Registration No. 333-

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

OWENS-ILLINOIS, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware (State or Other Jurisdiction of Incorporation or Organization)

22-2781933 (I.R.S. Employer) Identification No.)

One SeaGate
Toledo, Ohio 43666
(419) 247-5000
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Thomas L. Young
Executive Vice President and Chief Financial Officer
Owens-Illinois, Inc.
One SeaGate
Toledo, Ohio 43666
(419) 247-5000
(Name, Address, Including Zip Code, and Telephone Number,
Including Area Code, of Agent for Service)

Copy To:
Tracy K. Edmonson, Esq.
Latham & Watkins LLP
505 Montgomery Street, Suite 1900
San Francisco, California 94111
(415) 391-0600

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of the Registration Statement as determined by market conditions.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. o

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. o

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price Per Security(1)	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee
Common Stock, par value \$0.01 per share	36,000,000 shares	\$11.73	\$422,280,000	\$34,162.45

Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(c) of the Securities Act, as amended, based upon the average of the high (\$11.95) and low (\$11.50) trading prices of the common stock on the New York Stock Exchange on October 8, 2003.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission becomes effective. This preliminary prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any jurisdiction where such offer or sale is not permitted.

Subject to Completion Preliminary Prospectus dated October 9, 2003

36,000,000 Shares

OWENS-ILLINOIS, INC.

Common Stock

This prospectus relates to 36,000,000 shares of our common stock that may be offered for sale or otherwise transferred from time to time by the selling stockholder.

The selling stockholder may offer its shares of common stock from time to time through public or private transactions at prevailing market prices or at privately negotiated prices. We will not receive any of the proceeds from the sale of the shares of our common stock by the selling stockholder.

Our common stock is listed on the New York Stock Exchange under the symbol "OI." The last reported sale price of our common stock on the New York Stock Exchange on October 8, 2003 was \$11.60 per share.

Investing in our common stock involves risks that are described in the "Risk Factors" section beginning on page 3 of this prospectus.

These securities have not been approved or disapproved by the Securities and Exchange Commission or any State Securities commission nor has the Securities and Exchange commission or any state securities commission passed on the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is

, 2003.

TABLE OF CONTENTS

	Page
Cautionary Statement Regarding Forward Looking Statements	1
The Company	2
Risk Factors	3
Use Of Proceeds	10
Selling Stockholder	10
Plan Of Distribution	11
Legal Matters	12
Experts	12
Where You Can Find More Information	12
Incorporation Of Certain Documents By Reference	13

You should rely only on the information contained or incorporated by reference in this prospectus. We have not, and the selling stockholder has not, authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the selling stockholder is not, making an offer to sell or seeking an offer to buy these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate only as of the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or of any sale of these securities. Our business, financial condition, results of operations and prospects may have changed since that date.

i

CAUTIONARY STATEMENT REGARDING FORWARD LOOKING STATEMENTS

This prospectus includes forward looking statements. We have based these forward looking statements on our current expectations and projections about future events. These forward looking statements are subject to risks, uncertainties, and assumptions about us and our subsidiaries, including, among other things, factors discussed under the section entitled "Risk Factors" and the following:

- foreign currency fluctuations relative to the U.S. dollar;
- change in capital availability or cost, including interest rate fluctuations;
- general political, economic and competitive conditions in markets and countries where we have operations or sell products, including competitive pricing pressures, inflation or deflation, and changes in tax rates;

•

consumer preferences for alternative forms of packaging;

- fluctuations in raw material and labor costs;
- availability of raw materials;
- costs and availability of energy;
- transportation costs;
- consolidation among competitors and customers;
- the ability to integrate operations of acquired businesses;
- unanticipated expenditures with respect to environmental, safety and health laws;
- performance by customers of their obligations under supply agreements; and
- timing and occurrence of events, including events related to asbestos-related claims, which are beyond our control.

We caution you that although we believe that the assumptions on which the forward looking statements contained herein are based are reasonable, any of those assumptions could prove to be inaccurate and, as a result, the forward looking statements also could be materially incorrect. In light of these and other uncertainties, you should not regard the inclusion of a forward looking statement in this prospectus as a representation by us that our plans and objectives will be achieved, and you should not place undue reliance on these forward looking statements. We undertake no obligation to publicly update or revise any forward looking statements, whether as a result of new information, future events or otherwise. In light of these risks, uncertainties and assumptions, the forward looking events discussed in this prospectus might not occur.

1

THE COMPANY

Unless otherwise specified or the context requires otherwise, reference in this prospectus to the "Company," "Owens-Illinois," "we," "us" or "our" refers to Owens-Illinois, Inc. and its direct and indirect subsidiaries on a consolidated basis.

We are one of the world's leading manufacturers of packaging products. We are the largest manufacturer of glass containers in North America, South America, Australia and New Zealand, and one of the largest in Europe. In addition, we are the leading manufacturer in North America of plastic containers, plastic closures and plastic prescription containers. We also have plastics packaging operations in South America, Europe, Australia and New Zealand. Consistent with our strategy to continue to strengthen our existing packaging businesses, we have acquired 18 glass container businesses in 18 countries since 1991, including businesses in North America, South America, Central and Eastern Europe and the Asia Pacific region, and 7 plastics packaging businesses with operations in 12 countries.

We believe that we are a technological leader in the worldwide glass container and plastics packaging segments of the rigid packaging market. During the five years ended December 31, 2002, we invested more than \$2.3 billion in capital expenditures (excluding acquisitions) and more than \$362 million in research, development and engineering to, among other things, improve labor and machine productivity, increase capacity in growing markets and commercialize technology into new products.

A more detailed description of our business is contained in our Annual Report on Form 10-K which we have incorporated by reference in this prospectus.

Our principal executive office is located at One SeaGate, Toledo, Ohio 43666 and our telephone number at that address is (419) 247-5000.

2

RISK FACTORS

You should carefully consider the following risks and uncertainties and all other information contained in this prospectus, including the documents incorporated by reference, before you decide whether to purchase our common stock. Any of the following risks, if they materialize, could adversely affect our business, financial condition and operating results. As a result, the trading price of our common stock could decline, and you could lose all or part of your investment.

Risks Relating to Our Business

Funded Status of Pension Plans-Recognition of a minimum pension liability may cause a significant reduction in net worth.

Due to broad declines in the stock market, the fair values of the assets in our U.S. pension plans have declined during the last several years. Statement of Financial Accounting Standards No. 87, "Accounting for Pensions," requires balance sheet recognition of a minimum liability if the fair value of plan assets is less than the accumulated benefit obligation ("ABO") at the end of the year. The fair values of our U.S. pension plans' assets exceeded the ABO at December 31, 2002; therefore, no recognition of a minimum liability was required. However, if the fair values of the U.S. plans' assets at December 31, 2003 decrease or if the discount rate used to calculate the ABO decreases, we may be required to write off most of our prepaid pension asset (\$925.5 million at December 31, 2002) and record a liability equal to the excess of ABO over the fair value of the assets at December 31, 2003. The resulting noncash charge would not reduce reported earnings. It would be recorded directly as a decrease in the Accumulated Other Comprehensive Income component of share owner's equity. While we cannot estimate the minimum liability with any certainty at this time, we believe that the required adjustment would significantly reduce our net worth. For our major

pension plan in the United Kingdom, the ABO exceeded the plan's assets at December 31, 2002. The required adjustment, after tax effect, reduced net worth at December 31, 2002 by \$91.5 million. Even if the fair values of the U.S. plans' assets are less than ABO at December 31, 2003, we believe that we will not be required to make cash contributions to the U.S. plans for at least several years.

Goodwill—A significant write down of goodwill would have a material adverse effect on our reported results of operations and net worth.

On January 1, 2002, we adopted Statement of Financial Accounting Standards No. 142, "Goodwill and Other Intangible Assets" ("FAS No. 142"). We no longer amortize goodwill, but we review our goodwill balance for impairment at least once a year using the business valuation methods required by FAS No. 142. These methods include the use of a weighted average cost of capital to calculate the present value of the expected future cash flows of our reporting units. Future changes in the cost of capital, expected cash flows, or other factors may cause our goodwill to be impaired, resulting in a noncash charge against results of operations to write down goodwill for the amount of impairment. If a significant write down is required, the charge would have a material adverse effect on our reported results of operations and net worth.

International Operations—We are subject to risks associated with operating in foreign countries.

We operate manufacturing and other facilities throughout the world. Net sales from international operations totaled approximately \$2.6 billion representing approximately 46% of our net sales for the year ended December 31, 2002. As a result of our international operations, we are subject to risks associated with operating in foreign countries, including:

political, social and economic instability;

3

- war, civil disturbance or acts of terrorism;
- taking of property by nationalization or expropriation without fair compensation;
- changes in government policies and regulations;
- devaluations and fluctuations in currency exchange rates;
- imposition of limitations on conversions of foreign currencies into dollars or remittance of dividends and other payments by foreign subsidiaries;
- · imposition or increase of withholding and other taxes on remittances and other payments by foreign subsidiaries;
- hyperinflation in certain foreign countries; and
- impositions or increase of investment and other restrictions or requirements by foreign governments.

The unusually severe economic market and/or currency exchange conditions in South America, Europe and the Asia Pacific region adversely affected operating results in 1999, 2000 and 2001. A national strike in Venezuela in December 2002 adversely affected operations and forced us to idle two factories in that country. In addition, we were negatively affected in 2002 by weakness in certain South American currencies, which reduced U.S. dollar sales and earnings of foreign affiliates in that region. The risks associated with operating in foreign countries may have a material adverse effect on operations.

