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World Flat Glass

Industry Study with Forecasts for **2012 & 2017**

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The Freedonia Group

767 Beta Drive

Cleveland, OH • 44143-2326 • USA

Toll Free US Tel: 800.927.5900 or +1 440.684.9600

Fax: +1 440.646.0484

E-mail: info@freedoniagroup.com

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Gains will be spurred by a healthy building construction environment and rapid growth in newer technologies such as smart glass, self-cleaning windows and head-up display (HUD) windshields.

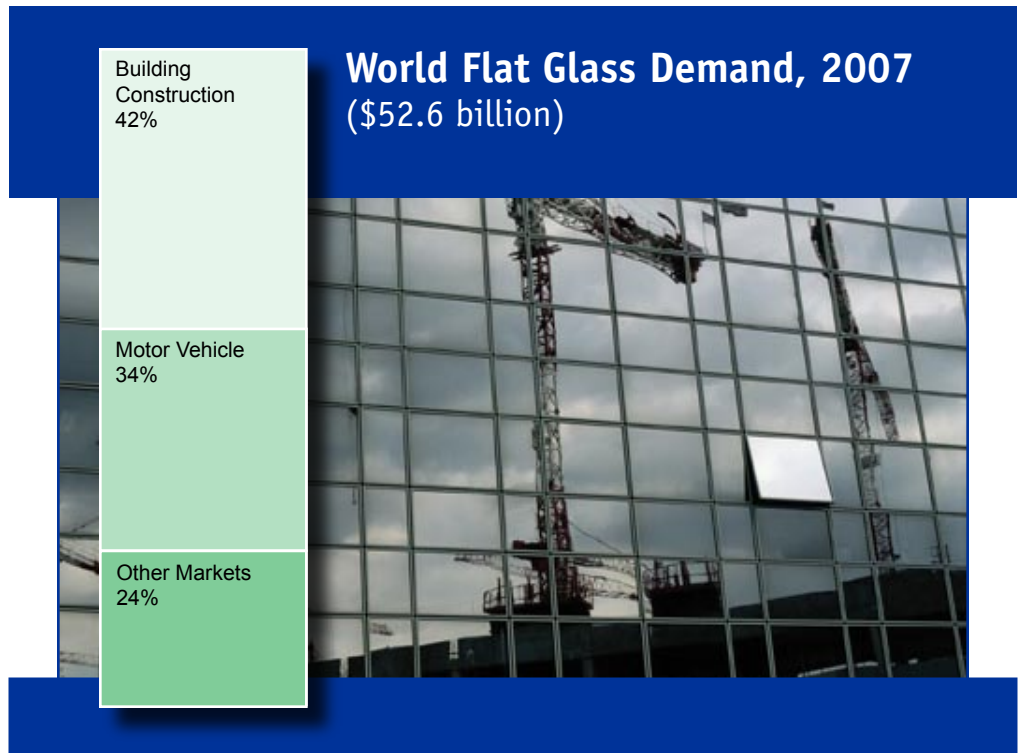
Global flat glass demand to rise 5.5% annually through 2012

World demand for flat glass is forecast to rise 5.5 percent per year through 2012 to 6.9 billion square meters. Maintaining the trend seen over the 2002-2007 period, demand will outpace real (i.e., inflation-adjusted) gains in the global economy. The market value of fabricated glass (basic flat glass as well as value-added products such as laminated, tempered, insulating and mirrored glass) is forecast to reach \$73 billion in 2012.

Gains will be spurred by a healthy building construction environment and rapid growth in newer technologies such as smart glass, self-cleaning windows and head-up display (HUD) windshields. Value gains will be aided by more rapid gains in laminated glass demand than in lower value tempered glass demand. Besides increasing usage as hurricane glass, ballistic glass and burglary resistant glass, laminated glass will increasingly replace tempered glass in motor vehicle side and rear windows.

Developing Asian countries to register fastest gains

Developing countries in Asia will register the strongest gains in flat glass demand through 2012, with growth especially strong in China and India. China's share of world flat glass demand in square meters will rise from under 35 percent in



2007 to 40 percent in 2012. However, the country's share of world fabricated flat glass demand in value will stand at a much less significant 19 percent in 2012. Basic unfabricated float glass continues to account for a disproportionate share of the overall Chinese flat glass market due to the frenetic pace of building construction activity taking place in the country, often necessitating the utilization of the cheapest materials available. The other developing countries in Latin America, Eastern Europe and the Africa/Mideast region will also have strong growth, led by the other BRIC countries of Russia and Brazil. The developed US, Japanese and West European markets will all see slower growth in their markets through 2012.

Production of flat glass is projected to exceed 62 million metric tons in 2012, of which around 56 million metric tons will be high quality float glass. The remainder will consist of low quality float glass produced primarily in China -- and, to a lesser extent, in Russia -- as well as sheet glass and rolled glass. Based on year-end 2007 figures, the global industry will require over 60 new float lines averaging 500 metric tons per day to meet projected 2012 demand levels. Moreover, some existing floats lines (particularly in China and Russia) will need to be replaced with modern larger-scale lines.

