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Water Treatment Chemicals

US Industry Study with Forecasts for **2017 & 2022**

Study #3072 | September 2013 | \$4900 | 273 pages

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Gains will reflect healthy growth in the oil, gas, and mining industries, a rebound in manufacturing output, and an increased need to protect companies' investments in water treatment equipment.

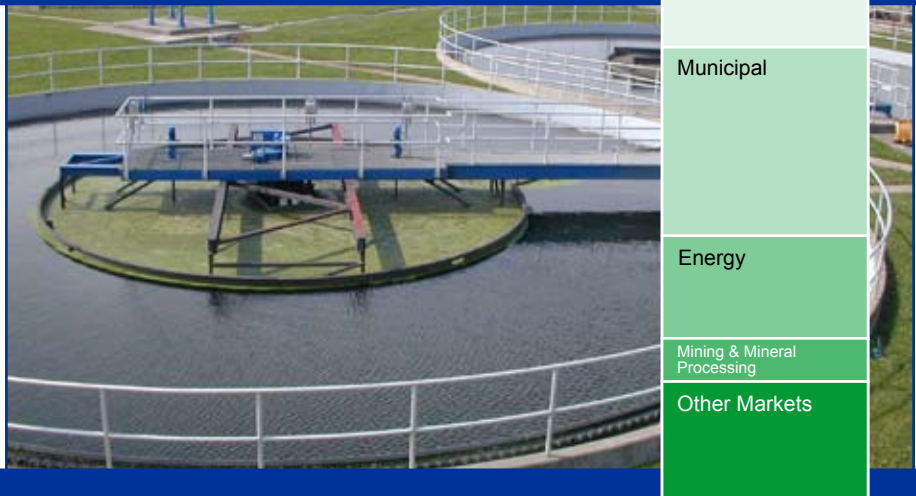
US demand to rise 3.2% annually through 2017

Demand for water treatment chemicals in the US is forecast to rise 3.2 percent per year to \$6.7 billion (15.1 billion pounds) in 2017. Gains will reflect not only healthy growth in the oil, gas, and mining industries and a rebound in manufacturing output, but also the increased use of scale control and other water treatment chemical products that help protect companies' investments in water treatment equipment. A shift in product mix favoring more efficient and less hazardous chemicals that have higher prices will also promote growth in market value. Additionally, chemical demand will be supported by efforts to recycle water, as water treated for reuse usually needs greater conditioning than fresh supply water.

Energy, mining sectors to be fastest growing markets

The energy and mining markets are projected to show the fastest growth through 2017. In the energy market, the primary driver will be the rise in oil and gas production from hydraulic fracturing activities, which require large volumes of water. Industry efforts to reuse water, as well as tighter restrictions on treated wastewater in some states, will further support growth. In the mining market, an expected increase in mine output and a continued emphasis on wastewater remediation will support gains in water treatment chemical demand. Manufac-

US Water Treatment Chemical Demand (\$6.7 billion, 2017)



turing markets are expected to recover from the weakness of the 2007-2012 period, when output was hampered by the struggling economy.

Scale, foam control agents to be fastest growing types

Increasing investment in water treatment equipment going forward will generally support greater water treatment chemical consumption as companies seek to avoid fouling, scale, foam, and corrosion to maximize equipment life and operating efficiency. Scale control agents are expected to show the fastest growth through 2017, followed by foam control agents. In addition to the boost from increased use of water treatment

equipment, demand for these products will be supported by a shift to more expensive chemicals and increased water recycling activities. Biocide demand growth, however, will be restrained by rising use of disinfection equipment.

The larger, more mature categories of water treatment chemicals are expected to show more modest growth, with gains driven by trends in equipment use, water use and recycling, and changes in product mix. For example, demand for higher value coagulants and flocculants will be supported by greater use of membrane separation systems and by an increased emphasis on reducing sludge volumes.

