



[CLICK TO VIEW](#)

[Table of Contents 2](#)

[List of Tables & Charts 3](#)

[Study Overview 4](#)

[Sample Text, Table & Chart 5](#)

[Sample Profile, Table & Forecast 6](#)

[Order Form 7](#)

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Powder Coatings

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

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Table of Contents

EXECUTIVE SUMMARY

MARKET ENVIRONMENT

General	4
Macroeconomic Overview	5
Demographic Outlook	9
Personal Consumption Expenditures	12
Manufacturing Sector Outlook	14
Historical Market Trends	17
Environmental & Regulatory Considerations	20
The Environmental Protection Agency... ..	20
The Occupational Safety & Health Administration	22
World Powder Coatings Demand	22

RAW MATERIALS & TECHNOLOGY

General	25
Raw Materials	26
Resins	27
Thermosetting Resins	28
Thermoplastic Resins	31
Pigments	31
Additives	33
Crosslinking Agents	33
Flow Control Additives	34
Photoinitiators	35
Other Additives	35
Manufacturing	37
Application Technology	38
Electrostatic Deposition	40
Fluidized Bed	42
Curing Ovens	42

OVERVIEW

General	44
Industrial Coatings Overview	46
Industrial Coating Types	48
Industrial Coating Formulations	51
Advantages & Disadvantages of Powder Coatings	53
Pricing Trends	57

PRODUCTS

General	60
---------------	----

Thermoset Powder Coatings	63
Performance Characteristics of Major Thermosets	66
Epoxies	68
Epoxy/Polyester Hybrids	71
Polyesters	73
Polyurethanes	76
Acrylic	79
Silicone	80
Suppliers of Thermoset Powder Coatings	82
Thermoplastic Powder Coatings	83
Performance Characteristics of Major Thermoplastics	85
Polyvinyl Chloride	87
Nylon	90
Other Thermoplastic Powder Coatings	92
Ethylene Acrylic Acid Copolymer	93
Fluoropolymer	93
Polyethylene	94
Polypropylene	95
Thermoplastic Polyester	95
Suppliers of Thermoplastic Powder Coatings	96

MARKETS

General	98
Motor Vehicles	100
Motor Vehicle Overview	101
Powder Coatings Demand	104
Exterior Applications	107
Advantages	110
Disadvantages	110
Engine & Mechanical Applications ..	111
Interior Applications	112
Appliances & Housewares	113
Appliances & Housewares Overview	113
Powder Coatings Demand	115
Major Appliances	118
Small Appliances & Related Equipment	119
Housewares & Fixtures	120
Furniture	120
Furniture Industry Overview	121
Powder Coatings Demand	123
Industrial Machinery	125
Machinery Overview	126
Powder Coatings Demand	127

Lawn & Garden Equipment	130
Lawn & Garden Equipment Overview ...	130
Powder Coatings Demand	132
Construction Materials	134
Construction Overview	135
Powder Coatings Demand	138
Residential Building Applications ...	141
Nonresidential Building Applications	142
Other Markets	143
Sporting Goods & Recreational Equipment	144
Sporting Goods & Recreational Equipment Overview	145
Powder Coatings Demand	146
Electrical & Electronic Equipment	148
Electrical & Electronic Equipment Overview	149
Powder Coatings Demand	151
All Other Markets	153

INDUSTRY STRUCTURE

General	155
Market Share	156
Acquisitions, Divestitures & Industry Restructuring	162
Distribution	165
Marketing & Competitive Strategies	166
Research & Development	169

COMPANY PROFILES

Akzo Nobel	172
AmeriCoats	175
Arkema SA	176
BASF SE	178
Bayer AG	179
Cardinal Industrial Finishes	181
Cytec Industries	182
Diamond Vogel Paints	183
DIC Corporation	185
Dow Chemical	187
DuPont (EI) de Nemours	191
Eastman Chemical	196
Environmental Coatings	197
Evonik Industries	198

(continued on next page)

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Table of Contents

COMPANY PROFILES

(continued from previous page)

Henkel AG.....	200
Hexion Specialty Chemicals.....	201
Huntsman Corporation.....	203
Mitsui Chemicals.....	205
Nippon Paint.....	206
Nordson Corporation.....	207
Pioneer Powder.....	209
Powder Technology.....	210
PPG Industries.....	212
Protech/Oxyplast Group.....	214
Reichhold Incorporated.....	217
Royal DSM.....	218
RPM International.....	220
Sherwin-Williams Company.....	222
Spraylat Corporation.....	224
Thermoclad Company.....	225
3M Company.....	227
TIGER Coatings.....	228
Valspar Corporation.....	230
Weilburger Coatings.....	232
Whitford Corporation.....	233
Additional Companies Mentioned in Study.....	235