Competition—We face intense competition from other glass container producers, as well as from makers of alternative forms of packaging. Competitive pressures could adversely affect our financial health.

We are subject to significant competition from other glass container producers, as well as from makers of alternative forms of packaging, such as aluminum cans and plastic containers. We compete with each of our rigid packaging competitors on the basis of price, quality, service and the marketing attributes of the container. Advantages or disadvantages in any of these competitive factors may be sufficient to cause the customer to consider changing suppliers and/or to use an alternative form of packaging. For example, during 2001, our sales of glass containers for juice and iced tea products in the U.S. declined by approximately \$27.0 million due to conversions from glass to plastic containers. Our principal competitors among glass container producers in the U.S. are Saint-Gobain Containers Co., a wholly-owned subsidiary of Compagnie de Saint-Gobain, and Anchor Glass Container Corporation.

In supplying glass containers outside of the U.S., we compete directly with Compagnie de Saint-Gobain in Italy and Brazil, Rexam plc and Ardagh plc in the U.K., Vetropack in the Czech Republic and Amcor Limited in Australia. In other locations in Europe, we compete indirectly with a variety of glass container firms including Compagnie de Saint-Gobain, BSN Glasspack, Vetropack and Rexam plc.

In addition to competing with other large, well-established manufacturers in the glass container segment, we compete with manufacturers of other forms of rigid packaging, principally aluminum cans and plastic containers, on the basis of quality, price and service. The principal competitors producing metal containers are Crown Holdings Inc., Rexam plc, Ball Corporation and Silgan Holdings Inc. The principal competitors producing plastic containers are Consolidated Container Holdings, LLC, Graham Packaging Company, Plastipak Packaging, Inc. and Silgan Holdings Inc. We also compete with manufacturers of non-rigid packaging alternatives, including flexible pouches and aseptic cartons, in serving the packaging needs of juice customers.

Pressures from competitors and producers of alternative forms of packaging have resulted in excess capacity in certain countries in the past and have led to significant pricing pressures in the rigid packaging market.

Electrical power and natural gas are vital to our operations and we rely on a continuous power supply to conduct our business. In the first six months of 2003, higher energy costs worldwide impacted our operations and earnings at a level that we did not anticipate, resulting in an increase of approximately \$50.6 million in energy costs compared to the first six months of 2002. If energy costs substantially increase in the future, we could experience a significant increase in operating costs, which may have a material adverse effect on future operating income.

Integration Risks—We may not be able to effectively integrate businesses we acquire.

Consistent with past practice, we are considering strategic transactions, including acquisitions, that will complement, strengthen and enhance growth in our worldwide glass and plastics packaging operations. We are evaluating a number of these transactions on a preliminary basis but are not certain that any of these transactions will advance beyond the preliminary stages or be completed. Any recent or future acquisitions are subject to various risks and uncertainties, including:

- the inability to assimilate effectively the operations, products, technologies and personnel of the acquired companies (some of which are located in diverse geographic regions);
- the potential disruption of existing business and diversion of management's attention from day-to-day operations;
- the inability to maintain uniform standards, controls, procedures and policies;
- the need or obligation to divest portions of the acquired companies; and
- the potential impairment of relationships with customers.

In addition, we cannot assure you that the integration and consolidation of newly acquired businesses will achieve anticipated cost savings and operating synergies.

Customer Consolidation—The continuing consolidation of our customer base may intensify pricing pressures and have a material adverse effect on operations.

Over the last ten years, many of our largest customers have acquired companies with similar or complementary product lines. This consolidation has increased the concentration of our business with our largest customers. In many cases, such consolidation has been accompanied by pressure from customers for lower prices, reflecting the increase in the total volume of products purchased or the elimination of a price differential between the acquiring customer and the company acquired. Increased pricing pressures from our customers may have a material adverse effect on operations.

Seasonality and Raw Materials—Profitability could be affected by varied seasonal demands and the availability of raw materials.

Due principally to the seasonal nature of the brewing, iced tea and other beverage industries, in which demand is stronger during the summer months, sales of our products have varied and are expected to vary by quarter. Shipments in the U.S. and Europe are typically greater in the second and third quarters of the year, while shipments in South America and the Asia Pacific region are typically greater in the first and fourth quarters of the year. Unseasonably cool weather during peak demand periods can reduce demand for certain beverages packaged in our containers.

The raw materials that we use have historically been available in adequate supply from multiple sources. For certain raw materials, however, there may be temporary shortages due to weather or other factors, including disruptions in supply caused by raw material transportation or production delays.

5

These shortages, as well as material increases in the cost of any of the principal raw materials that we use, may have a material adverse effect on operations.

Environmental Risks—We are subject to various environmental legal requirements and may be subject to new legal requirements in the future. These requirements may have a material adverse effect on operations.

Our operations and properties, both in the U.S. and abroad, are subject to extensive laws, ordinances, regulations and other legal requirements relating to environmental protection, including legal requirements governing investigation and clean-up of contaminated properties as well as water discharges, air emissions, waste management and workplace health and safety. Such legal requirements frequently change and are different in every jurisdiction. Our operations and properties, both in the U.S. and abroad, must comply with these legal requirements. These requirements may have a material adverse effect on operations.

We have incurred, and expect to incur, costs for our operations to comply with environmental legal requirements, and these costs could increase in the future. Many environmental legal requirements provide for substantial fines, orders (including orders to cease operations), and criminal sanctions for violations. These legal requirements may apply to conditions at properties that we presently or formerly owned or operated, as well as at other properties for which we may be responsible, including those at which wastes attributable to us were disposed. A significant order or judgment against us, the loss of a significant permit or license or the imposition of a significant fine may have a material adverse effect on operations.

A number of governmental authorities both in the U.S. and abroad have enacted, or are considering, legal requirements that would mandate certain rates of recycling, the use of recycled materials, and/or limitations on certain kinds of packaging materials such as plastics. In addition, some companies with packaging needs have responded to such developments, and/or to perceived environmental concerns of consumers, by using containers made in whole or in part of recycled materials. Such developments may reduce the demand for some of our products, and/or increase our costs, which may have a material adverse effect on operations.

Labor Relations—We are party to collective bargaining agreements with labor unions. Organized strikes or work stoppages by unionized employees may have a material adverse effect on operations.

We are party to a number of collective bargaining agreements with labor unions, several of which will expire in 2005, and which at December 31, 2002, covered approximately 96% of our union-affiliated employees in the U.S. Upon the expiration of any collective bargaining agreement, if we are unable to

negotiate acceptable contracts with labor unions, it could result in strikes by the affected workers and increased operating costs as a result of higher wages or benefits paid to union members. If the unionized workers were to engage in a strike or other work stoppage, we could experience a significant disruption of operations and/or higher ongoing labor costs, which may have a material adverse effect on operations.

Asbestos-Related Contingent Liability—We have made, and will continue to make, substantial payments to satisfy claims of persons alleging exposure to asbestos-containing products and we may need to record additional charges in the future for estimated asbestos-related costs. These substantial payments have affected and will continue to affect our cost of borrowing and our ability to pursue acquisitions.

We are one of a number of defendants in a substantial number of lawsuits filed in numerous state and federal courts by persons alleging bodily injury (including death) as a result of exposure to dust from asbestos fibers. From 1948 to 1958, one of our former business units commercially produced and sold approximately \$40 million of a high-temperature, calcium-silicate based pipe and block insulation

6

material containing asbestos. We exited the pipe and block insulation business in April 1958. The traditional asbestos personal injury lawsuits and claims relating to such production and sale of asbestos material typically allege various theories of liability, including negligence, gross negligence and strict liability and seek compensatory and in some cases, punitive damages in various amounts (herein referred to as "asbestos claims").

We believe that our ultimate asbestos-related contingent liability (i.e., its indemnity or other claim disposition costs plus related legal fees) cannot be estimated with certainty. In 1993, we established a liability of \$975 million to cover indemnity payments and legal fees associated with the resolution of outstanding and expected future asbestos lawsuits and claims. In 1998, an additional liability of \$250 million was established. During the third quarter of 2000, we established an additional liability of \$550 million to cover our estimated indemnity payments and legal fees arising from outstanding asbestos personal injury lawsuits and claims and asbestos personal injury lawsuits and claims expected to be filed in the ensuing several years. In early March 2002, we initiated a comprehensive review to determine whether further adjustment of asbestos-related liabilities was appropriate. At the conclusion of this review in April, we determined that an additional charge of \$475 million would be appropriate to adjust the reserve for estimated future asbestos-related costs. Our ability to reasonably estimate our liability has been significantly affected by the volatility of asbestos-related litigation in the United States, the expanding list of non-traditional defendants that have been sued in this litigation and found liable for substantial damage awards, the continued use of litigation screenings to generate new lawsuits, the large number of claims asserted or filed by parties who claim prior exposure to asbestos materials but have no present physical impairment as a result of such exposure, and the growing number of co-defendants that have filed for bankruptcy.

We expect to complete a comprehensive review of our asbestos-related liabilities and costs in connection with finalizing and reporting our results for 2003, and annually thereafter, unless significant changes in trends or new developments warrant an earlier review. If the results of this annual comprehensive review indicate that the existing amount of the accrued liability is insufficient to cover our estimated liabilities, then we will record an appropriate charge to increase the accrual.

Our ultimate legal and financial liability in respect to the lawsuits and proceedings referred to above cannot be estimated with certainty. Our reported results of operations for 2002 were materially affected by the \$475 million first-quarter charge and any possible future additional accrual would likewise materially affect our results of operations in the period in which it might be recorded. Cash payments for asbestos-related costs were \$221.1 million in 2002 and \$99.9 million in the first half of 2003. The continued use of significant amounts of cash for asbestos-related costs has affected and will continue to affect our cost of borrowing and our ability to pursue global or domestic acquisitions.

