photo: Zhejiang MR Refrigeratn Co., Ltd.

World Fluorochemicals

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

Study #2528 | August 2009 | $5800 | 362 pages

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World Fluorochemicals

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

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(continued on next page)

NORTH AMERICA

WESTERN EUROPE

ASIA/PACIFIC

OTHER REGIONS

INDUSTRY STRUCTURE

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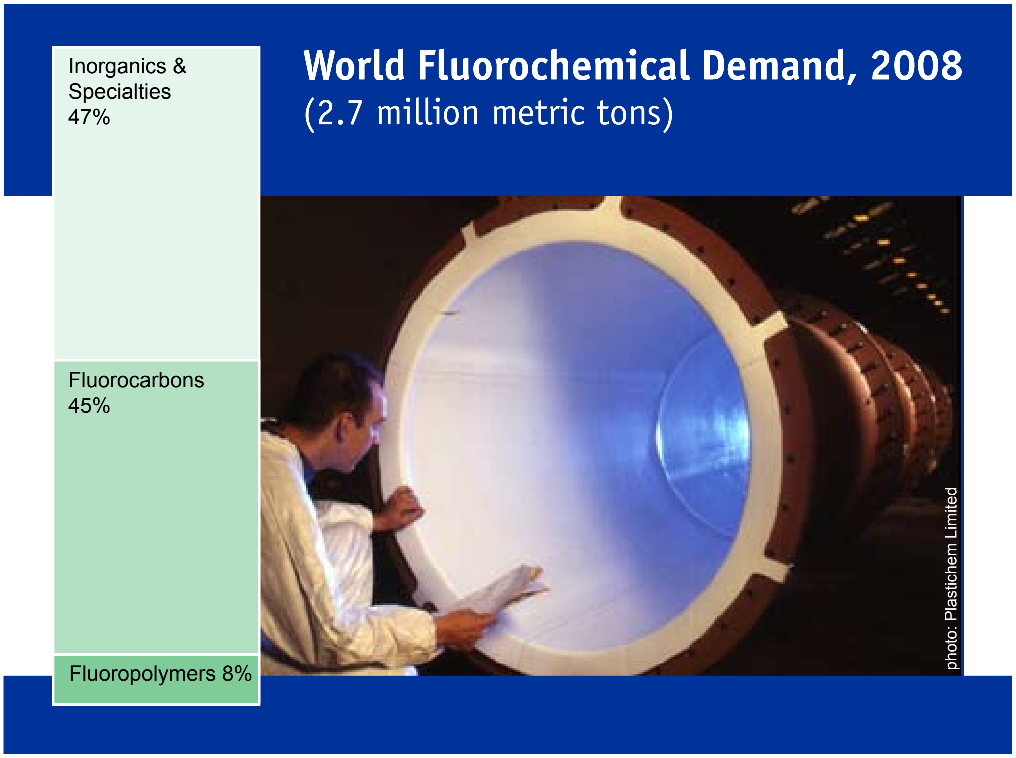
Gains will be driven by healthy increases in the production of refrigeration and cooling equipment, boosting demand for fluorocarbon refrigerants, and by growth in demand for fluoropolymers.

Global demand to rise 2.7% yearly through 2013

Global demand for fluorochemicals is forecast to rise 2.7 percent per year to 3.1 million metric tons in 2013. Gains will be driven by healthy increases in the production of refrigeration and cooling equipment, boosting demand for fluorocarbon refrigerants, particularly in the developing world. Growth in demand for fluoropolymers, which will remain strong in nearly all world regions, will also benefit overall market gains. However, advances will be restrained by continued consumer concerns over the environmental impact of fluorochemicals.

Asia/Pacific region to remain largest market

The Asia/Pacific region will continue to account for the largest portion of fluorochemical demand in 2013, totaling just under half of the world market. The region will also see above-average gains in demand, although slowing considerably from the pace of increase during the previous decade. The fastest demand growth, however, is expected for the Africa/Mideast region (from a relatively small base), fueled by a rapid increase in aluminum metal production in the region. In a continuation of long-term trends, the US, Western Europe and Japan will account for a shrinking share of the world fluorochemical market, as the developed world adopts more stringent restrictions on the use of fluorine-derived products.



