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World Fuel Additives

Industry Study with Forecasts for **2016 & 2021**

Study #2977 | December 2012 | \$6100 | 423 pages

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Global demand in value terms for fuel additives will grow 8% per annum to over \$59 billion in 2016 as volume demand for gasoline oxygenates such as MTBE rises in developing regions.

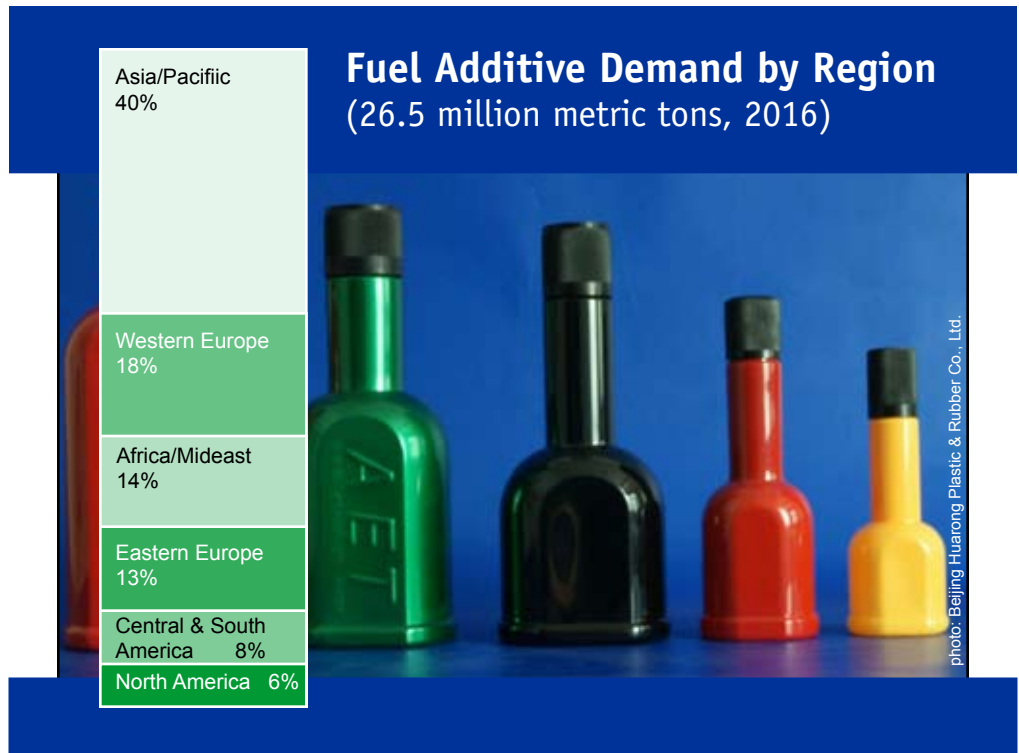
World demand to rise 4.7% per annum through 2016

The world market for fuel additives by volume is forecast to grow 4.7 percent per year to 26.5 million metric tons in 2016, with demand in value terms rising 8.0 percent yearly to \$59.4 billion. Total fuel additive demand in volume terms is heavily dominated by gasoline oxygenates, such as methyl tertiary butyl ether (MTBE). In 2011, ether oxygenates accounted for 94 percent of total demand.

Excluding oxygenates, global demand for specialty fuel additives is projected to rise 3.6 percent per year to 1.5 million metric tons in 2016. The rapidly growing fuel market in China will drive advances, particularly as China's fuel standards become stricter and additive treat rates rise. Globally, deposit control additives will exhibit the greatest gains, promoted by higher standards needed to accommodate the increased use of newer engine technology. Cold flow improvers will be the fastest growing product type, though from a much smaller base.

Oxygenates to remain dominant fuel additive

Going forward, world demand for both oxygenates and specialty additives will be influenced by changing standards for vehicle emissions, fuel quality, and engine efficiency. Many industrializing nations began significant regulation of fuels after 2006, in response to concerns over air and water pollution. One of the biggest influences on global fuel additive demand is the use of low sulfur diesels.



While most industrialized nations have already met their target sulfur levels, many industrializing nations have not yet fully transitioned to low sulfur diesels, which need higher levels of lubricity improvers, cold flow improvers, and other additives. As the motor vehicle market globalizes, vehicle manufacturers around the world are producing more efficient and better performing engines, which require high quality fuel types.

