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Amines

US Industry Study with Forecasts for **2015 & 2020**

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Gains will remain healthy in important markets such as agricultural chemicals and personal care products, and show promise in emerging markets such as wind energy and oil exploration.

US demand to rise 3.3% annually through 2015

US demand for amines (excluding those used to produce other amines) is forecast to advance 3.3 percent annually to 3.3 billion pounds in 2015, valued at \$3.4 billion. Gains will remain healthy in important markets such as agricultural chemicals and personal care products. Technical innovations in emerging markets will drive growth going forward as amines are used in place of competitive intermediates in such markets as wind energy and shale control in oil exploration.

Ethanolamines to remain largest, fastest-growing segment by volume

Ethanolamines will continue to represent both the largest and the fastest-growing product segment in the US amines market, accounting for over one-third of volume demand and projected to grow at an annual pace of 4.4 percent through 2015. Diethanolamine will remain the most commercially significant of the ethanolamines, providing strong support as it continues to benefit from use in popular glyphosate herbicides. Demand for monoethanolamine will see ongoing gains in the wood treatment market, with demand benefiting from a strong rebound in the US construction industry. Additionally, growth in triethanolamine demand will be aided by expanding uses in personal care products and fabric softeners.

US Amines Demand, 2010 (\$2.8 billion)



Specialty amines demand will be boosted by a rebound in plastics processing, as well as by the replacement of other amines in such applications as natural gas treatment and by expanding uses in fast-growing applications including epoxy curing agents in wind turbine blades. Fatty amines are most commonly used in cleaning products and personal care products and will continue to benefit from their benign environmental profile. Alkylamines will advance at a below-average pace, restrained by market maturity combined with sluggish gains for the major products that employ these amines. Market maturity will also limit gains for ethyleneamines, which represent the smallest-volume product segment.

Agricultural chemicals among best prospects

Among the various markets in which amines are used, agricultural chemicals and cleaning products are the largest and together will account for the majority of gains in demand through 2015. Agricultural chemicals will also see some of the fastest increases of all markets in this period. Above-average growth will be achieved in the rubber, plastics and personal care products markets as well, driven by rebounds in the rubber and plastics industries and by the popularity of high-end cosmetics and soaps that increasingly employ fatty and specialty amines.

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Sample Text, Table & Chart

MARKETS

Amines Demand -- Cleaning Products

US demand for amines in the cleaning products market to increase to 1.5 million pounds in 2015. The maturity of the cleaning products market -- will continue to grow. Fatty amines and their derivatives are used in cleaning products such as dishwashing detergents and carpet shampoos. Fatty amines are used in cleaning products with bleach and remaining effective in a wide pH range, although stickiness limits their use in powdered products. They have reached market saturation in these applications, although through gains will accelerate as US output of cleaning products improves.

Ethanolamines, the second largest amines class used (comprising 31 percent of market demand in 2010), will see healthy growth through 2015 as all three analogs find significant use in cleaning products. Diethanolamine is used in liquid formulations, and is particularly suitable for use in hard water due to its lathering characteristics in that setting. Monoethanolamine is a key surfactant in solid products such as powdered household laundry detergents. Triethanolamine's primary use in the cleaning product market had been in dry cleaning solvents based on chlorinated hydrocarbons, which have declined in use due to greater environmental concerns. This decline has been more than offset, however, by rapidly rising demand for triethanolamine in diesterquat fabric softeners. All three analogs benefited from increasing loadings during the 2005-2010 period, a trend which will continue through 2015 as more concentrated formulations demand stronger surfactant while still maintaining low costs.

Specialty amines, ethyleneamines and alkylamines will find use in cleaning products, although demand for these amine

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SAMPLE
TEXT

TABLE IV-5

CLEANING PRODUCTS MARKET: AMINES DEMAND
(million pounds)

Item	2000	2005	2010	2015	2020
Cleaning Products Shipments (mil 2005 lbs amines/000\$ cleaning products)					
Amines Demand					
Fatty Amines					
Ethanolamines					
Specialty Amines					
Ethyleneamines					
Alkylamines					
\$/lb					
Amines Demand (mil \$)					
% cleaning products					
Total Amines Demand (mil \$)					

SAMPLE
TABLE

CHART V-2

US AMINES CAPACITY SHARE BY COMPANY
(4.4 billion pounds, 2010)



SAMPLE
CHART

Sample Profile, Table & Forecast

TABLE III-4
DIETHANOLAMINE DEMAND BY MARKET
(million dollars)

