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# Synthetic Lubricants & Functional Fluids

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

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Study #2842 | February 2012 | \$4900 | 282 pages

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**The Freedonia Group**

767 Beta Drive

Cleveland, OH • 44143-2326 • USA

Toll Free US Tel: 800.927.5900 or +1 440.684.9600

Fax: +1 440.646.0484

E-mail: [info@freedoniagroup.com](mailto:info@freedoniagroup.com)

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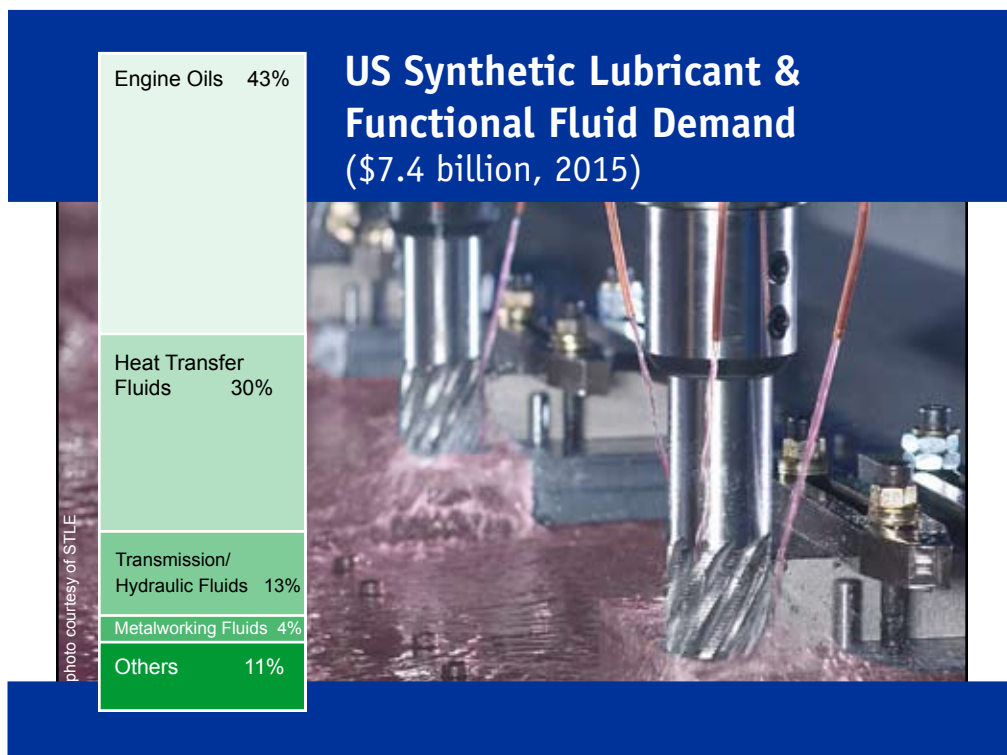
*Demand will benefit from synthetics growth in the lubricant market, as well as increasingly stringent environmental standards, and the increasing availability of new and high quality basestock capacity.*

## US demand to grow 8.6% annually through 2015

US demand for synthetic lubricants and functional fluids is forecast to climb 8.6 percent per year to \$7.4 billion in 2015. Synthetics will expand their share of the overall lubricant market, propelled by the higher performance requirements of modern equipment, as well as increasingly stringent environmental standards. Gains will also be fueled by the expanding availability of high quality basestocks due to rising investment in new basestock capacity, both in the US and overseas. As the supply of these materials expands, original equipment manufacturers (OEMs) are becoming more willing to recommend the use of high performance synthetic products, particularly as OEMs make steps toward global specifications.

## Vehicle & equipment market to remain dominant

The vehicle and equipment market will remain the largest outlet for synthetic lubricants through the forecast period. Within this market, light vehicles account for the majority of demand due to the universally synthetic nature of antifreeze, brake and deicing (windshield wiper) fluids, in addition to the rising use of synthetic engine oils and transmission fluids. Although demand in this segment will continue to rise, more rapid gains will be achieved in the medium and heavy vehicle sector. Fueling growth will be increasingly stringent greenhouse gas emissions and fuel economy regulations, which will generate greater interest in lower viscosity engine oils that can



handle higher loads and perform well in higher operating temperatures.

## Engine oil to remain fastest-growing product

Engine oil will remain the fastest-growing product type through 2015. These lubricants primarily find use in automotive applications, and will therefore benefit from a rebound in motor vehicle output from the declines of the 2005-2010 period, as well as continued gains in the number of motor vehicles in use. The adoption of the GF-5 and API SN engine oil specifications in 2010 will further promote gains. Major auto makers such as Toyota, Honda and GM now require at least some type of synthetic or synthetic blend motor oil for nearly all of their vehicles. This will drive demand for

synthetics in the engine oil market. Although volume gains will be limited by lengthening oil change intervals, demand for synthetics will grow as they capture a greater share of the market from conventional formulations.