Risks Relating to Our Indebtedness

Substantial Leverage—Our substantial indebtedness could adversely affect our financial health and prevent us from fulfilling our obligations.

We have a significant amount of debt. As of June 30, 2003, we had approximately \$5.8 billion of total consolidated debt outstanding. Our ratios of earnings to fixed charges were 1.0x and 1.4x for the year ended December 31, 2002 and the six months ended June 30, 2003, respectively. Our ratios of earnings to combined fixed charges and preferred stock dividends were 1.0x and 1.3x for the year ended December 31, 2002 and the six months ended June 30, 2003, respectively.

This substantial indebtedness could have important consequences to you. For example, it could:

increase our vulnerability to general adverse economic and industry conditions;

7

- require us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness, thereby reducing the availability of our cash flow to fund working capital, capital expenditures, acquisitions, development efforts and other general corporate purposes;
- limit our flexibility in planning for, or reacting to, changes in our business and the rigid packaging market;
- place us at a competitive disadvantage relative to our competitors that have less debt; and
- limit, along with the financial and other restrictive covenants in the documents governing our indebtedness, among other things, our ability to borrow additional funds.

Ability to Service Debt and Preferred Stock—To service our indebtedness and to make preferred stock dividend payments, we will require a significant amount of cash. Our ability to generate cash depends on many factors beyond our control.

Our ability to make payments on and to refinance our indebtedness, to make quarterly dividend payments of \$5.4 million on 9,050,000 shares of our \$2.375 convertible preferred stock, and to fund working capital, capital expenditures, acquisitions and other development efforts depends on our ability to generate cash in the future. We cannot assure you that we will generate sufficient cash flow from operations, or that future borrowings will be available under our secured credit agreement, in an amount sufficient to enable us to pay our indebtedness, to make our preferred stock dividend payments, or to fund other liquidity needs. If short term interest rates increase, our debt service cost will increase because some of our debt is subject to short term variable interest rates. Our annual interest expense

for 2002, on a pro forma basis assuming we had issued, at the beginning of 2002, the $8^1/4\%$ Senior Notes due 2013 and the $7^3/4\%$ Senior Secured Notes due 2011, and further assuming that all of such notes, the $8^3/4\%$ Senior Secured Notes due 2012 and the $8^7/8\%$ Senior Secured Notes due 2009 had been outstanding at the beginning of 2002, would have been \$486.7 million. Based on the amount of variable rate debt outstanding during 2002, after giving pro forma effect to the issuance of the $8^1/4\%$ Senior Notes due 2013, the $7^3/4\%$ Senior Secured Notes due 2011, the $8^7/8\%$ Senior Secured Notes due 2009 and the $8^3/4\%$ Senior Secured Notes due 2012, a 1% increase in variable interest rates for 2002 would have increased our annual pro forma interest expense by \$14.4 million to \$501.1 million.

We may need to refinance all or a portion of our indebtedness on or before maturity. If we are unable to generate sufficient cash flow and are unable to refinance or extend outstanding borrowings on commercially reasonable terms or at all, we may have to:

- reduce or delay capital expenditures planned for replacements, improvements and expansions;
- sell assets;
- restructure debt; and/or
- obtain additional debt or equity financing.

We cannot assure you that we could effect or implement any of these alternatives on satisfactory terms, if at all.

Debt Restrictions—We may not be able to finance future needs or adapt our business plans to changes because of restrictions placed on us by our secured credit agreement, our indentures and the instruments governing other indebtedness.

Our secured credit agreement, our indentures and certain of the agreements governing other indebtedness contain affirmative and negative covenants that limit our ability to take certain actions. For example, the indentures restrict, among other things, our ability to borrow money, pay dividends

8

on, or redeem or repurchase, stock, make investments, create liens, enter into certain transactions with affiliates and sell certain assets or merge with or into other companies. These restrictions could adversely affect our ability to operate our businesses and may limit our ability to take advantage of potential business opportunities as they arise.

Failure to comply with these or other covenants and restrictions contained in the secured credit agreement, our indentures or agreements governing other indebtedness could result in a default under those agreements, and the debt under those agreements, together with accrued interest, could then be declared immediately due and payable. If a default occurs under the secured credit agreement, the lenders could cause all of the outstanding debt obligations under the secured credit agreement to become due and payable. A default under the secured credit agreement, our indentures or agreements governing other indebtedness could also lead to an acceleration of debt under other debt instruments that contain cross acceleration or cross-default provisions.

Risks Relating to Our Common Stock

Possible Dilution—Future sales of substantial amounts of our common stock, or the perception that such sales may occur, could adversely affect the trading price for our stock and our ability to raise funds in new stock offerings.

Actual sales of additional amounts of our common stock, or the perception that such sales could occur, might adversely affect the value of our common stock. In addition to the adverse effect a price decline could have on holders of our common stock, such a decline could also impair our ability to raise capital through the sale of our equity securities. As of October 9, 2003, our Restated Certificate of Incorporation permitted the issuance of up to 250 million shares of our common stock, approximately 147.8 million shares of our common stock were outstanding and approximately 19.2 million shares of our common stock were issuable upon exercise of outstanding stock options and conversion of preferred stock. Thus, we have the ability to issue substantial amounts of our common stock in the future.

Anti-Takeover Provisions—Certain provisions of our certificate of incorporation, bylaws and Delaware General Corporate Law may have possible anti-takeover effects.

Some of the provisions of our certificate of incorporation and bylaws could discourage, delay or prevent an acquisition of our business at a premium price. The provisions:

- permit the board of directors to increase its own size and fill the resulting vacancies;
- · provide for a board composed of three classes of directors with each class serving a staggered three-year term; and
- authorize the issuance of up to an additional 40,950,000 shares of preferred stock in one or more series without a shareholder vote.

In addition, Section 203 of the Delaware General Corporate Law also imposes restrictions on mergers and other business combinations between us and any holder of 15% or more of our common stock.

Dividends—We have never paid dividends and do not intend to do so in the near future.

We have never paid any cash dividends on our common stock and we do not have any present intention to commence payment of any cash dividends. We intend to retain our earnings, if any, to provide funds for the operation and expansion of our business and to repay outstanding indebtedness. In addition, we are currently restricted from declaring and paying cash dividends on, or repurchasing, our common stock under some covenants contained in our debt agreements.

USE OF PROCEEDS

All of the shares of common stock offered by this prospectus are being offered by the selling stockholder. For information about the selling stockholder, see "Selling Stockholder." We will not receive any proceeds from the sale of shares of our common stock by the selling stockholder.

SELLING STOCKHOLDER

We originally issued and sold the 36,000,000 shares of common stock covered by this prospectus in a transaction exempt from the registration requirements of the Securities Act to three limited partnerships, of which KKR Associates, L.P. is the sole general partner and as to which it possesses sole voting and investment power. It may from time to time offer and sell pursuant to this prospectus any and all of the common stock. Our registration of the common stock held by the selling stockholder does not necessarily mean that the selling stockholder will sell all or any of the shares of common stock.

The following table sets forth, to our knowledge, with respect to the selling stockholder (i) the number of shares of common stock beneficially owned as of October 9, 2003 and prior to the offering contemplated hereby, (ii) the maximum number of shares of common stock which may be sold in this offering, and (iii) the number of shares of common stock which will be owned after the offering, assuming the sale of all the shares of common stock offered hereby:

	Shares of Common Stock Owned Prior to the Offering		Shares of Common Stock to be Owned After the Offering(1)		
Selling Stockholder	Number	%	Number of Shares of Common Stock Offered Hereby	Number	%
KKR Associates, L.P.(2)	36,000,000	24.4%	36,000,000	0	0

- (1) For purposes of this table, we have assumed that the selling stockholder will sell all shares covered by this prospectus.
- Shares shown as owned by KKR Associates, L.P. are owned of record by three limited partnerships of which KKR Associates, L.P. is the sole general partner and as to which it possesses sole voting and investment power. Henry R. Kravis, George R. Roberts, Paul E. Raether, Michael W. Michelson, James H.Greene, Jr., Edward A. Gilhuly, Perry Golkin and Scott Stuart are the general partners of KKR Associates, L.P., and Messrs. Kravis and Roberts are also the members of the Executive Committee of KKR Associates, L.P., and in such capacity may be deemed to share beneficial ownership of any shares of common stock beneficially owned or deemed to be beneficially owned by KKR Associates, L.P., but disclaim any such beneficial ownership. Messrs. Roberts, Michelson, Greene and Gilhuly sit on our board of directors. Messrs. Roberts, Michelson and Gilhuly are members of our board's Compensation Committee, Mr. Michelson is the chairman of our board's Compensation Committee and Messrs. Greene and Gilhuly are members of our board's Compensation Committee. Messrs. Michelson, Greene and Gilhuly are members of KKR & Co. L.L.C., the general partner of Kohlberg Kravis Roberts & Co., L.P., of which KKR Associates, L.P. is an affiliate, which provides management, consulting and financial services to the Company for an annual fee. In 2002 the payment for the management fee and expenses was \$2,024,291. Such services include, but are not necessarily limited to, advice and assistance concerning any and all aspects of the operation, planning and financing of the Company, as needed from time to time.

Except as noted above, the selling stockholder has not had, within the past three years, any position, office, or other material relationship with us or any of our affiliates. The selling stockholder identified above may have sold, transferred, or otherwise disposed of a portion of its common stock since the date on which it provided information regarding its common stock to us.