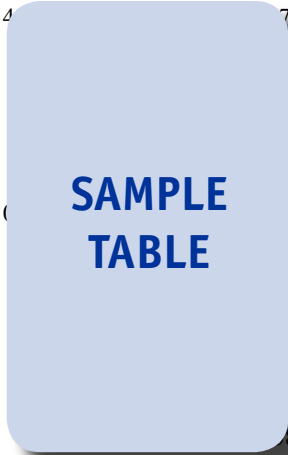
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Sample Profile, Table & Forecast

TABLE VII-8
INDIA -- FLAT GLASS SUPPLY & DEMAND

Item	1997	2002	2007	2012	2017
Building Constr Expend (bil 2006\$)	14				7.1
\$ bldg const glass/000\$ bldg const0					4
Motor Vehicle Production (000 units)					70
\$ MV glass/motor vehicle					50
Manufact Value Added (bil 2006\$)					56
\$ other flat glass/000\$ MVA					36
Fabricated Flat Glass Demand (mil \$)					35
Building Construction Market					20
Motor Vehicle Market					15
Other Markets					00
\$ fabricated/square meter					5
Flat Glass Demand (mil sq meters)					80



COMPANY PROFILES

Turkiye Sise Ve Cam Fabrikalari AS
 Is Kuleleri, Kule 3
 4 Levent, Istanbul 34330
 Turkey
 90-212-350-5050
 http://www...

SAMPLE PROFILE

Sales: \$...
 Geograp... pe 78%, Africa and
 the Midd... and America 4%
 Employr...

Key Proc... soda ash

Turkiye Sise Ve Cam Fabrikalari, commonly known as Siseecam Group, is a manufacturer of glass and inorganic chemicals. Siseecam operates through six segments: Flat Glass, Glassware, Glass Packaging, Chemicals, Other and Holding Company. Turkiye Is Bankasi AS, one of Turkey's largest banks, owns approximately 64 percent of Siseecam.

The Company is involved in the world flat glass industry mainly via the Flat Glass and Chemicals segments. Through these segments, Siseecam produces float glass, fabricated flat glass and soda ash. In 2007, the Company's total float glass production exceeded 1.1 million metric tons.

Siseecam's Flat Glass segment generated sales of \$670 million and employed 2,960 in 2007. The segment produces clear and tinted float glass, including HELIO blue, bronze, green and grey versions; TENTE-SOL solar control glass; ISICAM dual-sealed insulating glass; climate and noise control glass; spandrel panels; AURA REFLEKTA online

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"World demand for flat glass in the motor vehicle market is forecast to rise 3.3 percent per year to 470 million square meters in 2012. Market value is forecast to expand 5.8 percent per year to \$23.6 billion. Both the OEM and replacement segments of the market will decelerate from the robust performance of the 2002-2007 period, with the strongest gains continuing to arise in developing countries, especially in Asia. Nonetheless, the vast majority of demand will remain concentrated in developed nations such as the US, Japan, Germany and South Korea, which account for a majority of world motor vehicle production (although some developing countries such as China and India are also increasingly important)."
 --Section IV, pg. 58

OTHER STUDIES

Windows & Doors

This study analyzes the US window and door industry. It presents historical demand data (1997, 2002 and 2007) and forecasts for 2012 and 2017 by window and door material (wood, metal, plastic), type (e.g., flush, panel, double-hung, casement, prime, specialty and storm, patio), market (residential, nonresidential) and US geographic region. The study also considers market environment factors, details industry structure, evaluates company market share and profiles industry participants.

#2406 10/2008 \$4800

Siding

Demand for siding materials in the US will exceed 115 million squares in 2012. Gains will derive largely from a recovery in residential construction, particularly in single-family housing. Demand in the key vinyl siding segment will be moderated by competition from fiber cement siding. Stucco and related materials will also outpace vinyl. This study analyzes the \$10.4 billion US siding industry, with forecasts for 2012 and 2017 by material, market and region. It also evaluates market share and profiles industry players.

#2376 07/2008 \$4700

Advanced Flat Glass

Demand for advanced flat glass in the US will grow 5% annually through 2012. Ongoing rapid growth in a variety of emerging technologies (e.g., smart glass, self-cleaning glass) and strong gains in laminated glass used as hurricane glass, ballistic glass and burglary resistant glass will help drive living spaces. This study analyzes the \$5.6 billion US advanced flat glass industry, with forecasts for 2012 and 2017 by product and market. It also considers market environment factors, profiles industry competitors and evaluates their market share.

#2342 06/2008 \$4500

Windows & Doors in China

Demand for windows and doors (fenestration) in China will grow 11% annually through 2011. Gains will be driven by healthy growth in building construction, increased demand for larger living spaces, and further privatization of home ownership. Plastic fenestration will continue to supplant metal and wood types. This study analyzes the ¥115.6 billion Chinese fenestration industry, with forecasts for 2011 and 2016 by product, market and region. It also evaluates company market share and profiles major players.

#2258 11/2007 \$4900

Flat Glass in China

Demand for flat glass in China will rise 8.6% yearly through 2011 based on strong gains in building construction and manufacturing. Float glass will continue supplanting drawn and rolled glass. Fabricated flat glass will benefit from higher-end window and furniture glass and healthy motor vehicle and electronic display production. This study analyzes the ¥58.5 billion Chinese flat glass industry, with forecasts (2011, 2016) by product, market and region. It also details market share and profile major players.

#2223 11/2007 \$4900

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