Among the various materials utilized to formulate synthetic lubricants and functional fluids, glycol fluids represented the leading category in 2010. However, glycol's share of the market is forecast to decline due to maturity in the large anti-freeze segment, along with a shift toward extended flush intervals and fill-for-life components in automotive design technology. Polyalphaolefins (PAOs) and Group III base oils are also key materials, and are projected to expand at the fastest rates through 2015.

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## Sample Text, Table & Chart

### MARKETS

**Medium- & Heavy-Duty Vehicles** -- Demand for synthetic lubricants and functional fluids used in medium- and heavy-duty vehicles is projected to increase at a rate of 3.5 percent per year through 2020. This growth is driven by an estimated 56 million gallons of new vehicle production in 2010, which will drive demand for synthetic lubricants. Vehicle producers are developing new technologies that will utilize synthetic lubricants by a significant rebound in demand experienced between 2005 and 2010. Continued increases in the medium- and heavy-duty motor vehicle market will also support demand. Moreover, fleet owners are seeking to reduce downtime and extend drain intervals, generating the greatest in synthetic lubricants and functional fluids. This will drive demand in spite of the skepticism that has historically limited demand for these products in this segment, as the traditionally conservative industry becomes more comfortable with the use of synthetic engine oils. Over the longer term, however, growth in market volume will be restrained by the use of lubricants with extended drain intervals, although this may be somewhat mitigated by increasing levels of biodiesel in the fuel supply. (Biodiesel tends to accumulate in the engine oil, which is best addressed through oil changes.)

Synthetics accounted for 15 percent of total fluid demand in medium- and heavy-duty trucks and buses in 2010. While synthetics represent only a small share of the market, they will become increasingly important based on their enhanced performance properties and ability to further extend drain intervals. In terms of market value, engine oils and heat transfer fluids are the most widely used synthetics in the medium and heavy vehicle market. Engine oils are projected to offer by far the best growth through the forecast period as synthetics increasingly penetrate the market. Demand for transmission and hydraulic fluids, gear oils

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TABLE III-5

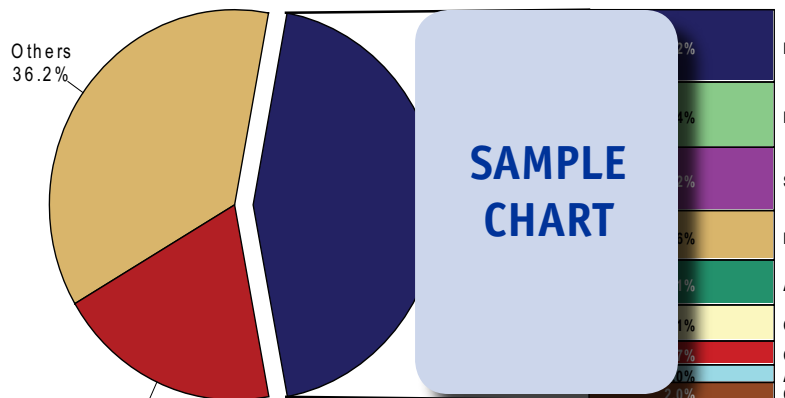
SYNTHETIC ENGINE OIL DEMAND BY ENGINE TYPE  
 (million gallons)

Item	2000	2005	2010	2015	2020
Gross Domestic Product (bil 2005\$)	10	12	15	18	20
gal oil/mil \$ GDP	3	5	6	7	8
Engine Oil Demand % synthetic	0	0	0	0	0
Synthetic Engine Oil Demand Gasoline	5	6	7	8	9
Diesel	0	0	0	0	0
Other	0	0	0	0	0
\$/gallon	5	6	7	8	9
Synthetic Engine Oil Demand (mil \$)	0	0	0	0	0
% engine oil	8	10	12	15	18
Synthetic Functional Fluid Dmnd (mil \$)	0	0	0	0	0

SAMPLE TABLE

CHART VI-1

SYNTHETIC LUBRICANT & FUNCTIONAL FLUID MARKET SHARE  
 (\$4.9 billion, 2010)