10

Only the selling stockholder identified above who beneficially owns the common stock set forth opposite its name in the foregoing table on the effective date of the registration statement of which this prospectus forms a part may sell common stock pursuant to the registration statement.

Pursuant to a registration rights agreement entered into by the selling stockholder and us, KKR Associates, L.P. has the right, under certain circumstances and subject to certain conditions, to require us to register under the Securities Act the shares of common stock held by it. Such registration rights will generally be available to KKR Associates, L.P. until registration is no longer required to enable them to resell their common stock. KKR Associates, L.P. has exercised its rights under this registration rights agreement and requested that we register the shares of common stock covered by this prospectus. The registration rights agreement provides, among other things, that we will pay all expenses in connection with any such registration, other than underwriting discounts and selling commissions.

PLAN OF DISTRIBUTION

The purpose of this prospectus is to permit the selling stockholder or its pledgees, donees, transferees or other successors in interest (collectively, the "selling stockholder") to offer for sale or to sell shares of common stock covered by this prospectus at such time and at such prices as each, in its sole discretion, chooses. We will not receive any of the proceeds from these offerings or sales.

The selling stockholder may sell or distribute some or all of its shares from time to time through dealers or brokers or other agents or directly to one or more purchasers in transactions (which may involve crosses and block transactions) on the New York Stock Exchange or other exchanges on which our common stock may be listed for trading, in privately negotiated transactions (including sales pursuant to pledges) or in the over-the-counter market, or in brokerage transactions, or in a combination of these transactions. In addition, the selling stockholder may sell or distribute some or all of its shares of common stock in a transaction involving an underwriter. Such transactions may be effected by the selling stockholder at market prices prevailing at the time of sale, at prices related to such prevailing market prices, at negotiated prices, or at fixed prices, which may be changed. Brokers, dealers, or their agents participating in such transactions as agent may receive compensation in the form of discounts, concessions or commissions from the selling stockholder (and, if they act as agent for the purchaser of the shares, from the purchaser). Such discounts, concessions or commissions as to a particular broker, dealer or other agent might be in excess of those customary in the type of transaction involved. The selling stockholder may also engage in short sales against the box, puts and calls and other transactions in our securities or derivatives of our securities and may sell or deliver shares in connection with these trades. The selling stockholder may enter into hedging transactions with broker-dealers and, in connection with these transactions, broker-dealers may engage in short sales of the shares.

If the applicable law requires, we will provide a supplement to this prospectus to disclose the specific shares to be sold, the public offering price of the shares to be sold, the names of any agents, dealers or underwriters employed by the selling stockholder in connection with such sale, and any applicable commissions or discounts with respect to a particular offer. We will file a post-effective amendment to the registration statement of which this prospectus is a part to include any material information with respect to the plan of distribution not previously described in the registration statement or any material change to such information in the registration statement.

The selling stockholder and any such brokers, dealers or other agents that participate in such distribution may be deemed to be "underwriters" within the meaning of the Securities Act, and any discounts, commissions or concessions received by any such brokers, dealers or other agents might be deemed to be underwriting discounts and commissions under the Securities Act.

11

In connection with the offer and sale of the shares of common stock by the selling stockholder, various state securities laws and regulations require that any such offer and sale should be made only through the use of a broker-dealer registered as such in any state where a selling stockholder engages such broker-dealer and in any state where such broker-dealer intends to offer and sell shares.

Under applicable rules and regulations under the Exchange Act, any person engaged in a distribution of the shares of common stock offered hereby may not simultaneously engage in market activities with respect to common stock for the applicable period under Regulation M prior to the commencement of such distribution. In addition, the selling stockholder will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Rule 10b-5 and Regulation M, which provisions may limit the timing of purchases and sale of any of the shares by the selling stockholder. All of the foregoing may affect the marketability of the shares offered hereby.

We will pay all expenses of the registration of the offered securities, including Commission filing fees and expenses of compliance with state securities or "blue sky" laws. The selling stockholder will pay any underwriting discounts and selling commissions. The selling stockholder will be indemnified by us against certain civil liabilities, including certain liabilities under the Securities Act. The selling stockholder will indemnify us against certain civil liabilities, including certain liabilities under the Securities Act.

The selling stockholder also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act, provided they meet the criteria and conform to the requirements of such Rule.

LEGAL MATTERS

The validity of the common stock will be passed upon by Latham & Watkins LLP, San Francisco, California. Certain partners of Latham & Watkins LLP, members of their families, related persons and others have an interest in less than 1% of the common stock. In addition, Latham & Watkins LLP has in the past provided, and may continue to provide, legal services to KKR Associates, L.P., the selling stockholder, and its affiliates.

EXPERTS

The consolidated financial statements of Owens-Illinois, Inc., appearing in Owens-Illinois, Inc.'s Annual Report (Form 10-K) for the year ended December 31, 2002, have been audited by Ernst & Young LLP, independent auditors, as set forth in their report thereon included therein and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and special reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's web site at http://www.sec.gov. You may obtain information on the operation of the SEC's public reference room in Washington, D.C. by calling the SEC at 1-800-SEC-0330. You may also read and copy any document we file at the SEC's public reference room at 450 Fifth Street, N.W., Washington, D.C. 20549. We also file information with The New York Stock Exchange. These reports, proxy statements and other information may be read and copied at 20 Broad Street, New York, New York 10005. You can also request copies of these documents upon payment of a duplication fee by writing to the SEC.

This prospectus, which constitutes a part of a registration statement on Form S-3 that we filed with the Commission under the Securities Act of 1933, omits certain information contained in the

12

registration statement. Accordingly, you should refer to the registration statement and its exhibits for further information with respect to Owens-Illinois, Inc. and the shares of common stock offered hereby. Furthermore, statements contained in this prospectus or in any document incorporated in this prospectus by reference regarding any contract or other document are not necessarily complete, and, in each instance, you should refer to the copy of the contract or other document filed with the Commission as an exhibit to the registration statement.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

In this prospectus we have incorporated by reference certain reports and other information we have filed, or will file, with the SEC. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. The following documents filed with the SEC by us pursuant to the Exchange Act are incorporated herein by reference until all of the securities covered hereby are sold or this offering is terminated:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2002 (including information specifically incorporated by reference into our Form 10-K from our Proxy Statement for our 2003 Annual Meeting of Share Owners);
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2003 and June 30, 2003;
- our Current Report on Form 8-K filed with the SEC on March 28, 2003;
- the description of our common stock contained in our Registration Statement on Form 8-A, as amended, filed on December 3, 1991 (File No. 1-9576) pursuant to Section 12 of the Exchange Act; and
- all other documents subsequently filed by us pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus and before the termination of the offering of all common shares to which this prospectus relates, which shall be deemed to be a part hereof from the date of filing of such documents.

You may request a copy of these filings at no cost, by writing or telephoning us at the following address: Owens-Illinois, Inc., One SeaGate, Toledo, Ohio 43666, Attn: Investor Relations, Telephone: (419) 247-5000.

13

No dealer, salesman, or other person has been authorized to give any information or to make any representation, other than those contained in this prospectus, in connection with the offering made by this prospectus and information or representations not herein contained, if given or made, must not be called upon as having been authorized. This prospectus does not constitute an offer to sell, or a solicitation of an offer to buy, the securities offered hereby. Neither the delivery of this prospectus nor any sales made hereunder shall under any circumstances create any implication that the information contained herein is correct as of any time subsequent to the date hereof.

36,000,000 Shares

Owens-Illinois, Inc.

Common Stock

PROSPECTUS

, 2003

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the estimated expenses in connection with the distribution of the securities covered by this Registration Statement. Owens-Illinois, Inc. has agreed to pay all fees and expenses incident to the registration of this offering, other than sales commissions, discounts and applicable transfer taxes.

SEC registration fee	\$ 34,162
Legal fees and expenses	40,000
Accounting fees and expenses	20,000
EDGAR formatting and related expenses	2,500
Miscellaneous expenses	3,338
Total	\$ 100,000

Item 15. Indemnification of Directors and Officers.

We are a Delaware corporation. Subsection (b)(7) of Section 102 of the Delaware General Corporation Law (the "DGCL"), enables a corporation in its original certificate of incorporation or an amendment thereto to eliminate or limit the personal liability of a director to the corporation or its stockholders for monetary damages for violations of the director's fiduciary duty, except (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) pursuant to Section 174 of the DGCL (providing for liability of directors for unlawful payment of dividends or unlawful stock purchases or redemptions) or (iv) for any transaction from which a director derived an improper personal benefit.

Subsection (a) of Section 145 of the DGCL empowers a corporation to indemnify any director or officer, or former director or officer, who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that such person acted in any of the capacities set forth above, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding

provided that such director or officer acted in good faith in a manner reasonably believed to be in, or not opposed to, the best interests of the corporation, and, with respect to any criminal action or proceeding, provided further that such director or officer had no reasonable cause to believe his conduct was unlawful.

Subsection (b) of Section 145 empowers a corporation to indemnify any director or officer, or former director or officer, who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that such person acted in any of the capacities set forth above, against expenses (including attorneys' fees) actually and reasonably incurred in connection with the defense or settlement of such action or suit provided that such director or officer acted in good faith and in a manner reasonably believed to be in, or not opposed to, the best interests of the corporation, except that no indemnification may be made in respect to any claim, issue or matter as to which such director or officer shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all of the circumstances of the case,

II-1

such director or officer is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Section 145 further provides that to the extent a director or officer of a corporation has been successful in the defense of any action, suit or proceeding referred to in subsections (a) and (b) or in the defense of any claim, issue or matter therein, he shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him in connection therewith; that indemnification and advancement of expenses provided for, by, or granted pursuant to Section 145 shall not be deemed exclusive of any other rights to which the indemnified party may be entitled; and empowers the corporation to purchase and maintain insurance on behalf of a director or officer of the corporation against any liability asserted against him or incurred by him in any such capacity, or arising out of his status as such, whether or not the corporation would have the power to indemnify him against such liabilities under Section 145.

