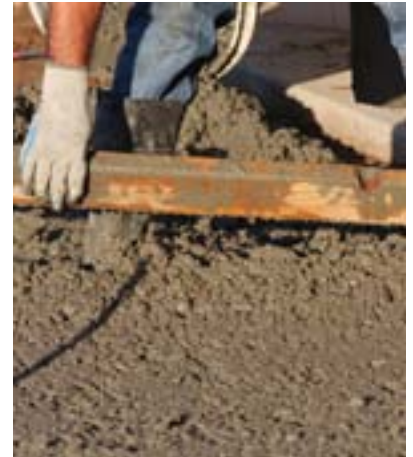


Cement & Concrete Additives

US Industry Study with Forecasts for 2020 & 2025

Study #3455 | October 2016 | \$4900



Rising additive use fuels growth

Cement and concrete additive demand in the US will be energized by rising additive use per ton of concrete and continuing recovery in concrete demand following steep losses experienced during the housing market collapse and the Great Recession.

Most growth in additive demand will register in the building construction market, aided by gains in new housing starts and investments in nonresidential facilities. Rising usage of technologically advanced forms of concrete that require high additive loadings and also a progression toward stronger, more durable concrete will promote growth and gradually shift the product mix toward high value additives.

Nonresidential market contributes most to additive gains

The nonresidential building construction market will be the largest contributor to overall gains in demand. On average, concrete used for nonresidential building construction contains twice the additives per volume as concrete used for residential construction.

Supplementary cementitious materials (SCMs), particularly fly ash and slag cement, are continuing to gain favor in nonresidential building construction because of their ability to strengthen concrete and reduce its permeability,

thereby rendering it less susceptible to such problems as corrosion. These materials are also increasingly ubiquitous in highway and street construction.

Architectural & decorative applications increase

The usage of concrete for architectural and decorative purposes will continue to climb. Demand for specialty products used in these applications, such as coloring agents, white portland cement, white pozzolans, and glass fibers, will grow. The rising popularity of concrete flooring will support demand for fiber additives, particularly microfibers, which reduce shrinkage cracking and allow wider spacing of expansion joints. Industrial concrete flooring will provide growing demand for synthetic macro-fiber and steel fiber, as these materials can replace steel mesh reinforcement while reducing labor costs. However, growth in the industrial market will be limited due to weakness in construction activity in that sector.

Study coverage

This study analyzes the US cement and concrete additive market. It presents historical demand data (2005, 2010, 2015) plus forecasts (2020, 2025) by type of additive (fiber, chemical, mineral) and market (nonresidential building, residential building, highway and street, other). The study also considers market environment factors, assesses the industry structure and evaluates company market share.

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MINERAL ADDITIVES

Slag Cement

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Slag cement is produced by quenching molten slag with water to produce a sand-like material (granulated blast furnace slag), which is then ground into a fine white powder. Slag cement typically replaces 20 to 50 percent of portland cement in a concrete mix, about twice the replacement rate for fly ash. As a result, the potential of slag cement to reduce the carbon dioxide emitted in concrete production is greater than that of fly ash. Slag cement can replace cement in higher portions of concrete because it is both cementitious and pozzolanic, whereas fly ash is primarily a pozzolanic material.

Like fly ash, slag cement can be included in a blended cement concrete mix. Concrete made with slag cement also provides similar benefits to that made with fly ash, such as improved workability, greater strength, reduced permeability, and reduced alkali-silica reactivity. In general, however, slag cement exhibits higher performance and more consistent properties than fly ash; slag cement also provides more stable air entrainment. The light color of slag cement is also sometimes preferred over the gray shade of fly ash, particularly for colored concrete.

Slag cement is acquired through partnerships between slag cement suppliers and iron and steel producers to collect blast furnace slag.