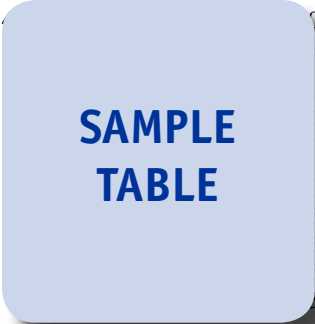


SAMPLE CHART

## Sample Profile, Table & Forecast

**TABLE IV-6**  
**SILICONE-BASED SYNTHETIC LUBRICANT  
 & FUNCTIONAL FLUID DEMAND**  
 (million dollars)

Item	2000	2005	2010	2015	2020
Synthetic Functional Fluids (mil gal) % silicone fluids					
Silicone-Based Func Fluids (mil gal) \$/gallon					
Silicone-Based Func Fluid Demand					
Heat Transfer Fluids					
Transmission & Hydraulic Fluids					
Dielectric Fluids					
Other Functional Fluids					



**COMPANY PROFILES**

---

**CLC Lubricants Company**  
 0N902 Old Kirk Road  
 Geneva, IL 60134  
 630-232-7900  
 http://www.clc.com

Annual Sales: \$100 million  
 Employment: 400

Key Products: Industrial and metalworking fluids

**SAMPLE PROFILE**

CLC Lubricants produces and markets industrial lubricants and metalworking fluids for a range of applications. CLC is privately held.

The Company's lubricant and fluid offerings are synthetic and semi-synthetic types for industrial and metalworking applications. These products are typically used by fastener manufacturers, injection molders, extruders and heat treaters. Among other products, for industrial applications, CLC Lubricants produces LUBRI-MAX SYN 32 HT synthetic industrial greases. The Company's metalworking fluids include semi-synthetic coolants in light- to moderate-duty, moderate-to-heavy-duty, and heavy-duty varieties; synthetic coolants in light-to-moderate-duty and moderate-duty formulations; CHEM FINISH synthetic fluids and CHEM FINISH skin-friendly, semi-synthetic fluids for honing/lapping and other applications; and a range of CARB "O" GRIND metalworking fluids formulated with fully synthetic bases and synthetic ester technology, superior Group II oils with proprietary synthetic ester packages, and ultra-pure synthetic fluids that can be filtered to one micron.

CLC Lubricants conducts manufacturing and other operations at a 27,000-square-foot facility in Geneva, Illinois. The Company also

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"Demand for silicone-based synthetic fluids is forecast to expand 7.1 percent per annum through 2015 to \$380 million, with volume rising to more than eleven million gallons. Silicone fluids will record below-average advances, with competition from less expensive mineral oil- and other synthetic-based lubricant formulations serving as a key factor restricting growth. Due to the high cost of these fluids, silicones find only limited use as liquid lubricants. Demand is generally ..."  
 --Section IV, pg. 114

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**OTHER STUDIES**

**World Fuel Additives**

The world fuel additives market will rise 8.0 percent yearly to \$59.4 billion in 2016. The rapidly growing fuel market in China will drive gains, especially as China's fuel standards become stricter and additive treat rates rise. Deposit control additives will see the greatest gains globally, while cold flow improvers grow at the fastest rate. This study analyzes the \$40.5 billion world specialty fuel additives industry, with forecasts for 2016 and 2021 by product, application, world region and for 19 countries. The study also evaluates company market share and profiles industry players.

#2977 .....December 2012 ..... \$6100

**World Specialty Silicas**

World demand for specialty silicas will grow 5.6 percent annually to 2.8 million metric tons in 2016. Precipitated silica will remain dominant, with good growth fueled by the adoption of "green tires", especially in North America and the Asia/Pacific region. China will be the largest and fastest growing market. This study analyzes the 2.1 million metric ton world specialty silica industry, with forecasts for 2016 and 2021 by product, market, world region and for 16 major countries. The study also evaluates company market share and profiles industry players.

#2906 ..... July 2012 ..... \$6100

**Silicones**

US demand for silicones is forecast to climb 5.6 percent annually to \$4.1 billion in 2016. Silicone resins and elastomers will be the fastest growing products, with elastomers overtaking silicone fluids as the largest segment by 2016. The industrial market will remain dominant while the construction segment grows the fastest as it rebounds from previous declines.

This study analyzes the \$3.1 billion US silicone industry, with forecasts for 2016 and 2021 by product, market and application. It also evaluates company market share and profiles industry players.

#2879 .....April 2012 ..... \$4900

**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

**World Rubber Processing Chemicals**

Global demand for rubber processing chemicals will rise 4.7 percent yearly to 1.4 million metric tons in 2015. China will remain the largest and fastest growing market. Accelerators and processing aids will be among the fastest growing types, while antidegradants will remain the largest segment. This study analyzes the 1.1 million metric ton world rubber processing chemical industry, with forecasts for 2015 and 2020 by type of rubber, chemical, market, world region and for 27 countries. The study also evaluates company market shares and profiles industry players.

#2863 ..... March 2012 ..... \$6100

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