

NEW

US industry forecasts for 2012 & 2017

Solvents

Study # 2357

June 2008

\$4600

US demand to reach 11.8 billion pounds in 2012

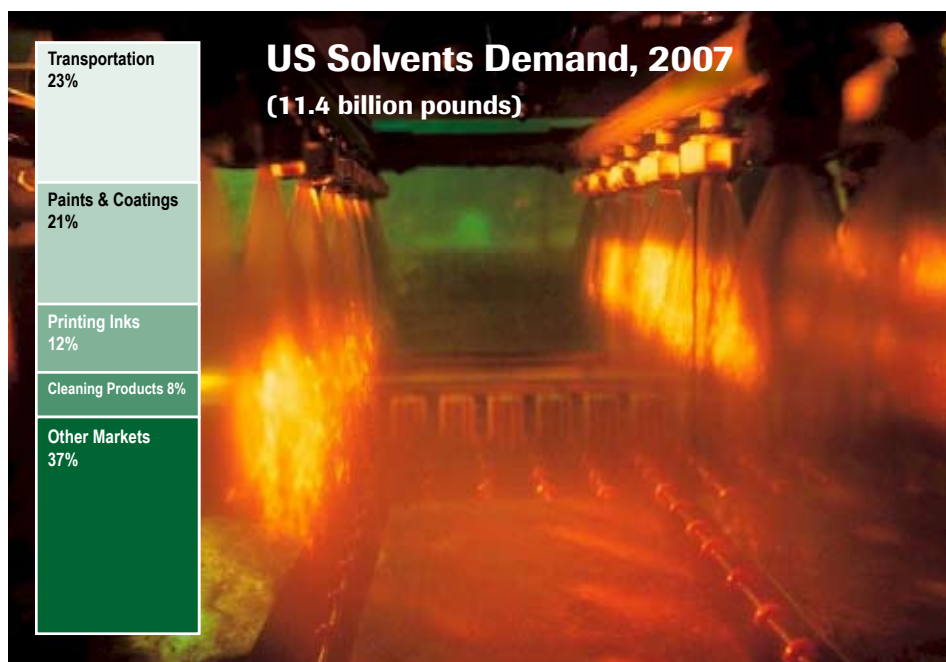
Demand for chemical solvents will reach nearly 12 billion pounds in 2012, valued at \$5.9 billion. Gains will continue to lag the overall economy, as manufacturers of coatings, inks and adhesives take strides to reduce the VOC content of their products. However, opportunities exist in a number of areas, including specialty solvents, environmentally-friendly "green solvents," and conventional solvents that feature favorable toxicity and air pollution profiles. Value gains will also benefit from trends toward the use of higher-cost products such as esters and green solvents.

Ester, alcohol solvents to pace conventional types

Among conventional solvents, best opportunities are expected for the ester and alcohol product classes, driven by growth in markets such as coatings, cleaning products and cosmetics and toiletries. Glycols will experience more subdued advances, restrained by increased antifreeze recycling efforts and demand for longer life automotive fluids. Hydrocarbon and chlorinated solvents will continue their long-term declines in demand, although the drop in consumption for both products will be less pronounced than in the past.

Green solvents to outpace conventional counterparts

Green solvents have come to prominence through the replacement of conventional solvents over which environmental or toxicological concerns have been raised.



Nearly all green solvent products will see more rapid gains in demand than their conventional counterparts, with particularly strong growth for smaller-volume products such as hydrogen peroxide and supercritical fluids. Demand for more mature products such as propylene glycol, pine oil and soy oil will rise at a slower rate, though still far outpacing gains for the solvent market overall.

Best market prospects for electronics, pharmaceuticals, cosmetics & toiletries

Coatings and printing inks, the two largest manufacturing markets for solvents, will both see subpar gains in demand. Manufacturers of these products will continue to move away from solvent-based formulations in order to comply with VOC emissions regulations. More

fortuitous growth prospects are expected for solvents in cosmetics and toiletries, pharmaceuticals and electronics, fueled by strong product demand and the use of more environmentally favorable solvents. Demand for solvents in transportation uses, the largest of the nonmanufacturing markets, will be limited by a slowdown in the number of motor vehicles on the road through 2012.

Study coverage

Solvents, a new Freedonia industry study, is priced at \$4600. It presents historical demand data (1997, 2002, 2007) as well as forecasts for 2012 and 2017 by solvent type, function and market. The study also considers market environment factors, evaluates market share data and profiles 42 US industry competitors.

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plus forecasts for 2012 and 2017

Solvents

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MANUFACTURING MARKETS

Paints & Coatings

Paints and coatings are composed of a variety of components, including polymer resins, pigments, plasticizers, active solvents (which dissolve the resins in solution) and diluents (also solvents, which reduce the viscosity of the coating). While performance considerations are the primary concern when choosing an active solvent, diluents are frequently selected mainly on the basis of price, to keep manufacturing costs down. environmental performance, paints more powerful active solvents which By varying the mix of active and diluent a product which has lower VOC performance properties.