List of Tables/Charts

EXECUTIVE SUMMARY

1 Summary Table.....	3
----------------------	---

MARKET ENVIRONMENT

1 Macroeconomic Indicators.....	9
2 Population & Households.....	12
3 Personal Consumption Expenditures..	14
4 Manufacturers' Shipments.....	17
5 Powder Coatings Demand, 1998-2008	19
Cht Powder Coatings Demand, 1998-2008	19
Cht World Powder Coatings Demand by Region, 2008.....	24

RAW MATERIALS & TECHNOLOGY

1 Raw Material Demand in Powder Coatings.....	27
--	----

OVERVIEW

1 Industrial Coatings Demand.....	48
2 Industrial Coatings Demand by Type..	50
3 Industrial Coatings Demand by Formulation.....	53
4 Advantages & Disadvantages of Powder Coatings.....	56
5 Powder Coatings Prices.....	59

PRODUCTS

1 Powder Coatings Demand by Type.....	63
2 Thermoset Powder Coatings Demand by Type & Market.....	65
3 Comparable Performance Characteristics of Major Thermoset Powder Coatings.....	68
4 Epoxy Powder Coatings Demand by Market & Application.....	71
5 Epoxy/Polyester Hybrid Powder Coatings Demand by Market.....	73
6 Polyester Powder Coatings Demand by Market.....	76
7 Polyurethane Powder Coatings Demand by Market.....	78
8 Acrylic Powder Coatings Demand.....	80
9 Silicone Powder Coatings Demand.....	81
Cht US Thermoset Powder Coatings Sales by Company, 2008.....	83
10 Thermoplastic Powder Coatings Demand by Type & Market.....	85
11 Comparable Performance Characteristics of Major Thermoplastic Powder Coatings.....	87
12 Polyvinyl Chloride Powder Coatings Demand.....	90
13 Nylon Powder Coatings Demand.....	92
14 Other Thermoplastic Powder Coatings Demand.....	93
Cht US Thermoplastic Powder Coatings Sales by Company, 2008.....	97

MARKETS

1 Powder Coatings Demand by Market	100
2 Motor Vehicle Indicators.....	104
3 Motor Vehicle Market for Powder Coatings by Type & Application.....	107
4 Appliance Shipments.....	115
5 Appliances & Housewares Market for Powder Coatings by Type & Application.....	117
6 Furniture Shipments.....	122
7 Furniture Market for Powder Coatings by Type.....	125
8 Machinery Shipments.....	127
9 Industrial Machinery Market for Powder Coatings by Type.....	129
10 Power Lawn & Garden Equipment Shipments.....	131
11 Lawn & Garden Equipment Market for Powder Coatings by Type.....	134
12 Construction Expenditures.....	138
13 Construction Materials Market for Powder Coatings by Type & Sector	141
14 Other Markets for Powder Coatings by Type & Market.....	144
15 Sporting Goods & Recreational Equipment Shipments.....	146
16 Sporting Goods & Recreational Equipment Market for Powder Coatings.....	148
17 Electrical & Electronic Equipment Shipments.....	151
18 Electrical & Electronic Equipment Market for Powder Coatings by Application.....	153
19 All Other Markets for Powder Coatings.....	154

INDUSTRY STRUCTURE

1 US Powder Coatings Sales by Company, 2008.....	158
Cht US Powder Coatings Sales by Company, 2008.....	159
2 Selected Acquisitions & Divestitures	164
3 Research & Development Spending Patterns, 2006-2008: Selected Powder Coating Suppliers.....	171

Powder coatings demand in the US will continue to achieve gains above the overall paint and coatings market average through 2013, taking share from competing coating products.

US demand to grow 3.5% annually through 2013

US powder coatings demand is projected to expand 3.5 percent annually to 445 million pounds in 2013. Volume growth is expected to significantly outpace the gains of the 2003-2008 period as durable goods shipments are forecast to rebound from a weak 2008 base. Powder coatings will continue to achieve gains above the overall paint and coatings market average, taking share from competing products. However, advances in powder coatings market value will continue to be restrained by downward pricing pressure, as overcapacity in the industry persists and the manufacture of durable goods shifts to developing regions, particularly Asia.