Section 8 of our Restated Certificate of Incorporation (filed as Exhibit 3.1), provides for the elimination of liability of directors to the extent permitted by Section 102(b)(7) of the DGCL. Article III, Section 13 of our Bylaws (filed as Exhibit 3.2) provides for indemnification of the officers and directors of the Company to the extent permitted by applicable law.

We have purchased insurance policies covering all of our directors and officers.

The registration rights agreement between us and the selling stockholder relating to the common stock requires us, on the one hand, and the selling stockholder, on the other hand, under certain circumstances, to indemnify each other and their respective officers, directors and general and limited partners against certain liabilities, including liabilities under the Securities Act, incurred in connection with the registration of such securities.

Item 16. Exhibits.

The following documents are filed as exhibits to this Registration Statement, including those exhibits incorporated herein by reference to a prior filing of Owens-Illinois, Inc. under the Securities Act or the Exchange Act as indicated in parenthesis:

Exhibit No.	Description
3.1	Restated Certificate of Incorporation of Owens-Illinois, Inc. (incorporated by reference to Exhibit No. 3.1 to the Registration Statement on Form S-2 of Owens-Illinois, Inc., File No. 33-43224, as filed in December, 1991).
3.2	Bylaws of Owens-Illinois, Inc., as amended (incorporated by reference to Exhibit 3.2 to the Registration Statement on Form S-2 of Owens-Illinois, Inc., File No. 33-43224, as filed in December, 1991).
4.1	Restated Certificate of Incorporation and Bylaws of Owens-Illinois, Inc. (filed as Exhibits 3.1 and 3.2).
4.2	Specimen of Certificate for Shares of Common Stock of Owens-Illinois, Inc. (incorporated by reference to Exhibit No. 7.1 to the Registration Statement on Form 8-A of Owens-Illinois, Inc., File No. 1-9576, as filed on December 3, 1991).
**4.3	Registration Rights Agreement by and among OII Holdings Corporation, KKR Partners II, L.P., OII Associates, L.P., OII Associates II, L.P. and KKR Associates, dated March 17, 1987.
**5.1	Opinion of Latham & Watkins LLP as to the validity of the common stock.
**23.1	Consent of Ernst & Young LLP, independent auditors.
**23.2	Consent of Latham & Watkins LLP (included in the opinion filed as Exhibit 5.1).
**24.1	Powers of Attorney (included on the signature page of this Registration Statement).

* Filed herewith.

II-2

Item 17. Undertakings

- (a) The registrant hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in the volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range

may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that the undertakings set forth in clauses (i) and (ii) above do not apply if the registration statement is on Form S-3, Form S-8 or Form F-3, and the information required to be included in a post-effective amendment by those clauses is contained in periodic reports filed with or furnished to the Securities and Exchange Commission by Owens-Illinois, Inc. pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of Owens-Illinois, Inc.'s annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers, and controlling persons of the registrant pursuant to the provisions set forth in Item 15 or otherwise, the registrant has been advised that, in the opinion of the Securities and Exchange Commission, such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by a registrant of expenses incurred or paid by a director, officer, or controlling person of the registrant in the successful defense of any action, suit, or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the registrant will, unless, in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

II-3

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, Owens-Illinois, Inc. certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Toledo, state of Ohio, on October 9, 2003.

OWENS-ILLINOIS, INC.

By: /s/ JAMES W. BAEHREN

Name: James W. Baehren

Title: Vice President and Director of Finance

and Corporate Secretary

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Thomas L. Young and James W. Baehren and each of them, his true and lawful attorney-in-fact and agent, with full power of substitution and full power to act without the other, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement and any registration statement for the same offering that is effective under Rule 462(b) of the Securities Act, and to file the same with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and ratifying and confirming all that said attorney-in-fact and agent or his substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed below by the following persons in the capacities indicated on the dates indicated.

Signature	Title	Date	
/s/ JOSEPH H. LEMIEUX	Chairman of the Board and Chief Executive Officer (Principal Executive Officer); Director	October 9, 2003	
Joseph H. Lemieux	(Trincipal Executive Officer), Director		
/s/ THOMAS L. YOUNG	Executive Vice President and Chief Financial Officer (Principal Financial Officer); Director	October 9, 2003	

Thomas L. Young		
/s/ EDWARD C. WHITE	Vice President and Controller (Principal Accounting Officer)	October 9, 2003
Edward C. White	Officer)	
/s/ GARY F. COLTER		
Gary F. Colter	Director	October 9, 2003
/s/ ROBERT J. DINEEN		
Robert J. Dineen	Director	October 9, 2003
Edward A. Gilhuly	Director	
/s/ JAMES H. GREENE, JR.		
James H. Greene, Jr.	Director	October 9, 2003
/s/ ANASTASIA D. KELLY		
Anastasia D. Kelly	Director	October 9, 2003
John J. McMackin, Jr.	Director	
Michael W. Michelson	Director	
/s/ GEORGE R. ROBERTS		
George R. Roberts	Director	October 9, 2003

EXHIBIT INDEX

Exhibit No.	Description
3.1	Restated Certificate of Incorporation of Owens-Illinois, Inc. (incorporated by reference to Exhibit No. 3.1 to the Registration Statement on
	Form S-2 of Owens-Illinois, Inc., File No. 33-43224, as filed in December, 1991).
3.2	Bylaws of Owens-Illinois, Inc., as amended (incorporated by reference to Exhibit 3.2 to the Registration Statement on Form S-2 of Owens-
	Illinois, Inc., File No. 33-43224, as filed in December, 1991).
4.1	Restated Certificate of Incorporation and Bylaws of Owens-Illinois, Inc. (filed as Exhibits 3.1 and 3.2).
4.2	Specimen of Certificate for Shares of Common Stock of Owens-Illinois, Inc. (incorporated by reference to Exhibit No. 7.1 to the Registration
	Statement on Form 8-A of Owens-Illinois, Inc., File No. 1-9576, as filed on December 3, 1991).
**4.3	Registration Rights Agreement by and among OII Holdings Corporation, KKR Partners II, L.P., OII Associates, L.P., OII Associates II, L.P.
	and KKR Associates, dated March 17, 1987.
**5.1	Opinion of Latham & Watkins LLP as to the validity of the common stock.
**23.1	Consent of Ernst & Young LLP, independent auditors.
**23.2	Consent of Latham & Watkins LLP (included in the opinion filed as Exhibit 5.1).
**24.1	Powers of Attorney (included on the signature page of this Registration Statement).
21	
Filed her	ewith.

QuickLinks

TABLE OF CONTENTS
CAUTIONARY STATEMENT REGARDING FORWARD LOOKING STATEMENTS

THE COMPANY

RISK FACTORS

USE OF PROCEEDS

SELLING STOCKHOLDER

PLAN OF DISTRIBUTION

LEGAL MATTERS

EXPERTS

WHERE YOU CAN FIND MORE INFORMATION

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE PART II INFORMATION NOT REQUIRED IN PROSPECTUS SIGNATURES
EXHIBIT INDEX

REGISTRATION RIGHTS AGREEMENT

This REGISTRATION RIGHTS AGREEMENT, dated as of this 17th day of March, 1987, is made and entered into by OII Holdings Corporation, a Delaware corporation (the "Company"), KKR Partners II, L.P., a Delaware limited partnership, OII Associates, L.P., a Delaware limited partnership, OII Associates II, L.P., a Delaware limited partnership, and KKR Associates, a New York limited partnership.

1. <u>Background</u>. The Company has entered into various securities purchase agreements with certain of the parties hereto (the "Purchase Agreements") pursuant to which the Company has agreed to issue and sell to such parties, and such purchasers have agreed to purchase, an aggregate of 36,000,000 shares of the Company's Common Stock, par value \$.01 per share (the "Common Stock"), at a purchase price of \$5.00 per share, as follows: KKR Partners II, L.P. — 848,600 shares of Common Stock; OII Associates, L.P. — 34,920,000 shares of Common Stock; OII Associates II, L.P. — 231,400 shares of Common Stock. Such shares of Common Stock in the aggregate will comprise 100% of the issued and outstanding shares of Common Stock of the Company. This Agreement shall become effective upon the issuance of the Common Stock to be sold under all such Purchase Agreements.

2. <u>Definitions</u>.

As used in this Agreement, the following capitalized terms shall have the following respective meanings:

Exchange Act - The Securities Exchange Act of 1934, as amended, or any similar federal statute then in effect, and a reference to a particular section thereof shall be deemed to include a reference to the comparable section, if any, of any such similar federal statute.

<u>Holder</u> - Any party hereto (other than the Company) and any holder of Registrable Securities who agrees in writing to be bound by the provisions of this Agreement.

<u>Person</u> - Any individual, partnership, joint venture, corporation, trust, unincorporated organization or government or any department or agency thereof.

Registrable Securities - - Any Common Stock issued or issuable pursuant to a Purchase Agreement and any Common Stock which may be issued or distributed in respect thereof by way of stock dividend or stock split or other distribution, recapitalization or reclassification. As to any particular Registrable Securities, once issued such Securities shall cease to be Registrable Securities when (i) a registration statement with respect to the sale of such Securities shall have become effective under the Securities Act and such Securities shall have been disposed of in accordance with such registration statement, (ii) they shall have been distributed to the public pursuant to Rule 144 (or any successor provision) under the Securities Act, (iii) they shall have been otherwise transferred, new certificates for them not bearing a legend restricting further transfer shall have been delivered by the Company and subsequent disposition of them

shall not require registration or qualification of them under the Securities Act or any state securities or blue sky law then in force, or (iv) they shall have ceased to be outstanding.

