION OF INCORPORATION

Delaware
Washington
Washington
Ohio
Germany
Delaware
United Kingdom and Wales
United Kingdom and Wales
United Kingdom and Wales
Minnesota
Minnesota
North Dakota

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our reports dated December 11, 2018, with respect to the consolidated financial statements and internal control over financial reporting included in the Annual Report of Quanex Building Products Corporation on Form 10-K for the year ended October 31, 2018. We hereby consent to the incorporation by reference of said reports in the Registration Statements of Quanex Building Products Corporation on Forms S-8 (File No. 333-150392, File No. 333-173245, File No. 333-194812 and File No. 333-217118).

/s/ GRANT THORNTON LLP

Houston, Texas
December 11, 2018

CHIEF EXECUTIVE OFFICER CERTIFICATION

I, William C. Griffiths, certify that:

1. I have reviewed this annual report on Form 10-K of Quanex Building Products Corporation (the Registrant);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;
4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures [as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)] and internal control over financial reporting [as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)] for the Registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and
5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of Registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

December 11, 2018

/s/ WILLIAM C. GRIFFITHS

WILLIAM C. GRIFFITHS

Chairman of the Board, President and Chief Executive Officer
(Principal Executive Officer)

CHIEF FINANCIAL OFFICER CERTIFICATION

I, Brent L. Korb, certify that:

1. I have reviewed this annual report on Form 10-K of Quanex Building Products Corporation (the Registrant);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;
4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures [as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)] and internal control over financial reporting [as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)] for the Registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and
5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of Registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

December 11, 2018

/s/ BRENT L. KORB

BRENT L. KORB
Senior Vice President – Finance and
Chief Financial Officer
(Principal Financial Officer)

**Certification Pursuant To Section 906
of the Sarbanes-Oxley Act of 2002
(18 U.S.C. SECTION 1350)**

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code) (the Act), William C. Griffiths, President and Chief Executive Officer of Quanex Building Products Corporation (the Company) and Brent L. Korb, Senior Vice President – Finance and Chief Financial Officer of the Company, each hereby certify that, to the best of their knowledge:

- (a) the Company's Annual Report on Form 10-K for the fiscal year ended October 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the Report), fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and
- (b) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

December 11, 2018

/S/ WILLIAM C. GRIFFITHS

WILLIAM C. GRIFFITHS

*Chairman of the Board, President and
Chief Executive Officer*

/S/ BRENT L. KORB

BRENT L. KORB

*Senior Vice President—Finance and
Chief Financial Officer*

A signed original of this written statement required by Section 906 has been provided to Quanex Building Products Corporation and will be retained by Quanex Building Products Corporation and furnished to the Securities and Exchange Commission or its staff upon request.