Fluoropolymers to see most rapid advances

Fluorocarbon demand will increase at a pace slightly slower than the fluorochemical market as a whole, however, this masks a considerable shift in the prospects for individual products. Demand for HCFCs, which saw healthy growth during the 2003-2008 period, will begin to decline through 2013. The 2007 adjustment to the Montreal Protocol has accelerated the start of HCFC phaseout in developing countries such as China and India, significantly reducing growth prospects going forward. This, in turn, will drive strong advances in demand for HFCs, the most common replacements for HCFCs, in the developing world. However, HFCs are beginning to come under increasingly stringent restrictions, particularly in Western Europe, restraining demand for fluorocarbons overall.

Gains in demand for inorganic fluorochemicals will decelerate markedly from the 2003-2008 period, as aluminum production (the largest outlet for these products) exhibits a similar slowdown. However, demand for the higher-value specialty products, such as fluorochemical gases, will benefit from strong growth in world electronics production. Fluoropolymers will see the most rapid advances of any major fluorochemical product type, fueled by the rising need for high-performance materials in chemical processing, electronics and motor vehicle applications.

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Sample Text, Table & Chart

TABLE VI-16

SOUTH KOREA -- FLUOROCHEMICAL DEMAND BY MARKET
(000 metric tons)

SAMPLE TABLE

Item	1998	2003	2008	2013	2018
Gross Domestic Product (bil 2007$)					0
kg fluorochemical/mil $ GDP					5
Fluorochemical Demand					7
Refrigerants					2
Aluminum Production					--
Blowing Agents					8
Components					6
Other					1
% South Korea					1
Asia/Pacific Fluorochemicals					0

ASIA/PACIFIC

South Korea: Markets

SAMPLE TEXT

Demand for fluorochemicals in South Korea is expected
3, accounting for four percent of th
home to one of the more advanced
d economic growth and rising ma
luorochemical consumption going
n smelting, which is generally a hi
uth Korea remains one of the more
region due to high levels of refrig

Refrigerants are the largest market for fluorochemicals in South Korea, comprising 45 percent of overall consumption. Gains in this expanding sector are being driven by strong growth in refrigeration and cooling equipment shipments, as well as increases in motor vehicle production and use. The sizeable residential sector for refrigerants is slowing somewhat due to market maturity, but will continue to expand through the forecast period. However, improving equipment efficiency and reduced leakage rates will have a modest effect at curbing demand for all refrigerants in South Korea. Although Montreal Protocol restrictions on HCFCs are looming, at present nonfluorinated refrigerants are a limited market. HFCs have already gained a significant portion of the refrigerant market, however, due to their use in motor vehicles and cooling equipment exported to the US and Western Europe.

Restrictions under the Montreal Protocol are having a major effect on the fluorochemical blowing agent market, fueling competition from nonfluorinated alternatives. These factors will contribute to a modest drop in blowing agent demand through 2013, although South Korea's substantial foamed plastics industry will ensure that this sector remains a prominent market for fluorochemicals through the forecast period. More positive is the outlook for fluorochemical components, which will grow

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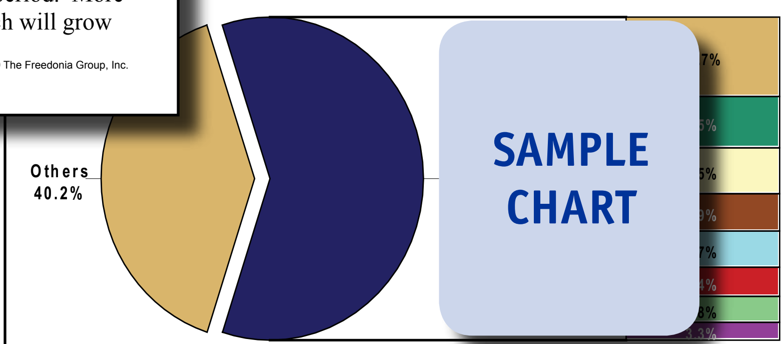
CHART VIII-1