Registration Expenses - Any and all expenses incident to performance of or compliance with this Agreement, including, without limitation, (i) all SEC and stock exchange or National Association of Securities Dealers, Inc. registration and filing fees, (ii) all fees and expenses of complying with securities or blue sky laws (including fees and disbursements of counsel for the underwriters in connection with blue sky qualifications of the Registrable Securities), (iii) all printing, messenger and delivery expenses, (iv) all fees and expenses incurred in connection with the listing of the Registrable Securities on any securities exchange pursuant to clause (viii) of Section 5, (v) the fees and disbursements of counsel for the Company and of its independent public accountants, including the expenses of any special audits and/or "cold comfort" letters required by or incident to such performance and compliance, (vi) the reasonable fees and disbursements of one counsel selected by the Holders of a majority of the Registrable Securities being registered to represent all Holders of the Registrable Securities being registered in connection with each such registration, (vii) any fees and disbursements of underwriters customarily paid by the issuers or sellers of securities, including liability insurance if the Company so desires or if the underwriters so require, and the reasonable fees and expenses of any special experts retained in connection with the requested registration, but excluding underwriting discounts and commissions and transfer taxes, if any.

<u>Securities Act</u> - The Securities Act of 1933, as amended, or any similar federal statute then in effect, and a reference to a particular section thereof shall be deemed to include a reference to the comparable section, if any, of any such similar federal statute.

<u>SEC</u> - The Securities and Exchange Commission or any other federal agency at the time administering the Securities Act or the Exchange Act.

3. <u>Incidental Registrations</u>.

Right to Include Registrable Securities. If the Company at any time after the date hereof proposes to register its Common Stock under the Securities Act (other than a registration on Form S-4 or S-8, or any successor or other forms promulgated for similar purposes), whether or not for sale for its own account, in a manner which would permit registration of Registrable Securities for sale to the public under the Securities Act, it will each such time give prompt written notice to all Holders of Registrable Securities of its intention to do so and of such Holders' rights under this Section 3. Upon the written request of any such Holder made within 15 days after the receipt of any such notice (which request shall specify the Registrable Securities intended to be disposed of by such Holder), the Company will use its best efforts to effect the registration under the Securities Act of all Registrable Securities which the Company has been so requested to register by the Holders thereof, to the extent requisite to permit the disposition of the Registrable Securities so to be registered; provided, that (i) if, at any time after giving written notice of its intention to register any securities and prior to the

effective date of the registration statement filed in connection with such registration, the Company shall determine for any reason not to proceed with the proposed registration of the securities to be sold by it, the Company may, at its election, give written notice of such determination to each Holder of Registrable Securities and, thereupon, shall be relieved of its obligation to register any Registrable Securities in connection with such registration (but not from its obligation to pay the Registration Expenses in connection therewith), and (ii) if such registration involves an underwritten offering, all Holders of Registrable Securities requesting to be included in the Company's registration must sell their Registrable Securities to the underwriters selected by the Company on the same terms and conditions as apply to the Company, with such differences, including any with respect to indemnification and liability insurance, as may be customary or appropriate in combined primary and secondary offerings. If a registration requested pursuant to this Section 3(a) involves an underwritten public offering, any Holder of Registrable Securities requesting to be included in such registration may elect, in writing prior to the effective date of the registration statement filed in connection with such registration, not to register such securities in connection with such registration.

- (b) <u>Expenses</u>. The Company will pay all Registration Expenses in connection with each registration of Registrable Securities requested pursuant to this Section 3.
- (c) <u>Priority in Incidental Registrations</u>. If a registration pursuant to this Section 3 involves an underwritten offering and the managing underwriter advises the Company in writing that, in its opinion, the number of securities requested to be included in such registration exceeds the number which can be sold in such offering, so as to be likely to have an adverse effect on such offering as contemplated by the Company (including the price at which the Company proposes to sell such securities), then the Company will include in such registration (i) first, 100% of the securities the Company proposes to sell, (ii) second, to the extent of the number of Registrable Securities requested to be included in such registration which, in the opinion of such managing underwriter, can be sold without having the adverse effect referred to above, the number of Registrable Securities which the Holders have requested to be included in such registration, such amount to be allocated pro rata among all requesting Holders on the basis of the relative number of shares of Registrable Securities then held by each such Holder (provided that any shares thereby allocated to any such Holder that exceed such Holder's request will be reallocated among the remaining requesting Holders in like manner). For purposes of this provision, the term Holders shall include all members of management of the Company and the term Registrable Securities shall include all shares of Common Stock held by or subject to options granted to such persons, to the extent necessary to reflect all rights of registration to which such persons may be entitled with respect to such shares prior to a public offering after the date hereof of shares of Common Stock pursuant to an effective registration statement under the Securities Act.

4. <u>Registration on Request</u>.

(a) <u>Request by Holders</u>. After any Common Stock of the Company has been registered after the date hereof under the Securities Act (other than a registration on

3

Form S-4 or S-8, or any successor or other forms promulgated for similar purposes), upon the written request of any Holder or Holders requesting that the Company effect the registration under the Securities Act of all or part of such Holder's or Holders' Registrable Securities (constituting in the aggregate at least 5,000,000 shares or such lesser number of Registrable Securities then outstanding) and specifying the intended method of disposition thereof, the Company will promptly give written notice of such requested registration to all other Holders of Registrable Securities, and thereupon will, as expeditiously as possible, use its best efforts to effect the registration under the Securities Act of:

- (i) the Registrable Securities which the Company has been so requested to register by such Holder or Holders; and
- (ii) all other Registrable Securities which the Company has been requested to register by any other Holder thereof by written request given to the Company within 15 days after the giving of such written notice by the Company (which request shall specify the intended method of disposition of such Registrable Securities),

all to the extent necessary to permit the disposition (in accordance with the intended method thereof as aforesaid) of the Registrable Securities so to be registered; *provided*, that, unless Holders of a majority of the shares of Registrable Securities held by Holders consent thereto in writing, the Company shall not be obligated to file a registration statement relating to any registration request under this Section 4(a) (A) unless the aggregate requests by the Holder or Holders for such registration cover an aggregate of 5,000,000 or more shares of the Registrable Securities (or such lesser number of Registrable Securities then outstanding), (B) (other than a registration statement on Form S-3 or any successor or similar short-form registration statement) within a period of nine months after the effective date of any other registration statement relating to any registration request under this Section 4(a) which was not effected on Form S-3 (or any successor or similar short-form registration statement) or relating to any registration effected under Section 3, (C) if with respect thereto, the managing underwriter, the SEC, the Securities Act or the rules and regulations thereunder, or the form on which the registration statement is to be filed, would require the conduct of an audit other than the regular audit conducted by the Company at the end of its fiscal year, in which case the filing may be delayed until the completion of such regular audit (unless the Holders agree to pay the expenses of the Company in connection with such an audit other than the regular audit).

underwritten public offering, and if the managing underwriter shall advise the Company in writing that, in its opinion, the use of another form of registration statement is of material importance to the success of such proposed offering, then such registration shall be effected on such other form.
4
(c) <u>Expenses</u> . The Company will pay all Registration Expenses in connection with the first six (6) registrations of Registrable Securities pursuant to this Section 4 upon the written request of any of the Holders. All expenses for any subsequent registrations of Registrable Securities pursuant to this Section 4 shall be paid pro rata by the Company and all other Persons (including the Holders) participating in such registration on the basis of the relative number of shares of Common Stock of each such person included in such registration.
(d) <u>Effective Registration Statement</u> . A registration requested pursuant to this Section 4 will not be deemed to have been effected unless it has become effective; <i>provided</i> , that if, within 180 days after it has become effective, the offering of Registrable Securities pursuant to such registration is interfered with by any stop order, injunction or other order or requirement of the SEC or other governmental agency or court, such registration will be deemed not to have been effected.
(e) <u>Selection of Underwriters</u> . If a requested registration pursuant to this Section 4 involves an underwritten offering, the Company shall have the right to select the investment banker or bankers and managers to administer the offering; <i>provided</i> , <i>however</i> , that such investment banker or bankers and managers shall be satisfactory to holders of a majority of the shares of Registrable Securities which are held by Holders and-which the Company has been requested to register.
(f) Priority in Requested Registrations. If a requested registration pursuant to this Section 4 involves an underwritten offering and the managing underwriter advises the Company in writing that, in its opinion, the number of securities requested to be included in such registration (including securities of the Company which are not Registrable Securities) exceeds the number which can be sold in such offering, the Company will include in such registration only the Registrable Securities requested to be included in such registration exceeds the number which, in the opinion of such managing underwriter, can be sold, the number of such Registrable Securities to be included in such registration shall be allocated pro rata among all requesting Holders on the basis of the relative number of shares of Registrable Securities then held by each such Holder (provided that any shares thereby allocated to any such Holder that exceed such Holder's request shall be reallocated among the remaining requesting Holders in like manner). In the event that the number of Registrable Securities requested to be included in such registration is less than the number which, in the opinion of the managing underwriter, can be sold.
(g) Additional Rights. If the Company at any time grants to any other hollers of Common Stock any rights to request the Company to effect the registration under the Securities Act of any such shares of Common Stock on terms more favorable to such holders than the terms set forth in this Section 4, the terms of this Section 4 shall be deemed amended or supplemented to the extent necessary to provide the Holders such more favorable rights and benefits.
5
5. Registration Procedures. If and whenever the Company is required to use its best efforts to effect or cause the registration of any Registrable Securities under the Securities Act as provided in this Agreement, the Company will, as expeditiously as possible:
(i) prepare and, in any event within 120 days after the end of the period within which a request for registration may be given to the Company, file with the SEC a registration statement with respect to such Registrable Securities and use its best efforts to cause such registration statement to become effective, <i>provided</i> , <i>however</i> , that the Company may discontinue any registration of its securities which is being effected pursuant to Section 3 at any time prior to the effective date of the registration statement relating thereto;
(ii) prepare and file with the SEC such amendments and supplements to such registration statement and the prospectus used in connection therewith as may be necessary to keep such registration statement effective for a period not in excess of 180 days and to comply with the provisions of the Securities Act with respect to the disposition of all securities covered by such registration statement during such period in accordance with the intended methods of disposition by the seller or sellers thereof set forth in such registration statement; <i>provided</i> , that before filing a registration statement or prospectus, or any amendments or supplements thereto, the Company will furnish to one counsel selected by the Holders of a majority of the Registrable Securities covered by such registration statement, copies of all documents proposed to be filed, which documents will be subject to the review of such counsel;