Motor vehicle market to provide strongest gains

Powder coatings are primarily used in durable goods markets such as motor vehicles, appliances and housewares, furniture, industrial machinery, and lawn and garden equipment. The motor vehicle market will provide the strongest gains through 2013 based largely on an expected rebound in motor vehicle output following the significant declines of the 2003-2008 period. Product developments which will allow for greater use of powder coatings in exterior applications will also offer opportunities for growth in this market. On the other hand, demand in appliances and housewares will be restrained by market



maturity, as well as continued declines in appliance shipments, which reflect the inroads that imports have made in both small and major household appliances. The furniture market will benefit from an improving outlook for furniture production, as well as from the development of powder coatings that can be used on wood and plastic substrates.

Thermoset powder coatings dominate industry

Thermoset powder coatings (e.g., epoxy, epoxy/polyester hybrid, polyurethane, polyester, acrylic and silicone) represent the vast majority of the overall powder coatings market, accounting for 91 percent of demand in 2008. Epoxy is the

single largest product type in the thermoset segment, favored for its excellent corrosion and chemical resistance in interior applications. Epoxy/polyester hybrids are also well-represented and combine the best characteristics of straight epoxy and polyester powder coatings. The superior resistance to weathering demonstrated by polyester and polyurethane powder coating formulations makes these the products of choice for exterior applications. Smaller volume types include acrylic and silicone coatings, which are expected to experience above-average growth from relatively small 2008 bases, with silicone benefitting from its use in high heat applications.

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Sample Text, Table & Chart

MARKETS

Powder Coatings Demand

Demand for powder coatings in the furniture market is advanced by the use of powder coatings in million pounds. Despite the fact that the furniture market is expected to generally forecast a decline, demand for powder coatings will improve. Performance coatings, particularly in the furniture market, are expected to continue to grow. Demand for powder coatings is expected to continue to grow from the furniture market, particularly in the furniture market. Demand for powder coatings is expected to continue to grow from the furniture market, particularly in the furniture market. Demand for powder coatings is expected to continue to grow from the furniture market, particularly in the furniture market.

As is the case in other markets such as appliances and garden equipment, the furniture market will be affected by the continued penetration of plastics into fixtures, furniture components and whole units (such as patio chairs and tables). Though some plastics may be coated, the vast majority are not, and therefore powder coatings demand will continue to be related primarily to metal furniture components. However, demand will benefit from developments in powder coating technology which will allow the coating of plastic and wood substrates, including medium-density fiberboard. Powders are widely used for commercial furniture, though these coatings are also finding new interior residential applications, such as wire mesh shelving designed for pantries and closets.

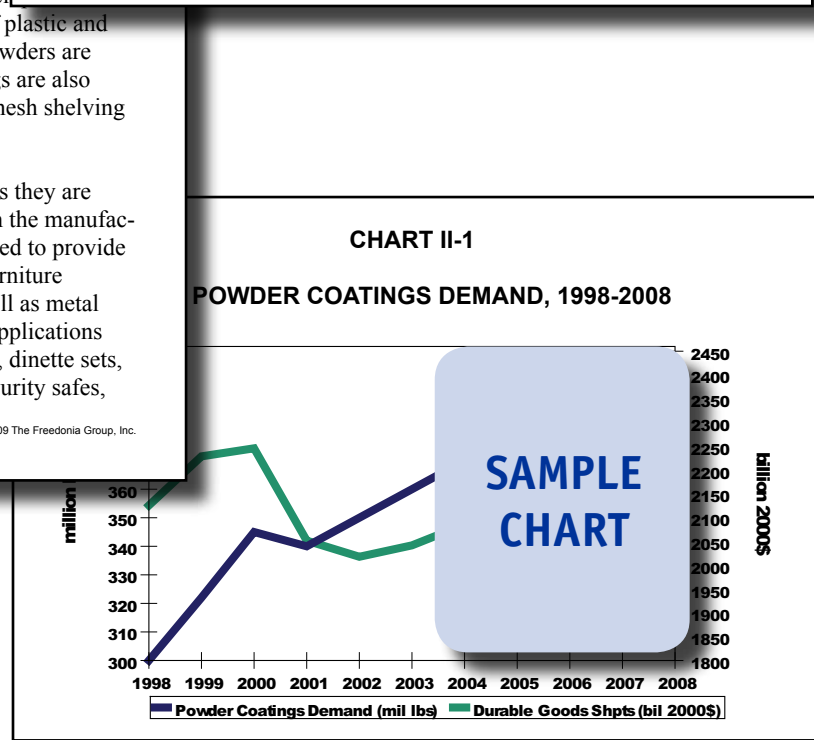
Powders are commonly used to coat metal furniture, as they are ideally suited to finish the complex shapes typically used in the manufacture of tubular outdoor furniture, where powders can be used to provide attractive, durable and weather resistant coatings. Other furniture applications include metal home and office furniture, as well as metal components used in nearly all types of furniture. Typical applications include bedframes, bedsprings, benches, chair bases, desks, dinette sets, filing cabinets, hospital beds, partitions, patio furniture, security safes,