D FLUOROCHEMICALS MARKET SHARE, 2008
($12.6 billion)



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Sample Profile, Table & Forecast

TABLE VI-15

SOUTH KOREA -- FLUOROCHEMICAL DEMAND BY TYPE
(000 metric tons)

Item	1998	2003	2008	2013	2018
Population (million persons)					.5
kg fluorochemical/capita					56
Fluorochemical Demand					77
Fluorocarbons:					44
HCFCs					28
HFCs					16
Other					eg
Inorganics & Specialties					17
Fluoropolymers					16

SAMPLE TABLE

COMPANY PROFILES

Air Products and Chemicals Incorporated
7201 Hamilton Boulevard
Allentown, PA 18195
610-481-4911
http://www.airproducts.com

Sales: $ Y 2008)
Geograp JS 47%, Canada 2%,
Latin An
Employr

Key Proc erived products

SAMPLE PROFILE

Air dustrial gases and related eq chemicals. The Company operates in four continuing segments: Tonnage Gases, Merchant Gases, Electronics and Performance Materials, and Equipment and Energy. In July 2008, Air Products and Chemicals agreed to hold for sale the US operations of its former Healthcare segment, listing the segment as a discontinued operation and transferring its remaining European operations to the Merchant Gases segment. Portions of the segment were sold to various companies in 2008 and 2009, with the remaining operations expected to be sold by the end of September 2009.

The Company participates in the world fluorochemical industry through the $4.2 billion Merchant Gases segment, and the $2.2 billion Electronics and Performance Materials segment. Among the gases and other products manufactured through these two segments are fluorine (F2)-based gases and fluorine-derived products.

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"Demand for fluorochemicals in South Korea is expected to increase 3.4 percent per year through 2013 to 65,000 metric tons. South Korea's fluorochemical market is dominated by fluorocarbons, which in 2008 accounted for over two-thirds of overall demand due to the country's large refrigerant and blowing agent markets. For the past decade, CFC consumption in South Korea has trended downward in accordance with Montreal Protocol regulations, although CFCs still account for a portion of demand. South Korea is also ..."
--Section VI, pg. 215

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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, nobel 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

Fluoropolymers

US demand for fluoropolymers will rise 4.5% annually through 2013. Gains will be driven in part by a turnaround in key markets such as motor vehicles and wire and cable, and rising demand in fast-growing emerging markets such as advanced batteries, fuel cells and photovoltaic modules. PTFE will remain the largest type while fluoroelastomers will grow the fastest. This study analyzes the $1.4 billion US fluoropolymer industry, with forecasts for 2013 and 2018. It also evaluates company market share and profiles industry players.

#2496 .... 05/2009..................... $4600

Industrial Gases

Total US industrial gas demand, including some captive consumption, will grow 4.9% annually through 2013. The petroleum and natural gas industry will remain the dominant and fastest growing market, driven by the massive amounts of hydrogen needed to produce cleaner-burning fuels from increasingly impure crude oil, as required by law. This study analyzes the $14.3 billion US industrial gas industry, with forecasts for 2013 and 2018 by market and product. It also evaluates market share and profiles industry players.

#2460 .... 03/2009..................... $4700

World Commercial Refrigeration Equipment

Global demand for commercial refrigeration equipment will rise 4.6% annually through 2012. Developing nations will register the strongest gains, especially those in Latin America and Asia. The US will remain the largest market, as replacement demand continues to create opportunities. This study analyzes the $23.4 billion global commercial refrigeration equipment industry, with forecasts for 2012 and 2017 by product, world region and for 27 countries. It also evaluates market share and profiles industry players.

#2414 .... 10/2008..................... $5700

World Industrial Gases

Global industrial gas demand will rise 6.9% yearly through 2011. The developing regions of Asia/Pacific, Latin America, Eastern Europe and Africa/Mideast will continue growing at above average rates. Metals production and fabrication will remain the largest market, while the medical/health care market grows the fastest. This study analyzes the $26.4 billion world industrial gas industry, with forecasts for 2011 and 2016 by type, market, world region and for 15 countries. It also evaluates market share and profiles major players.

#2318 .... 04/2008..................... $5500

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