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Sample Text, Table & Chart

MARKETS

Mining & Mineral Processing

Demand for water treatment chemicals in the mining and mineral processing market is expected to increase significantly in 2017. In volume terms, demand is expected to grow by 3.3 percent per year to almost one billion pounds. This growth will be supported by increasing production and by efforts to retreat and reclaim. Additionally, users in the mining and mineral processing industry are increasingly adopting higher standards for wastewater quality to promote sustainable water treatment chemicals.

**SAMPLE
TEXT**

Water treatment chemical demand in the mining and mineral processing market is dominated by corrosion inhibitors, coagulants, flocculants, scale control agents, pH control agents, and chelating agents. Water treatment is a crucial part of the mining and mineral processing industry, as water is necessary to maximize mine production and mineral recovery from ore. Process water can be fouled in mining applications, sometimes requiring a significant amount of treatment and treatment during use. Because of the many contaminants that impact mine water quality, mine wastewater has long been considered one of the most toxic types of industrial wastewater. The water is usually very acidic, with high levels of heavy metals and other contaminants that require the use of corrosion inhibitors, pH control agents, scale control agents, and chelating agents to prevent damage to equipment and to promote equipment functionality.

Together, wastewater and process water applications comprise the majority of demand for water treatment chemicals in the mining and mineral processing market; in 2012, these two applications represented 68 percent of demand. Wastewater is the larger application by margin, as wastewater from mining and mineral processing is generally very heavily contaminated and must be treated before reuse.

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TABLE V-11

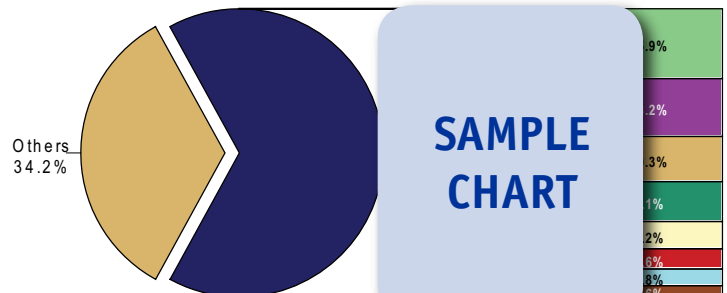
CORROSION INHIBITOR DEMAND IN WATER TREATMENT (million dollars)

Item	2002	2007	2012	2017	2022
Water Use (tril gal)					
lb chemicals/mil gal water					
Corrosion Inhibitor Demand (mil lb)					
\$/lb					
Corrosion Inhibitor Demand					
By Product:					
Molybdates					
Phosphates					
Nitrites					
Phosphonates					
Other Corrosion Inhibitors					
By Application:					
Wastewater					
Cooling Water					
Process Water					
Boiler Water					
Other Applications					
% corrosion inhibitors					
Water Treatment Chemical Demand					

**SAMPLE
TABLE**

CHART VI-1

US WATER TREATMENT CHEMICAL MARKET SHARE (\$5.7 billion, 2012)



**SAMPLE
CHART**

Sample Profile, Table & Forecast

TABLE IV-5
BOILER WATER TREATMENT CHEMICAL DEMAND BY PRODUCT
 (million dollars)

Item	2002	2007	2012	2017	2022
Water Treatment Chemical Demand % boiler	35	40	44	48	52
Boiler Water Treatment Chemicals					
Biocides	2	2	2	2	2
Coagulants & Flocculants	7	7	7	7	7
Corrosion Inhibitors	9	9	9	9	9
pH Control Agents	3	3	3	3	3
Scale Control Agents	9	9	9	9	9
Foam Control Agents	1	1	1	1	1
Other Water Treatment Chemicals	3	3	3	3	3
\$/lb					
Boiler Water Treatment Chems (mil lb)	1	1	1	1	1



COMPANY PROFILES

Albemarle Corporation

451 Florida Street
 Baton Rouge, LA 70801
 225-388-7400
<http://www.albemarle.com>

Sales: \$1.2 billion
 US Sales: \$1.2 billion
 Employees: 1,000

SAMPLE PROFILE

Key Products: Activated aluminas, Activated carbon, Activated alumina, Activated alumina, Activated alumina

Albemarle produces a wide range of fine chemicals that enhance consumer products. The Company operates through three segments: Polymer Solutions, Catalysts, and Fine Chemistry.