TABLE VI-3

SLAG CEMENT DEMAND (million dollars)

| Item | 2005 | 2010 | 2015 | 2020 | 2025 |
|--|------|------|------|------|------|
| Concrete Demand (mil ton) lb slag cement/ton concrete | | | | | |
| Slag Cement Demand (000 ton) \$/ton | | | | | |
| Slag Cement Demand | | | | | |
| Building Construction | | | | | |
| Highways & Streets | | | | | |
| Other | | | | | |
| % slag cement Mineral Additive Demand | | | | | |

SAMPLE
TABLE

Source: The Freedonia Group

TABLE VIII-5

HIGHWAY & STREET MARKET FOR CEMENT & CONCRETE ADDITIVES (million dollars)

| Item | 2005 | 2010 | 2015 | 2020 | 2025 |
|--|------|------|------|------|------|
| Highway & Street Constr Spend (bil \$) \$ additive/000\$ construction | | | | | |
| Highway & Street Additive Demand | | | | | |
| Chemical Additives | | | | | |
| Mineral Additives | | | | | |
| Fiber Additives | | | | | |
| % highways & streets Cement & Concrete Additive Demand | | | | | |

SAMPLE
TABLE

Source: The Freedonia Group

This study can help you:

- Determine your market & sales potential
- Learn more about industry competitors
- Assess new products & technologies
- Identify firms to merge with or acquire
- Complement your research & planning
- Gather data for presentations
- Confirm your own internal data
- Make better business decisions

Related Studies

World Construction Aggregates

World demand for construction aggregates will grow 5.2 percent yearly to 51.7 billion metric tons in 2019. Crushed stone, recycled concrete, fly ash, and slag will rise at twice the pace of sand and gravel. Hydraulic concrete will remain the largest application. Gains will be fastest in the Asia/Pacific market. This study analyzes the 40.2 billion metric ton world construction aggregate market, with forecasts for 2019 and 2024 by product and application for six world regions and 22 major countries. The study also evaluates company market share and profiles industry players.

#3389..... March 2016..... \$6300

World Cement & Concrete Additives

Global demand for cement and concrete additives will rise 7.2 percent annually through 2019 to \$24 billion. The Asia/Pacific region will remain the largest market, while the Africa/Mideast region and Central and South America will grow the fastest. Chemicals will remain the largest segment and will lead gains. This study analyzes the \$17 billion world cement and concrete additive industry, with forecasts for 2019 and 2024 by type and market for six world regions and 21 major countries. The study also evaluates company market share and profiles industry players.

#3358..... January 2016..... \$6300

Fiber Cement

US demand for fiber cement products is forecast to grow 5.8 percent annually through 2019 to 2.9 billion square feet, valued at \$2.2 billion. Siding will remain the dominant application, while backerboard grows the fastest. Growth in the dominant residential market will continue to outpace the nonresidential segment. This study analyzes the 2.2 billion square foot US fiber cement industry, with forecasts for 2019 and 2024 by material, application, market, and US region. The study also evaluates company market share and profiles industry players.

#3348..... December 2015..... \$5300

World Cement

World demand for cement will rise 4.5 percent yearly to 5.2 billion metric tons in 2019. India will be the fastest growing major market, as the pace of growth in China slows considerably. Blended cement will remain the most popular type, and will gain market share. This study analyzes the 4.2 billion metric ton world cement industry, with forecasts for 2019 and 2024 by type and market for six world regions and 20 major countries, along with total supply and demand for an additional 23 countries. The study also evaluates company market share and profiles industry players.

#3303..... August 2015..... \$6500

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Freedonia's methods

- Establishing consistent economic & market forecasts
- Using input/output ratios, flow charts & other economic methods to quantify data
- Employing in-house analysts who meet stringent quality standards
- Interviewing key industry participants, experts & end users
- Researching a proprietary database that includes trade publications, government reports & corporate literature

About The Freedonia Group

The Freedonia Group is a leading international industry market research company that provides its clients with information and analysis needed to make informed strategic decisions for their businesses. Studies help clients identify business opportunities, develop strategies, make investment decisions and evaluate opportunities and threats. Freedonia research is designed to deliver unbiased views and reliable outlooks to assist clients in making the right decisions. Freedonia capitalizes on the resources of its proprietary in-house research team of experienced economists, professional analysts, industry researchers and editorial groups. Freedonia covers a diverse group of industries throughout the United States and other world markets. Industries analyzed by Freedonia include:

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