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Mining Chemicals

US Industry Study with Forecasts for **2011 & 2016**

Study #2267 | November 2007 | \$4500 | 216 pages

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INDUSTRY STRUCTURE

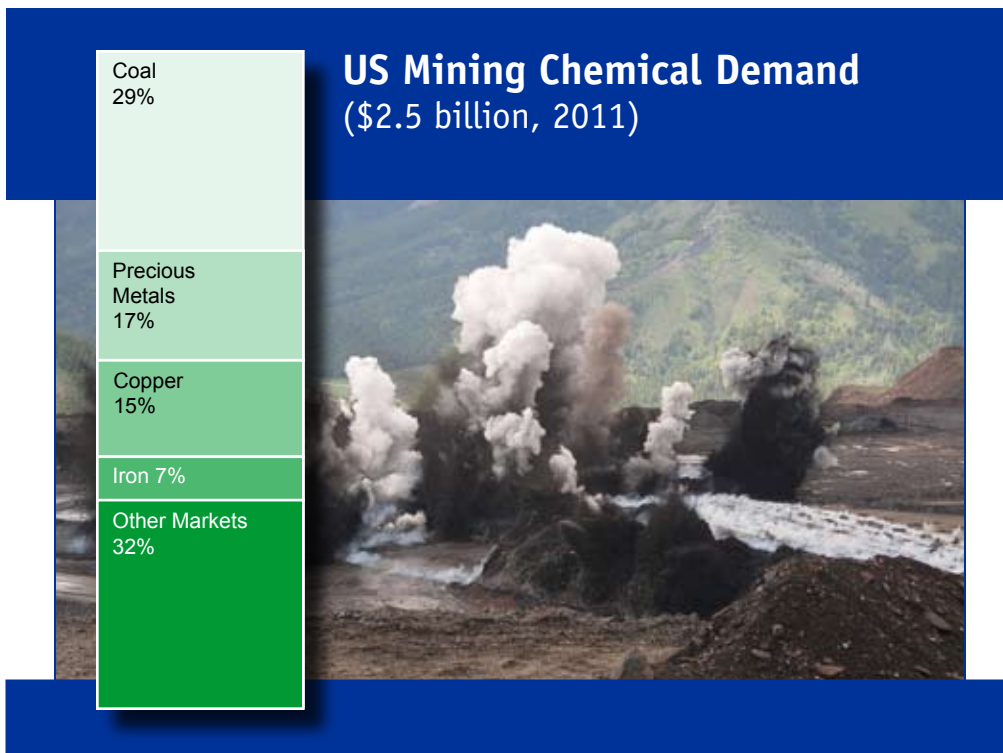
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Growth in US mining chemical demand will result from projected output gains in key markets such as coal mining and aggregate quarrying, which will boost demand for blasting agents.

US demand to reach \$2.5 billion in 2011

Demand for mining chemicals in the US, which mostly consist of products used for blasting, mineral processing, water treatment and dust control, is forecast to increase 2.0 percent per annum to \$2.5 billion in 2011. Growth will result from projected increases in output from key markets such as coal mining and aggregate quarrying, which will boost demand for blasting agents. Value gains will be further supported by a shift in the product mix toward more expensive, safer and more efficient chemicals. In addition, end-users of metals and other minerals are demanding higher quality products, while at the same time declining US reserves have led to the mining of lower quality ores, resulting in the need for further chemical processing. While volume growth will continue to be favorable, value growth will be restrained as price increases moderate significantly from high 2006 levels.

Legal and regulatory considerations regarding the environment and worker health and safety continue to be major concerns in the US mining industry, especially after high-profile mining accidents such as the explosion at the Sago coal mine in 2006. These issues will continue to support demand and product development for chemicals such as water and waste treatment products, acid mist suppressants, dust control chemicals and fire-resistant lubricants. However, increased efforts to reuse and



recycle chemicals back into mining processes may limit mining chemical demand somewhat.

Explosives to offer best growth opportunities

Explosives are the most important chemicals used in the mining industry and will provide the best opportunities, as demand will post above-average growth rates and surpass \$1 billion by 2011. In coal production, the largest consumer of explosives, trends toward surface and mountaintop mining methods, which require large amounts of explosives, will support demand growth. Value gains will be further boosted by an increase in aggregate quarrying activi-

ties, which use more expensive packaged explosives that provide better dust and after-blast vibration control, an important concern because quarrying sites are often found in close proximity to heavily populated regions.