Albemarle is active in the US water treatment industry through the Fine Chemistry segment, which posted sales of \$785 million in 2012. The segment is active through two divisions, of which the Performance Chemicals division manufactures various chemicals suitable for use in commercial and industrial water systems and equipment. Among these products are bromine-based biocides and activated aluminas.

Bromine-Based Biocides -- Albemarle's bromine-based biocides are sold under the ALBROM, MAXXIS, XTRABROM, SANIBROM, and STABROM brand names. In general, these biocides are designed to be effective against bacteria, fungi, algae, slime, and mollusks. For example, the Company's ALBROM products include ALBROM 100PC biocides, which feature stabilized bromine compounds and are designed for use as a disinfectant in swimming pools, spas, hot tubs, and fountains. These biocides are produced in nugget forms and are also capable of oxidizing organics in pool water.

OTHER STUDIES

World Water Treatment Chemicals

World water treatment chemical demand will rise 5.8 percent per year to \$30.6 billion in 2017. The fastest growth will occur in developing regions, driven by rising industrial water quality standards, more complex manufacturing processes, and efforts to improve access to safe drinking water supplies and sanitation facilities. This study analyzes the \$23.1 billion world water treatment chemical industry, with forecasts for 2017 and 2022 by product, market, world region, and for 16 countries. The study also evaluates company market share and profiles industry players.

#3122January 2014 \$6100

Disinfectant & Antimicrobial Chemicals

Demand for disinfectant and antimicrobial chemicals in the US is forecast to rise 6.1 percent annually to \$1.6 billion in 2017. Organosulfur compounds will see significant growth as antimicrobial agents in products such as water-based architectural paint, floor coverings, home textiles, and other construction materials. This study analyzes the \$1.2 billion US disinfectant and antimicrobial chemical industry, with forecasts for 2017 and 2022 by market, function, and product. The study also evaluates company market share and profiles industry players.

#3043June 2013 \$4900

Lubricant Additives

US demand for lubricant additives is forecast to increase 4.3 percent annually to nearly \$3.9 billion in 2017. Deposit control additives will remain the largest product segment. Friction modifiers and antioxidants will be the fastest growing additives as rising treat rates offset weak demand for automotive lubricants. This study analyzes the US lubricant additives industry. It presents historical demand data (2002, 2007, 2012) and forecasts for 2017 and 2022 by type and market. The study also evaluates company market share and profiles industry players.

#3020April 2013 \$4900

World Aquaculture: Feed, Equipment & Chemicals

After several decades of rapid expansion, world demand for aquaculture supplies and equipment is expected to grow 7.4 percent per year to \$63.6 billion in 2017 at the farm gate level. The Asia/Pacific region will remain the dominant market, with the key China segment outpaced by other Asian countries. This study analyzes the \$44.6 billion world aquaculture supplies and equipment industry, with forecasts for 2017 and 2022 by fish type, product, market, world region and for 17 countries. The study also evaluates company market share and profiles industry participants.

#2999March 2013 \$6100

Corrosion Inhibitors

US demand for corrosion inhibitors will rise 4.1 percent annually to \$2.5 billion in 2017. The oil and gas industry's continued expansion of horizontal drilling and hydrofracturing well stimulation in shale formations will drive advances in demand. Concrete and cement additives will grow the fastest due to a rebound in construction spending. This study analyzes the \$2 billion US corrosion inhibitors industry, with forecasts for 2017 and 2022 by application, market and product. The study also evaluates company market share and profiles industry competitors.

#2994March 2013 \$5100

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- Chemicals • Plastics • Life Sciences • Packaging • Building Materials • Security & Electronics • Industrial Components & Equipment • Automotive & Transportation Equipment • Household Goods • Energy/Power Equipment

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