Ethanol, biodiesel use to hike fuel additive demand

Many countries have also adopted bio-fuel mandates as a way to reduce overall consumption of petroleum products. In order to meet targeted biofuel levels, many countries are expected to increase

the levels of ethanol and biodiesel blended into their gasoline and diesel supplies. Ethanol and biodiesel use will have a substantial impact on fuel additive demand by necessitating increased use of antioxidants, corrosion inhibitors, cold flow improvers, and other products. Biofuel mandates are expected to contribute to expanded demand for ethyl tertiary butyl ether (ETBE), which is used in many European markets as an alternative to direct blending of ethanol. In addition, ETBE treat rates will expand as ETBE is used as a replacement for MTBE, which is coming under increased scrutiny in developed nations over its possible health effects. However, use of MTBE in developing regions is expected to continue to grow, leading to continued gains in MTBE demand.

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Sample Text, Table & Chart

OTHER REGIONS

Iran: Demand by Type -- Iranian demand for special is forecast to million kilod 2016. Gain ization leve country see n order to m sions and e

**SAMPLE
TEXT**

Depos to increase per year to 1.1 million kilograms. Improvements will be pro improving engine technology that favors more efficient engin are often more sensitive to the effects of harmful deposits. A tant will be the adoption of additional regulation covering hy and NOx emissions, both of which are impacted by the prese engine deposits.

Demand for cetane improvers is expected to grow slow million kilograms in 2016. Growth will be hindered by the c process of lowering sulfur content in Iranian fuels, which wi positive impact on cetane number. Additionally, cetane impr rates were already higher than in most other countries in the Iran has been using cetane improvers to improve its fuel quality for many years.

Lubricity improver and cold flow improver demand will both ben- efit from declining sulfur levels in fuels, with demand incre and 1.1 million kilograms, respectively, through 2016. How in lubricity improver demand will be restrained by historica rates relative to the rest of the region, while cold flow impr benefit from both declining sulfur levels and modest gains i in other refined petroleum products.

Corrosion inhibitor demand is expected to increase to kilograms in 2016, as treat rates rise to improve fuels' stora

295

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TABLE VIII-17

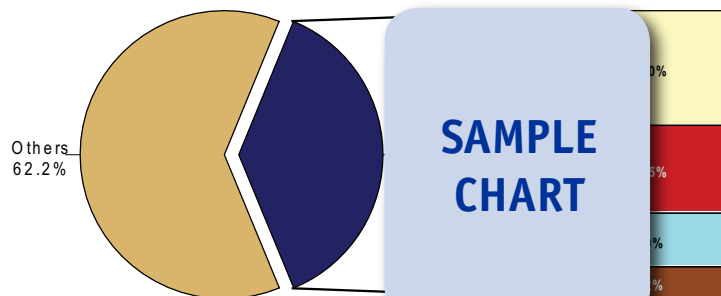
IRAN: FUEL ADDITIVE DEMAND BY APPLICATION
(million kilograms)

Item	2001	2006	2011	2016	2021
Gross Domestic Product (bil 2010\$)					
Motor Vehicles in Use (millions)					
Refined Petro Production (mil m ton) - net exports					
Refined Petroleum Demand (mil m ton) Gasoline Distillate Fuel Other					
kg additive/metric ton refined petro					
Specialty Fuel Additive Demand Gasoline Distillate Fuel Other					
kg oxygenate/metric ton gasoline Gasoline Oxygenate Demand					

**SAMPLE
TABLE**

CHART VIII-1

WORLD OXYGENATE MARKET SHARE
(\$35.6 billion, 2011)



**SAMPLE
CHART**

Sample Profile, Table & Forecast

TABLE VIII-18
IRAN: SPECIALTY FUEL ADDITIVE DEMAND BY TYPE
 (million kilograms)

Item	2001	2006	2011	2016	2021
Refined Petroleum Demand (mil m ton) / kg additive/metric ton refined petro					
Specialty Fuel Additive Demand					
Deposit Control Additives					
Cetane Improvers					
Lubricity Improvers					
Cold Flow Improvers					
Corrosion Inhibitors					
Antioxidants					
Other Fuel Additives					
% Iran					
Africa/Mideast Specialty Fuel Additives	69.7	98.7	138.0	189.0	251.5



COMPANY PROFILES

Stepan Company
 22 West Frontage Road
 Northfield, IL 60093
 847-446-
 http://wv

Sales: \$
 Employr

Key Proc



Stepan Company produces intermediate chemicals used in a broad range of industries. The Company operates in three segments: Surfactants, Polymers, and Specialty Products.

