Global demand to rise 3.5% annually through 2013

Global demand for chemicals used in petroleum refineries is projected to rise 3.5 percent annually to 18.2 million metric tons in 2013, valued at $21.6 billion. Gains will be led by strong increases in merchant hydrogen consumption, which is surging as refiners seek cost-effective options to meet their rising use of hydrogen for desulfurization and crude upgrading. For other refinery chemicals, global consumption will expand more slowly, although there will be healthy gains for catalysts used in hydrocracking and hydrotreating applications. Geographically, the most rapid growth rates for refinery chemical demand will be found in the Asia/Pacific and Africa/Mideast regions, although the large North American market will account for a substantial share of future volume gains.

Environmental regulations driving refinery chemical use

Around the world, oil refineries are subject to a myriad of environmental regulations aimed at reducing pollution from both petroleum products and the refineries themselves. The most significant of these regulations in terms of their impact on refinery operations are those mandating reductions in the sulfur content of refined petroleum products. To meet these reductions, refiners are expanding existing or constructing new hydrotreating units, which are projected to be among the fastest growing applications for refinery chemicals through 2013.

Crude oil upgrades support refinery chemical growth

A slowly growing share of global crude oil consumption is accounted for by heavier oils, which tend to contain higher levels of impurities and are generally more difficult and expensive to refine. Upgrading the long hydrocarbon chains found in these heavier oils for use in gasoline and distillate fuels requires significant refinery chemical use in hydrocracking, catalytic cracking and isomerization applications, and through 2013 the increased use of heavy crude oil will be a significant driver of refinery chemical demand.

Study coverage

This new Freedonia industry study, World Refinery Chemicals, is priced at $5700. The study provides an in-depth overview of the global refinery chemicals market, presenting historical demand data (1998, 2003 and 2008) plus forecasts for the years 2013 and 2018 by chemical type and application, along with regional trends. This information is framed in the context of the current and future operating environment for petroleum refineries, including future trends in refined petroleum product demand and existing government regulations. The study also considers market environment factors, evaluates company market share and profiles major suppliers of refinery chemicals.
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REFINERY CHEMICAL PRODUCTS

Metal Catalysts

Demand for metal catalysts used in refinery applications is projected to reach nearly $2.2 billion in 2013. In value terms, growth is expected to increase nearly 9 percent annually to $2.2 billion in the next five years. historically, nearly all of the demand in this market has come from hydrotreating processes, but value the expensive precious metals used in hydrotreating. While demand for these catalysts remains strong, the effects of recent price changes in metal commodities pricing, particularly for precious metal catalysts, although refiner efforts to limit catalyst usage or substitute base metals for precious metal in high price environments can dampen the effects of these price changes.

North America is the largest regional market for metal catalysts used in petroleum refining, although stronger gains are expected in the Asia/Pacific region (excluding the more mature Japanese market), Latin America and the Africa/Mideast region. Worldwide, efforts to reduce sulfur content levels in refined petroleum products will be the primary driver of metal catalyst demand, although a global trend toward the use of higher-sulfur crude oil will be an important contributing factor. Future demand growth will also be supported by regulations limiting the sulfur content of fuels burned in oceangoing vessels.

Hydrotreating is the largest application for metal catalysts in petroleum refining, accounting for over 90 percent of total global volume demand in 2008. In hydrotreating, a fixed bed consisting of an alumina base with molybdenum and base metal oxides is used to break apart hydrocarbon chains and displace sulfur molecules. Much of the future gains in metal catalyst demand are expected to come from hydrotreating processes, which are expanding strongly as refiners look for ways to remove impurities from their fuels to meet tightening standards. However, faster gains are expected for metal catalysts used in hydrocracking applications, which is one of the fastest growing conversion applications found in

Freedonia’s methods involve:

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

US oilfield chemical demand will grow 4.4% annually through 2013. The market will decline in the short term then rebound by the end of the forecast period, based mainly on swings in oil and gas prices. Stimulation chemicals and EOR products will be the fastest growing segments. Acids and polymers used in stimulation fluids will see growth. This study analyzes the US oilfield chemical industry, with forecasts for 2013 and 2018 by product and raw material. It also evaluates company market share and profiles industry players.

**Soy Chemicals**

US soy chemical demand will grow 7.8% annually through 2013, driven by the continued penetration of biodiesel, and by the adoption of alternatives to traditional, petrochemical-based materials in manufacturing. Soy oil derivatives such as methyl soyate, polyols, soy-based foamed plastics, waxes and fatty acids hold particularly good prospects. This study analyzes the $1.9 billion US soy chemical industry, with forecasts for 2013 and 2018 by product and market. It also evaluates market share and profiles industry players.

**World Well Stimulation Materials**

Global well stimulation material demand will grow at a double-digit annual rate through 2012. Efforts to maintain productivity in maturing oil and gas fields and to increase production in more difficult environments will drive gains. The US, Russia, Canada and China will continue to dominate demand. This study analyzes the $4.7 billion world well stimulation material industry, with forecasts for 2012 and 2017 by type and for four world regions and four key countries. It also evaluates market share and profiles industry competitors.

**World Oilfield Chemicals**

Global demand for oilfield chemicals will grow 5.7% annually through 2012. Gains will be driven by continuing growth in oil and gas production, and high levels of rotary drilling rigs in use and of wells drilled. North America will remain the dominant market while Latin America and the Asia/Pacific region will grow the fastest. This study analyzes the $15.2 billion world oilfield chemical industry, with forecasts for 2012 and 2017 by type, world region and for 27 countries. It also details market share and profiles industry players.

**World Refinery Chemicals**

Reports can be purchased at our website www.freedoniagroup.com and through major commercial online hosts.