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Metal Finishing Chemicals

US Industry Study with Forecasts for **2013 & 2018**

Study #2533 | July 2009 | \$4600 | 231 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

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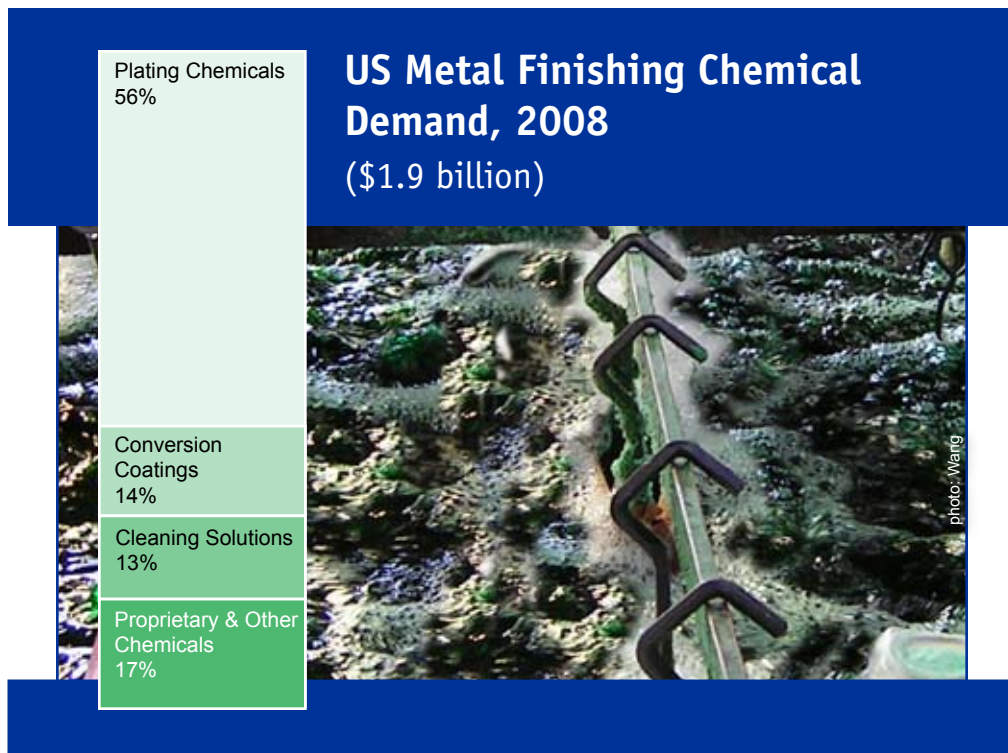
Growth will be supported by above-average gains in the large transportation equipment market, and by increasingly stringent regulations favoring higher-value and safer alternatives.

US demand to grow 2.4% annually through 2013

Demand for metal finishing chemicals in the US is forecast to grow 2.4 percent per year to \$2.2 billion in 2013. While a moderation in prices will restrain increases in market value to some extent, real growth will accelerate, supported by above-average gains in the large transportation equipment market. In addition, increasingly stringent environmental and worker safety regulations will help increase demand for higher-value and safer alternatives. However, gains will be limited by continued trends toward the use of plastics, which typically require less finishing, in applications where metals have traditionally been employed.

Proprietary chemicals to grow at fastest annual rate

Plating chemicals will continue to account for the majority of metal finishing chemical demand -- 56 percent of the total in 2013. However, plating chemicals, surface cleaners and conversion coatings, which are used widely in established markets, will only post gains comparable to the overall average. Also restraining demand will be environmental pressures, which have caused some metal finishing firms to recycle chemicals. For instance, certain solvents are now being recycled and reused in closed-loop systems, diminishing the need for new products. On the other hand, proprietary additives and other chemicals are expected to register



slightly above-average growth, benefiting from new product developments.