The market for mineral processing chemicals is dominated by precious metals, copper, and other metals, due to the importance of leaching and flotation in these markets. The generally poor quality of US metal reserves mandates extensive treatment to recover usable products. For example, in iron ore processing, flotation is used to recover iron, which must then be pelletized before being sent to steel producers.

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Sample Text, Table & Chart

APPLICATIONS

Blasting & Drilling

Blasting and drilling are used extensively in mining to remove overburden covering the material and to drill holes for explosives. In most cases, the overburden is drilled into the rocks and are performed for exploratory purposes to determine the content of deposits and the effectiveness of drilling leads to more efficient breakage can also save time and costs associated with crushing. Mining companies have their own blasting and drilling crews, while others hire outside contractors. In either case, the same mining chemicals are generally used.

Demand for blasting and drilling chemicals is projected to grow 2.0 percent annually to \$1.2 billion in 2011. This segment is driven by explosives. Increased use of explosives to lower overall production costs (by reducing the need for crushing and grinding) will boost demand for explosives demand. Growth in surface mining methods, as opposed to underground mining which requires less blasting, will also support demand.

In 2006, coal mining represented 54 percent of total blasting and drilling chemical demand. Coal mining relies heavily on a wide range of blasting agents. Drilling and blasting requirements depend on the overburden covering the coal deposit. In the coal market, mines in the Eastern US generally have thicker overburden made of hard rocks, and therefore require greater use of explosives. Mountaintop mining, for instance, has increased in the Appalachian region, and is a very explosives-intensive mining method. In addition, strong production growth in Western coal mining areas such as the Powder River Basin, where coal is mostly mined at the surface, will provide good opportunities.

**SAMPLE
TEXT**

TABLE V-3

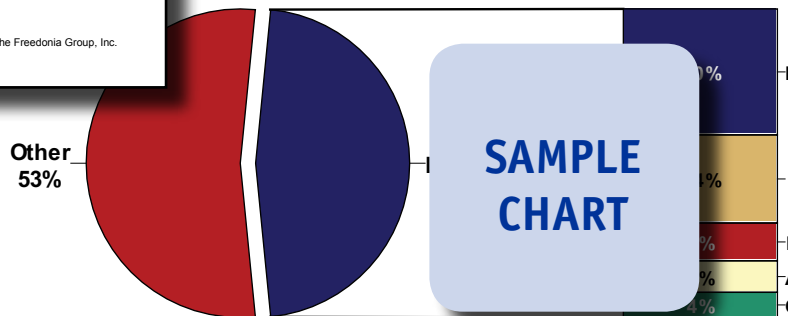
COAL MINING CHEMICAL DEMAND
(million dollars)

Item	1996	2001	2006	2011	2016
Coal Production (mil metric ton)	965	1023	1054	1125	1210
lb chemicals/ton coal	4.4	4.6	5.1	5.3	5.5
Coal Mining Chemicals (mil lb)	425	471	538	596	666
cents/lb	45	45	45	45	45
Coal Mining Chemical Demand					
By Function:					
Explosives					
Ammonium Nitrate					
ANFO					
Other					
Lubricants					
All Other					
By Application:					
Blasting & Drilling					
Other					
% coal					
Total Mining Chemical Demand	161	169	229	240	290

**SAMPLE
TABLE**

CHART VI-1

MINING CHEMICAL SALES BY COMPANY, 2006
(\$2.2 billion)

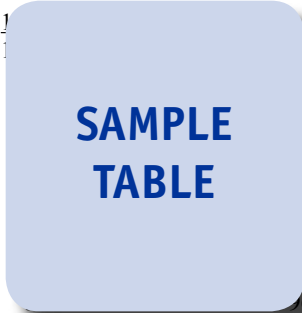


**SAMPLE
CHART**

Sample Profile, Table & Forecast

TABLE III-1
MINING CHEMICAL DEMAND BY TYPE

Item	1996	2001	2006	2011	2016
Mineral Production (mil metric ton)	3580	4090	4350	4880	5480
lb chemicals/ton minerals	5.3	4.9	4.9	4.7	4.4
Mining Chemical Demand (mil lb)					60
Inorganic Chemicals					20
Organic Chemicals & Polymers					30
Other					10
cents/lb					5
Mining Chemical Demand (mil \$)					90
Inorganic Chemicals					10
Organic Chemicals & Polymers					15
Other					65