furnish to each seller of such Registrable Securities such number of copies of such registration statement and of each amendment

and supplement thereto (in each case including all exhibits), such number of copies of the prospectus included in such registration statement (including each preliminary prospectus and summary prospectus), in conformity with the requirements of the Securities Act, and such disposition of

the Registrable Securities by such seller;

Registration Statement Form. If any registration requested pursuant to this Section 4 which is proposed by the Company to be

effected by the filing of a registration statement on Form S-3 (or any successor or similar short-form registration statement) shall be in connection with an

(b)

(iv)	use its best efforts to register or qualify such Registrable Securities covered by such registration statement under such other
securities or	blue s	ky laws of such jurisdictions as each seller shall reasonably request, and do any and all other acts and things which may be
reasonably i	necess	ary or advisable to enable such seller to consummate the disposition in such jurisdictions of the Registrable Securities owned by
such seller,	except	that the Company shall not for any such purpose be required to qualify generally to do business as a foreign corporation in any
jurisdiction	where	but for the requirements of this clause (iv), it would not be obligated to be so qualified, to subject itself to taxation in any such
jurisdiction,	or to	consent to general service of process in any such jurisdiction;

6

- (v) use its best efforts to cause such Registrable Securities covered by such registration statement to be registered with or approved by such other governmental agencies or authorities as may be necessary to enable the seller or sellers thereof to consummate the disposition of such Registrable Securities;
- (vi) notify each seller of any such Registrable Securities covered by such registration statement, at any time when a prospectus relating thereto is required to be delivered under the Securities Act within the appropriate period mentioned in clause (ii) of this Section 5, of the Company's becoming aware that the prospectus included in such registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing, and at the request of any such seller, prepare and furnish to such seller a reasonable number of copies of an amended or supplemental prospectus as may be necessary so that, as thereafter delivered to the purchasers of such Registrable Securities, such prospectus shall not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing;
- (vii) otherwise use its best efforts to comply with all applicable rules and regulations of the SEC, and make available to its security holders, as soon as reasonably practicable (but not more than eighteen months) after the effective date of the registration statement, an earnings statement which shall satisfy the provisions of Section 11(a) of the Securities Act and the rules and regulations promulgated thereunder;
- (viii) use its best efforts to list such Registrable Securities on any securities exchange on which the Common Stock is then listed, if such Registrable Securities are not already so listed and if such listing is then permitted under the rules of such exchange, and to provide a transfer agent and registrar for such Registrable Securities covered by such registration statement not later than the effective date of such registration statement;
- (ix) enter into such customary agreements (including an underwriting agreement in customary form) and take such other actions as sellers of a majority of shares of such Registrable Securities or the underwriters, if any, reasonably request in order to expedite or facilitate the disposition of such Registrable Securities;
- (x) obtain a "cold comfort" letter or letters from the Company's independent public accountants in customary form and covering matters of the type customarily covered by "cold comfort" letters as the seller or sellers of a majority of shares of such Registrable Securities shall reasonably request (provided that Registrable Securities constitute at least 257 of the securities covered by such registration statement); and.

7

(xi) make available for inspection by any seller of such Registrable Securities covered by such registration statement, by any underwriter participating in any disposition to be effected pursuant to such registration statement and by any attorney, accountant or other agent retained by any such seller or any such underwriter, all pertinent financial and other records, pertinent corporate documents and properties of the Company, and cause all of the Company's officers, directors and employees to supply all information reasonably requested by any such seller, underwriter, attorney, accountant or agent in connection with such registration statement.

The Company may require each seller of Registrable Securities as to which any registration is being effected to furnish the Company with such information regarding such seller and pertinent to the disclosure requirements relating to the registration and the distribution of such securities as the Company may from time to time reasonably request in writing.

Each Holder of Registrable Securities agrees that, upon receipt of any notice from the Company of the happening of any event of the kind described in clause (vi) of this Section 5, such Holder will forthwith discontinue disposition of Registrable Securities pursuant to the registration statement covering such Registrable Securities until such Holder's receipt of the copies of the supplemented or amended prospectus contemplated by clause (vi) of this Section 5, and, if so directed by the Company, such Holder will deliver to the Company (at the Company's expense) all copies, other than permanent file copies then in such Holder's possession, of the prospectus covering such Registrable Securities current at the time of receipt of such notice. In the event the Company shall give any such notice, the period mentioned in clause (ii) of this Section 5 shall be extended by the number of days during the period from and including the date of the giving of such notice pursuant to clause (vi) of this Section 5 and including the date when each seller of Registrable Securities

covered by such registration statement shall have received the copies of the supplemented or amended prospectus contemplated by clause (vi) of this Section 5.

6. <u>Indemnification</u>.

(a) <u>Indemnification by the Company</u>. In the event of any registration of any securities of the Company under the Securities Act pursuant to Section 3 or 4, the Company will, and it hereby does, indemnify and hold harmless, to the extent permitted by law, the seller of any Registrable Securities covered by such registration statement, each affiliate of such seller and their respective directors and officers or general and limited partners (and the directors, affiliates and controlling Persons thereof), each other Person who participates as an underwriter in the offering or sale of such securities and each other Person, if any, who controls such seller or any such underwriter within the meaning of the Securities Act (collectively, the "Indemnified Parties"), against any and all losses, claims, damages or liabilities, joint or several, and expenses to which such seller, any such director or officer or general or limited partner or affiliate or any such underwriter or controlling Person may become subject under the Securities Act, common law or otherwise, insofar as such losses, claims, damages or liabilities (or

8

actions or proceedings in respect thereof, whether or not such Indemnified Party is a party thereto) arise out of or are based upon (a) any untrue statement or alleged untrue statement of any material fact contained in any registration statement under which such securities were registered under the Securities Act, any preliminary, final or summary prospectus contained therein, or any amendment or supplement thereto, or (b) any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing, and the Company will reimburse such Indemnified Party for any legal or any other expenses reasonably incurred by it in connection with investigating or defending any such loss, claim, liability, action or proceeding; provided, that the Company shall not be liable to any Indemnified Party in any such case to the extent that any such loss, claim, damage, liability (or action or proceeding in respect thereof) or expense arises out of or is based upon any untrue statement or alleged untrue statement or omission or alleged omission made in such registration statement or amendment or supplement thereto or in any such preliminary, final or summary prospectus in reliance upon and in conformity with written information furnished to the Company through an instrument duly executed by such seller specifically stating that it is for use in the preparation thereof; and *provided*, *further*, that the Company will not be liable to any Person who participates as an underwriter in the offering or sale of Registrable Securities or any other Person, if any, who controls such underwriter within the meaning of the Securities Act, under the indemnity agreement in this Section 6(a) with respect to any preliminary prospectus or the final prospectus or the final prospectus as amended or supplemented, as the case may be, to the extent that any such loss, claim, damage or liability of such underwriter or controlling Person results from the fact that such underwriter sold Registrable Securities to a person to whom there was not sent or given, at or prior to the written confirmation of such sale, a copy of the final prospectus (including any documents incorporated by reference therein) or of the final prospectus as then amended or supplemented (including any documents incorporated by reference therein), whichever is most recent, if the Company has previously furnished copies thereof to such underwriter. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of such seller or any indemnified Party and shall survive the transfer of such securities by such seller.

(b) <u>Indemnification by the Sellers</u>. The Company may require, as a condition to including any Registrable Securities in any registration statement filed in accordance with Section 5 herein, that the Company shall have received an undertaking reasonably satisfactory to it from the prospective seller of such Registrable Securities or any underwriter to indemnify and hold harmless (in the same manner and to the same extent as set forth in subdivision (a) of this Section 6) the Company and all other prospective sellers with respect to any statement or alleged statement in or omission or alleged omission from such registration statement, any preliminary, final or summary prospectus contained therein, or any amendment or supplement, if such statement or alleged statement or omission or alleged omission was made in reliance upon and in conformity with written information furnished to the Company through an instrument duly executed by such seller or underwriter specifically stating that it is for use in the preparation of such registration statement, preliminary, final or summary prospectus or amendment or supplement, or a document incorporated by reference into any of the

9

foregoing. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of the Company or any of the prospective sellers, or any of their respective affiliates, directors, officers or controlling Persons and shall survive the transfer of such securities by such seller.