Transportation equipment market has best prospects

Through 2013, the transportation equipment market is expected to record the most rapid gains. Metal finishing chemical consumption in this industry will be boosted by a rebound in transportation equipment production (especially motor vehicles). In addition, the development of alternatives to chrome plating, in particular for the replacement of hexavalent chromates, will support demand for higher-value metal finishing chemicals. However, factors that will negatively affect demand include the continuing

replacement of metals by plastics in many automotive and other transportation equipment parts, due to their lower cost, lighter weight, superior corrosion resistance and other performance advantages. The electronics and electrical equipment market will remain the second largest major market. However, growth in this sector will be below-average as manufacturing of these items continues to move offshore. Additionally, the trend toward smaller, yet more powerful and technologically sophisticated electronic components will restrain demand in volume terms. Nonetheless, advances will be supported by the use of higher-priced finishing chemicals, including precious metal (gold in particular) plating solutions.

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Sample Text, Table & Chart

PRODUCTS

Plating Chemicals

Demand for plating chemicals is projected to increase per year to 2018. This growth will be supported by continued demand and investment in metal finishing chemicals in response to stringent product requirements and environmental regulations. However, regulatory requirements to reduce pollution and effluent discharge as metal finishing chemicals.

SAMPLE TEXT

Metal plating is accomplished through both electrolytic and electroless processes. Electrolytic is the dominant method, accounting for 83 percent of total plating chemical demand in 2008. However, faster growth is anticipated for electroless plating solutions due to the continued substitution of conventional metals with plastic substrates, which use electroless plating processes. In addition, the electroless method deposits a uniform coating onto the substrate, overcoming one of the major drawbacks of electroplating, i.e., the varying degree of plating thickness due to differences in current density.

In 2008, nickel was the most widely used metal in plating solutions, accounting for 36 percent of demand. Plating chemicals find use in almost every major market for metal finishing chemicals, although the transportation equipment, and electronics and electrical markets together accounted for the majority of demand in 2008, representing 58 percent of the total. Over the forecast period, the transportation equipment market is forecast to experience the fastest gains in plating chemical demand.

The Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA) have established guidelines for the use of certain plating chemicals, such as cadmium, chromium, cyanide, lead and nickel, which have been determined to be unsafe to the

TABLE V-2

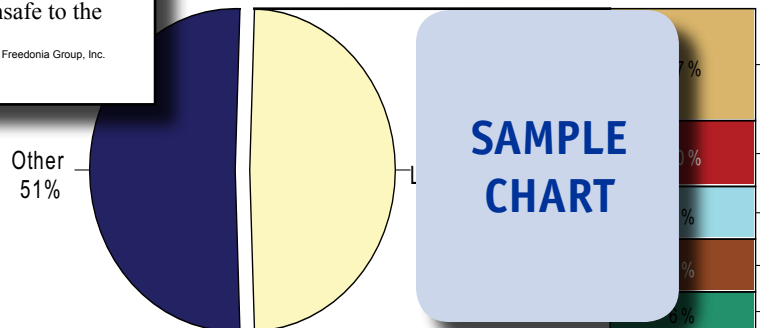
METAL SUBSTRATE FINISHING CHEMICAL DEMAND BY TYPE (million dollars)

Item	1998	2003	2008	2013	2018
Durable Goods Shipments (bil \$) \$ chemicals/000\$ durables					
Fabricated Metal Shipments (bil \$) \$ chemicals/000\$ shpts					
Metal Substrate Chemical Demand					
Steel					
Aluminum					
Other					
% metal					
Metal Finishing Chemical Demand	1,777	2,000	2,274	2,500	2,800

SAMPLE TABLE

CHART VII-1

METAL FINISHING CHEMICAL MARKET SHARE, 2008 (\$1.9 billion)



Sample Profile, Table & Forecast

COMPANY PROFILES

Petroferm Incorporated
 402 Centre Street, Suite A
 Fernandina Beach, FL 32034
 847-244-3410
<http://www.petroferm.com>

Annual Sales:
 Employment:

Key Products:

Petroferm is a leading manufacturer of specialty chemicals. The Company manufactures industrial cleaning agents, fuel additives, surfactants, emulsifiers, and other specialty chemicals. Petroferm operates through three business segments: Industrial Cleaning Products and Lambent Technologies. In October 2008, Petroferm was acquired by HIG Chemicals Holdings Corporation, a subsidiary of HIG Capital LLC (Miami, Florida), a global private equity investment firm.