The shift to low-solvent formulations is essentially complete. However, architectural coatings still constitute a significant outlet for solvents, particularly hydrocarbons, which are the main component of solventborne varnishes, stains, enamels and rust preventative coatings. Solvent-based coatings are significantly more important in the industrial paints market. However, in the 1990s, the push to reduce the solvent content and VOC emissions in coatings spread to the durable equipment and specialty coatings segments. For instance, powder coatings, which are 100-percent solids and thus contain no solvents, have made strong inroads into the coating of metals used for major durables such as appliances, furniture and motor vehicles. In addition to their environmental benefits, powders offer greater application efficiency and highly durable, corrosion-resistant coatings, especially for metal substrates. The automotive industry, in particular, has been actively moving to reduce solvent emissions in its coatings. The shift to low-solvent formulations is essentially complete. However, architectural coatings still constitute a significant outlet for solvents, particularly hydrocarbons, which are the main component of solventborne varnishes, stains, enamels and rust preventative coatings. Solvent-based coatings are significantly more important in the industrial paints market. However, in the 1990s, the push to reduce the solvent content and VOC emissions in coatings spread to the durable equipment and specialty coatings segments. For instance, powder coatings, which are 100-percent solids and thus contain no solvents, have made strong inroads into the coating of metals used for major durables such as appliances, furniture and motor vehicles. In addition to their environmental benefits, powders offer greater application efficiency and highly durable, corrosion-resistant coatings, especially for metal substrates. The automotive industry, in particular, has been actively moving to reduce solvent emissions in its coatings. The shift to low-solvent formulations is essentially complete. However, architectural coatings still constitute a significant outlet for solvents, particularly hydrocarbons, which are the main component of solventborne varnishes, stains, enamels and rust preventative coatings. Solvent-based coatings are significantly more important in the industrial paints market. However, in the 1990s, the push to reduce the solvent content and VOC emissions in coatings spread to the durable equipment and specialty coatings segments. For instance, powder coatings, which are 100-percent solids and thus contain no solvents, have made strong inroads into the coating of metals used for major durables such as appliances, furniture and motor vehicles. In addition to their environmental benefits, powders offer greater application efficiency and highly durable, corrosion-resistant coatings, especially for metal substrates. The automotive industry, in particular, has been actively moving to reduce solvent emissions in its coatings.

SAMPLE PAGE
Explanations that support each table's data and forecasts

GREEN SOLVENTS

Propylene Glycol & Related

Demand for propylene glycol and related chemicals in solvent applications is projected to grow steadily through 2012, valued at \$1.2 billion in 2007 and projected to reach \$1.5 billion by 2012. Propylene glycol and related solvents in the whole, gains will be significant. The solvents included in this category are the P-Series ethers, all of which are chemically similar to propylene glycol, which are derived from ethylene glycol and share similar characteristics. Transportation (antifreeze and deicing) and cleaning products are the dominant markets for propylene glycol and related solvents. Other significant uses include coatings, cosmetics, printing inks, pharmaceuticals and food production.

SAMPLE TEXT
Data illustrated with the aid of nearly 110 tables and charts

TABLE VIII-2
PROPYLENE GLYCOL AND RELATED SOLVENTS DEMAND BY TYPE
(million pounds)

Item	1997	2002	2007	2012	2017
Green Solvents Demand					0
% PG & related					3
Propylene Glycol & Related Solvents					5
Propylene Glycol					0
P-Series Ethers & Esters					5
Dipropylene Glycol					0
\$/lb					4
PG & Related Solvents (mil \$)					0

SAMPLE TABLE
Historical data for 1997, 2002 and 2007 as well as Freedonia forecasts for 2012 and 2017

COMPANY PROFILES

Profiles for 42 US industry players such as Archer-Daniels-Midland, BASF, Dow Chemical, Eastman Chemical, ExxonMobil, Lyondell, Oxea and Shell

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Automotive Coatings, Adhesives & Sealants

US demand for automotive coatings, adhesives and sealants will reach \$5.3 billion in 2012. Slow gains in the dominant coatings segment will offset faster growth in adhesives and sealants. Design trends will favor adhesives over mechanical fasteners and liquid over mechanical gaskets. This study analyzes the \$4.6 billion US automotive coating, adhesive and sealant industry, with forecasts for 2012 and 2017 by product, application and market. It also evaluates market share and profiles industry competitors

#2287.....05/2008.....\$4500

World Biofuels

Global demand for biofuels will grow 20% annually through 2011, despite concerns about their impact on the environment and food supplies. Bioethanol and biodiesel will lead gains. North America will remain dominant while the Asia/Pacific region and Western Europe grow faster. This study analyzes the 37.7 million metric ton world biofuel industry, with demand and production forecasts for 2011 and 2016 by fuel, world region and for 16 countries. It also evaluates market share and profiles major players.

#2287.....03/2008.....\$5500

World Architectural Paints

Global demand for architectural paints will grow 3.9% annually through 2011. Gains will be paced by developing Asia/Pacific countries, especially China and India. Water-based paints will continue to supplant solvent-based types to claim 73% of demand. This study analyzes the 17.8 million metric ton world architectural paint industry, with forecasts for 2011 and 2016 by formulation, market, end user, world region and for 23 major countries. It also evaluates company market share and profiles major players.

#2311.....02/2008.....\$5600

Pulp & Paper Chemicals

US pulp and paper chemical demand will reach 19.8 million tons in 2011 based on rising paper and board production, the use of recycled paper and demand for brighter paper and board. Higher-priced specialty additives will lead gains due to their ability to lower pollution and production costs and improve quality. This study analyzes the \$7.7 billion US pulp and paper chemical industry, with forecasts for 2011 and 2016 by product type and end user. It also evaluates company market share and profiles major players.

#2293.....02/2008.....\$4500

Wood Protection Coatings & Preservatives

US demand for wood protection coatings and preservatives will grow 3.4% annually through 2011, driven in part by a shift toward higher value formulations. Interior applications such as flooring and cabinets will lead gains. Exterior uses will continue to suffer from wood's gradual market losses to lower-maintenance alternatives. This study analyzes the \$2.9 billion US wood protection industry, with forecasts for 2011 and 2016 by product, application and market. It also details market share and profiles major firms.

#2243.....10/2007.....\$4500

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