The Company is active in the world fuel additives industry through the Surfactants segment, which had 2011 sales of \$1.4 billion. Of the segment's total 2011 sales, North America accounted for 62 percent, Europe accounted for 23 percent, Central and South America accounted for 11 percent, and Asia accounted for four percent. The Surfactants segment makes a range of products, including STEPAN BIODIESEL SB-D and STEPAN BIODIESEL SB-W biodiesel, and IGEPAL CA-520 emulsifier additives.

Stepan's STEPAN BIODIESEL SB-D and STEPAN BIODIESEL SB-W biodiesel additives contain soybean oil and methyl ester for use in blends with petroleum-based diesel fuel. Specifically, trucks and locomotives can utilize biodiesel blends interchangeably with petroleum-based diesel without making any modifications to existing fuel systems or engines. IGEPAL CA-520 emulsifiers can be used as anti-icing additives in automotive gasoline.

"Demand for specialty gasoline additives is forecast to increase 7.3 percent annually to 17.1 million kilograms in 2016. Gains will be promoted by accelerated growth in gasoline demand, in addition to modernizing standards for vehicle economy and emissions standards. Iran uses European Union standards for its vehicles, with Euro 3/Euro III adopted in 2008 for new cars, and Euro 4/Euro IV in 2012 for new cars; old vehicles were required to switch to Euro 3/Euro III in 2010. However, full adoption of some of these standards has been difficult because of poor fuel quality, resulting in higher levels of specialty fuel additives being blended into the gasoline supply ..."
 --Section VIII, pg. 293

OTHER STUDIES

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.

#2994 March 2013..... \$5100

World Oilfield Chemicals

World demand for oilfield chemicals is expected to increase 8.9 percent annually to \$28 billion in 2016. The US will remain the largest market based on its many mature wells and rapid growth in horizontal drilling and hydraulic fracturing. Brazil will be the fastest growing market. Drilling fluids and completion and workover fluids will lead gains. This study analyzes the \$18 billion world oilfield chemical industry, with forecasts for 2016 and 2021 by product, world region and for 44 countries. The study also evaluates company market share and profiles industry participants.

#2973 December 2012 \$6200

World Hydrogen

Global demand for hydrogen is projected to increase 4.1 percent annually through 2016 to 286 billion cubic meters. Chemical manufacturing will be the fastest growing market while petroleum refining will remain dominant. The Asia/Pacific region will continue as the largest market and grow the fastest. This study analyzes the 233.7 billion cubic meter world hydrogen industry, with forecasts for 2016 and 2021 by market, source, world region and for 17 major countries. The study also evaluates company market share and profiles industry participants.

#2895 July 2012..... \$5900

Specialty Fuel Additives

US demand for specialty fuel additives will grow 4.8 percent yearly to \$1.6 billion in 2016. Cold flow improvers will lead gains due to the mandated use of more biodiesel, while deposit control agents will remain the most common type. Gasoline will remain the largest application. Blenders and terminals will continue as the largest market. This study analyzes the \$1.3 billion US specialty fuel additives industry, with forecasts for 2016 and 2021 by additive type, application and market. The study also evaluates company market shares and profiles industry players.

#2874 April 2012 \$4800

Synthetic Lubricants & Functional Fluids

Demand for synthetic lubricants and functional fluids is forecast to climb 8.6 percent per year to \$7.4 billion in 2015. Engine oil will remain the fastest-growing product type. Group III base oils and polyalphaolefins (PAOs) will be the fastest growing materials. The vehicle and equipment market will remain by far the largest outlet. This study analyzes the \$4.9 billion US synthetic lubricant and functional fluid industry, with forecasts for 2015 and 2020 by product, material and market. The study also evaluates company market share and profiles industry competitors.

#2842 February 2012..... \$4900

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