The Company is active in the US metal finishing chemical industry through the Cleaning Products business group (Gurnee, Illinois), which develops, manufactures and supplies environmentally responsible industrial cleaning agents used to clean precision parts during production. These products include chemicals for use in aqueous, non-aqueous, semi-aqueous and vapor degreasing processes primarily used in the aerospace, defense, electronics and medical device industries. In the US, Petroferm maintains operations in Fernandina Beach, Florida and Gurnee, Illinois.

For metal finishing applications, Petroferm makes and markets precision cleaning agents under such brand names as AXAREL, BIOACT, CLEANSAFE, LENIUM, RUSTSAFE, SCALESafe and

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TABLE VI-2
TRANSPORTATION EQUIPMENT MARKET FOR METAL FINISHING CHEMICALS BY SEGMENT & TYPE
 (million dollars)

Item	1998	2003	2008	2013	2018
Transportation Equipment Shpts (bil \$)	50	55	60	65	70
\$ chemicals/000\$ shpts	14	14	14	14	14
Transportation Metal Finishing Chems				50	50
By Segment:					
Motor Vehicles				90	90
Aerospace				90	90
Other				50	50
By Type:					
Plating Chemicals				95	95
Conversion Coatings				58	58
Cleaning Solutions				34	34
Other				13	13
% transportation equipment				3	3
Metal Finishing Chemical Demand	17	17	17	180	180



“Consumption of metal finishing chemicals by the aerospace market is expected to grow 3.6 percent annually to \$242 million in 2013, faster than growth in demand for metal finishing chemicals in general. Advances will result from growth in aerospace equipment shipments as well as from the effectiveness and popularity of metal finishing chemicals such as conversion coatings in prepaint treatment. In addition, the development of chemical alternatives to chrome, in particular for the replacement of hexavalent chromates, will support demand for higher-value chemicals. However, ...”
 --Section VI, pg. 105

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OTHER STUDIES

Specialty Gases

This study analyzes the US specialty gas industry. It presents historical demand data for the years 1998, 2003 and 2008, and forecasts for 2013 and 2018 by specialty gas type (e.g., high purity atmospheric gases, noble gases, carbon gases, halogen gases) and market (e.g., chemical processing, lasers, lighting, electronics, medical/health care, government/academia). The study also considers market environment factors, details industry structure, evaluates company market share and profiles industry players.

#2519 08/2009 \$4700

World Lubricants

Global lubricant demand is forecast to reach 40.5 million metric tons in 2012. Gains will be strongest in the Asia/Pacific, Africa/Mideast and Latin American regions due to ongoing rapid industrialization and rising car ownership rates. Engine oils will remain the largest segment while process oils grow the fastest. This study analyzes the \$48.8 billion world lubricant industry, with forecasts for 2012 and 2017 by formulation, product, market, world region and for 31 countries. It also evaluates market share and profiles industry players.

#2454 02/2009 \$5700

Sealants & Caulks

US sealants and caulks demand will rise at an improved rate of 2.9% yearly through 2012. Gains will be driven by recoveries in the residential building and nonbuilding construction markets, and improved prospects for motor vehicles and aircraft. High performance materials such as silicones and polyurethanes will lead gains. This study analyzes the \$3.2 billion US sealants and caulks industry, with forecasts for 2012 and 2017 by material, type and market. It also evaluates market share and profiles major players.

#2393 09/2008 \$4600

Paint & Coatings

US demand for paint and coatings will rise 3.1% annually through 2012, aided by an improving outlook for construction and manufacturing activity and favorable export opportunities. A rebounding residential market will pace the dominant architectural paint segment, with interior paint outpacing exterior. This study analyzes the \$19.7 billion US paint and coating industry, with forecasts for 2012 and 2017 by market, application, end use and formulation. It also evaluates company market share and profiles industry players.

#2386 08/2008 \$4600

Solvents

Demand for solvents in the US will reach 11.8 billion pounds in 2012. Esters and alcohols will exhibit the best growth within the conventional solvents product group, though green solvents such as hydrogen peroxide and supercritical fluids will post more rapid gains. This study analyzes the \$5.5 billion US solvents industry, with forecasts for 2012 and 2017 by solvent product, market and function. It also considers market environment factors, evaluates company market share and profiles industry players.

#2357 06/2008 \$4600

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