Item	2000	2005	2010	2015	2020
Nondurable Goods Shipments (bil 2005\$)					240
lbs diethanolamine/mil \$ nondurables					6
Diethanolamine Demand					0
Agricultural Chemicals					0
Cleaning Products					0
Natural Gas					0
Personal Care Products					5
Other					5
\$/lb					5
Diethanolamine Demand (mil \$)					0
% diethanolamine					0
Ethanolamines Demand (mil \$)					000



COMPANY PROFILES

Chemtura Corporation

199 Benson Road
 Middlebury, CT 06749
 203-573-2000
<http://www.chemtura.com>

Sales: \$
 US Sales
 Employe

Key Pro



Chemtura Corporation is a specialty chemicals and polymer additive manufacturer. The Company operates in four segments: Consumer Performance Products, Industrial Performance Products, Crop Protection Engineered Products and Industrial Engineered Products. In November 2010, Chemtura and its US operations emerged from Chapter 11 Bankruptcy protection.

The Company participates in the US amines industry via the Industrial Performance products segment, which generated sales of \$999 million in 2009. The segment manufactures a range of antioxidants, petroleum additives and urethanes. Among these antioxidants, which are designed to inhibit the degradation of polymers caused by light and oxidation, are various chemicals based on amines.

Amine-based antioxidants are made and marketed by Chemtura through two main lines: NAUGARD and NAUGALUBES. Among NAUGARD products are NAUGARD 445, an aromatic amine-type antioxidant that serves as a thermal stabilizer in a variety of applications, including polyolefins, styrenics, polyols, hot melt adhesives, lubricants

"Demand for diethanolamine will advance 5.8 percent annually to 615 million pounds in 2015, valued at \$315 million. Rapid growth in the agricultural market -- the dominant market for diethanolamine -- will fuel gains. Specifically, diethanolamine demand will benefit from continued strong growth in glyphosate herbicides. As a result, ..."

--Section V, pg. 172

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OTHER STUDIES

World Well Stimulation Materials

This study analyzes the world well stimulation material industry. It presents historical demand data for the years 2000, 2005 and 2010, and forecasts for 2015 and 2020 by well stimulation material type (e.g., proppants, base fluid materials, additives, gases), major national market (US, Russia, Canada, China) and world regional market (Latin America, Europe, Asia/Pacific, Africa/Mideast). The study also considers market environment factors, details industry structure, evaluates company market share and profiles industry competitors.

#2752 May 2011 \$6100

World Fertilizers

World demand for fertilizers is projected to increase 3.8 percent per year through 2014. The Asia/Pacific will continue to control the largest portion of global fertilizer demand and post above-average gains. Single-nutrient fertilizers will remain the dominant product while multi-nutrient and organic types grow the fastest. This study analyzes the 345 million metric ton world fertilizer industry, with forecasts for 2014 and 2019 by type, market, world region and for 30 countries. The study also evaluates company market share and profiles industry participants.

#2726 April 2011 \$5900

Lubricants

US demand for lubricants will reverse recent declines, supported by a turnaround in motor vehicle production, an acceleration in the number of automobiles in use, and increased manufacturing output. Higher-quality Group II/III+ and Group III basestocks, as well as synthetic types, will increase their share of the market. This study analyzes the 2.1 billion gallon US lubricant industry, with forecasts for 2014 and 2019 by base oil, product and market. It also evaluates company market share and profiles industry players.

#2677 October 2010 \$4900

Industrial & Institutional (I&I) Cleaning Chemicals

US demand for industrial and institutional (I&I) cleaning chemicals will increase 4 percent annually through 2014. Disinfectants and sanitizers will be the fastest growing type as the food industry faces tighter safety requirements. General purpose cleaners and floor care cleaners will remain the largest segments. This study analyzes the \$8.8 billion US I&I cleaning chemical industry, with forecasts for 2014 and 2019 by market, product and raw material. It also evaluates company market share and profiles industry players.

#2683 September 2010 \$4900

World Oilfield Chemicals

Global oilfield chemical demand will rise 8.6 percent yearly through 2014, driven by a recovery in the oil and gas industry and higher oil and gas prices. North America will remain the dominant market while the Central and South American region grows the fastest. Stimulation and enhanced oil recovery chemicals will lead gains. This study analyzes the \$13.7 billion world oilfield chemical industry, with forecasts for 2014 and 2019 by product, world region and for 26 countries. It also evaluates market share and profiles industry players.

#2702 December 2010 \$5900

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