(c) Notices of Claims, Etc. Promptly after receipt by an indemnified party hereunder of written notice of the commencement of any action or proceeding with respect to which a claim for indemnification may be made pursuant to this Section 6, such indemnified party will, if a claim in respect thereof is to be made against an indemnifying party, give written notice to the latter of the commencement of such action; provided, that the failure of the indemnified party to give notice as provided herein shall not relieve the indemnifying party of its obligations under the preceding subdivisions of this Section 6, except to the extent that the indemnifying party is actually prejudiced by such failure to give notice. In case any such action is brought against an indemnified party, unless in such indemnified party's reasonable judgment a conflict of interest between such indemnified and indemnifying parties may exist in respect of such claim, the indemnifying party will be entitled to participate in and to assume the defense thereof, jointly with any other indemnifying party similarly notified to the extent that it may wish, with counsel reasonably satisfactory to such indemnified party, and after notice from the indemnifying party to such indemnified party of its election so to assume the defense thereof, the indemnifying party will not be liable to such indemnified party for any legal or other expenses subsequently incurred by the latter in connection with the defense thereof other than reasonable costs of investigation. No indemnifying party will consent to entry of any judgment or enter into any settlement which does not include as an unconditional term thereof, the giving by the claimant or plaintiff to such indemnified party of a release from all liability in respect to such claim or litigation.

- (d) Other Indemnification. Indemnification similar to that specified in the preceding subdivisions of this Section 6 (with appropriate modifications) shall be given by the Company and each seller of Registrable Securities with respect to any required registration or other qualification of securities under any federal or state law or regulation or governmental authority other than the Securities Act.
- (e) <u>Non-Exclusivity</u>. The obligations of the parties under this Section 6 shall be in addition to any liability which any party may otherwise have to any other party.
- 7. Rule 144. If the Company shall have filed a registration statement pursuant to the requirements of Section 12 of the Exchange Act or a registration statement pursuant to the requirements of the Securities Act, the Company covenants that it will file the reports required to be filed by it under the Securities Act and the Exchange Act and the rules and regulations adopted by the SEC thereunder (or, if the Company is not required to file such reports, it will, upon the request of any Holder of Registrable Securities, make publicly available such information), and it will take such further action as any Holder of Registrable Securities may reasonably request, all to the extent required from time to time to enable such Holder to sell shares of Registrable Securities without registration under the Securities Act within the limitation of the exemptions provided by

10

(i) Rule 144 under the Securities Act, as such Rule may be amended from time to time, or (ii) any similar rule or regulation hereafter adopted by the SEC. Upon the request of any Holder of Registrable Securities, the Company will deliver to such Holder a written statement as to whether it has complied with such requirements. Notwithstanding anything contained in this Section 7, the Company may deregister under Section 12 of the Exchange Act if it then is permitted to do so pursuant to the Exchange Act and the rules and regulations thereunder.

8. <u>Miscellaneous</u>.

- (a) <u>Holdback Agreement</u>. If any such registration shall be in connection with an underwritten public offering, each Holder of Registrable Securities agrees not to effect any public sale or distribution, including any sale pursuant to Rule 144 under the Securities Act, of any equity securities of the Company, or of any security convertible into or exchangeable or exercisable for any equity security of the Company (in each case, other than as part of such underwritten public offering), within 7 days before or 90 days (or such lesser period as the managing underwriters may permit) after the effective date of such registration, and the Company hereby also so agrees and agrees to cause each other Holder of any equity security, or of any security convertible into or exchangeable or exercisable for any equity security, of the Company purchased from the Company (at any time other than in a public offering) to so agree.
- (b) <u>Amendments and Waivers</u>. This Agreement may be amended and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company shall have obtained the written consent to such amendment, action or omission to act, of the Holders of a majority of the Registrable. Securities then outstanding. Each Holder of any Registrable Securities at the time or thereafter outstanding shall be bound by any consent authorized by this Section 9(b), whether or not such Registrable Securities shall have been marked to indicate such consent.
- (c) <u>Successors, Assigns and Transferees</u>. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and assigns. In addition, and whether or not any express assignment shall have been made, the provisions of this Agreement which are for the benefit of the parties hereto other than the Company shall also be for the benefit of and enforceable by any subsequent Holder of any Registrable Securities, subject to the provisions contained herein.
- (d) <u>Notices</u>. All notices and other communications provided for hereunder shall be in writing and shall be sent by first class mail, telex, telecopier or hand delivery:
 - (i) if to the Company, to:

OII Holdings Corporation c/o Kohlberg Kravis Roberts & Co.

11

101 California Street San Francisco, California 94111 Attention: Robert I. MacDonnell

With a copy to:

OII Holdings Corporation One Seagate Toledo, Ohio 43604 Attention: General Counsel

(ii) if to any of the partnerships, to:

KKR Partners II, L.P.,

OII Associates, L.P., or OII Associates II, L.P., as the case may be, c/o Kohlberg Kravis Roberts & Co. 9 West 57th Street New York, New York 10019 Attention: James H. Greene, Jr.

With a copy to:

Latham & Watkins 885 Third Avenue New York, New York 10022 Attention: Randall C. Bassett, Esq.

(iii) if to any other holder of Registrable Securities, to the address of such other holder as shown in the stock record book of the Company, or to such other address as any of the above shall have designated in writing to all of the other above.

All such notices and communications shall be deemed to have been given or made (1) when delivered by hand, (2) five business days after being deposited in the mail, postage prepaid, (3) when telexed answer-back received or (4) when telecopied, receipt acknowledged.

- (e) <u>Descriptive Headings</u>. The headings in this Agreement are for convenience of reference only and shall not limit or otherwise affect the meaning of terms contained herein.
- (f) <u>Severability</u>. In the event that any one or more of the provisions, paragraphs, words, clauses, phrases or sentences contained herein, or the application thereof in any circumstances, is held invalid, illegal or unenforceable in any respect for any reason, the validity, legality and enforceability of any such provision, paragraph,

12

word, clause, phrase or sentence in every other respect and of the remaining provisions, paragraphs, words, clauses, phrases or sentences hereof shall not be in any way impaired, it being intended that all rights, powers and privileges of the parties hereto shall be enforceable to the fullest extent permitted by law.

- (g) <u>Counterparts</u>. This Agreement may he executed in two or more counterparts, and by different parties on separate counterparts, each of which shall be deemed an original, but all such counterparts shall together constitute one and the same instrument, and it shall not be necessary in making proof of this Agreement to produce or account for more than one such counterpart.
- (h) <u>Governing Law</u>. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of New York applicable to contracts made and to be performed therein. The parties to this Agreement hereby agree to submit to the jurisdiction of the courts of the State of New York in any action or proceeding arising out of or relating to this Agreement.

[signature page to follow]

13

IN WITNESS WHEREOF, each of the undersigned has executed this Agreement or caused this Agreement to be executed on its behalf as of the date first written above.

OII HOLDINGS CORPORATION

By: /s/ James H. Greene

KKR PARTNERS II, L.P. By: KKR Associates, the General Partner

By: /s/ Signature

OII ASSOCIATES, L.P. By: KKR Associates, the General Partner

By: <u>/s/ Signature</u>

OII ASSOCIATES II, L.P. By: KKR Associates, the General Partner

By: <u>/s/ Signature</u>

Exhibit 5.1

Latham & Watkins LLP 505 Montgomery St. #1900 San Francisco, CA 94111

October 9, 2003

Owens-Illinois, Inc. One SeaGate Toledo, Ohio 43666

> Re: Registration Statement on Form S-3 36,000,000 shares of Common Stock, par value \$.01 per share

Ladies and Gentlemen:

This opinion is rendered in connection with the filing by Owens-Illinois, Inc., a Delaware corporation (the "*Company*"), of its Registration Statement on Form S-3 (the "*Registration Statement*") with the Securities and Exchange Commission under the Securities Act of 1933, as amended, with respect to the offer and sale by the selling stockholder named in the Registration Statement of up to 36,000,000 shares of the Company's common stock, par value \$0.01 per share (the "*Shares*").

In our capacity as your special counsel in connection with such registration, we are familiar with the proceedings taken by the Company in connection with the authorization and issuance of the Shares. In addition, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter.

We are opining herein as to the effect on the subject transaction only of the General Corporation Law of the State of Delaware, and we express no opinion with respect to the applicability thereto, or the effect thereon, of any other laws.

Subject to the foregoing and the other matters set forth herein, it is our opinion that as of the date hereof the Shares have been duly authorized by all necessary corporate action of the Company, have been validly issued and are fully paid and non-assessable.

We bring your attention to the fact that certain of our partners, members of their families, related persons and others have an interest in less than 1% of the common stock. In addition, we have in the past provided, and may continue to provide, legal services to the selling stockholder named in the Registration Statement and its affiliates.

We consent to your filing this opinion as an exhibit to the Registration Statement and to the reference to our firm under the heading "Legal Matters".

Very truly yours,

/s/ LATHAM & WATKINS LLP

QuickLinks

Latham & Watkins LLP 505 Montgomery St. #1900 San Francisco, CA 94111

CONSENT OF INDEPENDENT AUDITORS

Owens-Illinois, Inc.:

We consent to the reference to our firm under the caption "Experts" in the Registration Statement on Form S-3 and related prospectus of Owens-Illinois, Inc. for the registration of 36,000,000 shares of its common stock and to the incorporation by reference therein of our report dated January 23, 2003, with respect to the consolidated financial statements and schedule for Owens-Illinois, Inc. included in its Annual Report on Form 10-K for the year ended December 31, 2002, filed with the Securities and Exchange Commission.

/s/ ERNST & YOUNG LLP

Toledo, Ohio October 9, 2003

QuickLinks

CONSENT OF INDEPENDENT AUDITORS