COMPANY PROFILES

Quaker Chemical Corporation
 One Quaker Park
 901 Hector Street
 Conshohocken, PA 19428
 610-832-4000
<http://www.quakerchem.com>

Sales: \$
 North Am
 Employe

Key Pro wall roof support
 fluids an

Quaker Chemical Corporation markets a wide variety of formulated specialty chemical products, and provides chemical management services. The Company's products are used in heavy industrial and manufacturing applications, primarily for the steel, automotive, mining, aerospace, appliance and other durable goods industries. The Company operates in three segments: Metalworking Process Chemicals, Coatings, and Other Chemical Products.

The Company participates in the mining and mineral processing chemicals industry through the Metalworking Process Chemicals segment, which had 2006 sales of \$426 million. Through this segment, Quaker Chemical manufactures a range of industrial process fluids that serve as lubricants for several heavy industrial and manufacturing applications. For mining applications, the Company's lubricant products encompass fire-resistant hydraulic fluids, longwall roof support fluids and other specialty performance lubricants. These products are primarily marketed under the QUINTOLUBRIC and MINETECH brand names.

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“Demand for inorganic chemicals in mining is forecast to grow 2.1 percent annually to \$1.4 billion in 2011. This growth will primarily be due to increases in volumes, as prices are expected to moderate from high 2006 levels. This will especially be the case for the price of ammonium nitrate, which nearly doubled between 2001 and 2006.”

--Section III, pg. 38

OTHER STUDIES

World Mining Equipment

This study analyzes the global mining equipment industry. It presents historical demand data (1996, 2001, 2006) and forecasts for 2011 and 2016 by equipment type (e.g., underground machinery; crushing, pulverizing and screening; drills and breakers; mineral processing; surface mining); mining market (coal, mineral, metal); world regional market and for 32 major national markets. The study also considers market environment factors, evaluates company market share and profiles leading industry competitors.
 #2308 02/2008..... \$5700

Drilling Products

This study analyzes the US market for products used in drilling oil and natural gas wells. It presents historical US demand data (1996, 2001, 2006) and forecasts for the years 2011 and 2016 by equipment and consumables (e.g., drilling rigs, drill bits, downhole pipe, measuring and control equipment); services (contract drilling, directional control, logging, chemical); and drilling fluids. This study also considers market environment factors, evaluates market share and profiles leading industry competitors.
 #2288 12/2007..... \$4500

Oilfield Chemicals

US oilfield chemical demand will rise 4.3% per year through 2011. Gains will be driven by a rise in rig counts, more use of well stimulation and enhanced oil recovery (EOR) methods and more deepwater drilling and production. Best prospects include EOR chemicals, drilling fluids and well stimulation chemicals. This study analyzes the \$6 billion US oilfield chemical industry, with forecasts for 2011 and 2016 for formulated products and their raw materials. It also details market share and profiles major players.
 #2253 10/2007..... \$4500

World Oilfield Chemicals

Global demand for oilfield chemicals will rise 5.9% annually through 2010, driven by sustained growth in drilling activity. The dominant North American market will register healthy gains as producers strive to maintain production. Drilling fluids will remain the largest type while well stimulation chemicals will lead gains. This study analyzes the \$10.9 billion world oilfield chemical industry for 2010 and 2015 by type, world region and for 25 countries. It also details company market share and profiles major players.
 #2162 03/2007..... \$5400

World Well Stimulation Materials

Global demand for well stimulation materials is forecast to increase 11.3% annually through 2010. Gains will be driven by high oil and gas prices coupled with maturing wells. Among the leading markets, China, Canada and Russia hold stronger prospects than the US. Proppants will be the largest and fastest growing product. This study analyzes the \$2.5 billion world well stimulation material industry for 2010 and 2015 by product, key country and world region. It also evaluates market share and profiles major players.
 #2161 03/2007..... \$5400

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