TABLE VI-5
APPLIANCES & HOUSEWARES MARKET FOR POWDER COATINGS BY TYPE & APPLICATION
 (million pounds)

Item	1998	2003	2008	2013	2018
Major Appliance Shipments (mil units) 37					8
lbs coating/unit					
Powder Coatings in Appliances					
By Type:					
Epoxyes					
Epoxy/Polyester Hybrids					
Thermoplastics					
Other Powder Coatings					
By Application:					
Major Appliances					
Small Appliances & Related Equip					
Housewares & Fixtures					
\$/lb					
Powder Coatings in Appliances (mil \$)					
% appliances & housewares					
Total Powder Coatings Demand (mil \$)					

SAMPLE TEXT

SAMPLE TABLE

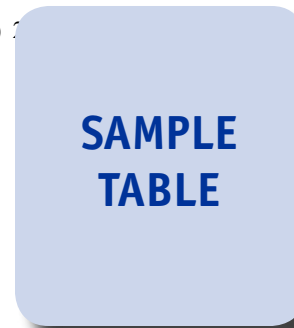


SAMPLE CHART

Sample Profile, Table & Forecast

TABLE V-5
EPOXY/POLYESTER HYBRID POWDER COATINGS
DEMAND BY MARKET
(million pounds)

Item	1998	2003	2008	2013	2018
Durable Goods Shipments (bil 2000\$) 2 lbs coating/mil \$ durables				95	10
Epoxy/Polyester Hybrid PC Demand				17	
Motor Vehicles				50	
Appliances & Housewares				22	
Furniture				7	
Other Markets				38	
\$/lb				55	
Epoxy/Polyester Hybrid (mil \$)				10	



COMPANY PROFILES

Diamond Vogel Paints
 1110 Albany Place Southeast
 Orange City, IA 51041
 712-737-8880
 http://www.dvpaints.com

Annual Sales:
 Employment:

Key Products: epoxy and hybrid powder

SAMPLE PROFILE

Diamond Vogel Paints manufactures heavy-duty protective and industrial coatings, and interior and exterior architectural paints. The Company is privately held.

The Company is active in the US powder coatings industry through the manufacture and sale of industrial powder coatings sold under the PERIDIUM tradename. These coatings are available in triglycidyl isocyanurate polyester, urethane, epoxy and hybrid varieties. Diamond Vogel Paints utilizes a proprietary manufacturing technology in the production of PERIDIUM powder coatings that allows for a tightly controlled particle size distribution that results in optimized first pass transfer, edge coverage and smoothness. Many of these coatings feature enhanced corrosion resistance and are suitable for use in appliance, agricultural equipment, construction equipment, electrical enclosure, lawn furniture, automotive underhood and other applications.

A representative product is the PERIDIUM series of epoxy/polyester hybrid powder coatings. These coatings feature enhanced adhesion and resistance properties, making them a suitable economical alternative to pure epoxy powder coatings. Specific end uses for these

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“Demand for epoxy/polyester hybrid powder coatings is expected to climb 3.9 percent per year to 98 million pounds in 2013, with a market value of \$250 million. Demand will continue to be supported by the supplantation of other coating systems, including traditional liquid coatings, as well as straight epoxy powder coatings. However, hybrid powder coatings are unsuitable for most outdoor applications due to their epoxy component. This will serve to limit overall gains in demand.”
 --Section V, pg. 71

OTHER STUDIES

Metal Finishing Chemicals

US metal finishing chemicals demand will reach \$2.2 billion in 2013, driven in part by more demand for higher-value and safer alternative chemicals. Plating chemicals will remain dominant while the proprietary additives and other chemical segment will grow the fastest. The key transportation equipment market will record the most rapid gains. This study analyzes the US metal finishing chemical industry, with forecasts for 2013 and 2018 by product, substrate and market. It also evaluates market share and profiles industry players.

#2533 07/2009..... \$4600

Wood Protection Coatings & Preservatives

US demand for wood protection products is forecast to increase 2.2% per year through 2013. Higher value formulations will continue to gain market share, primarily due to environmental and performance issues. Interior wood applications will achieve the best gains, promoted by a rebound in both housing starts and remodeling. This study analyzes the \$2.7 billion US wood protection industry, with forecasts for 2013 and 2018 by product, application and market. It also evaluates market share and profiles industry players.

#2509 07/2009..... \$4800

Printing Inks

US printing ink demand will reach \$4.8 billion in 2013, supported by shifts toward more environmentally friendly ink formulations and digital inks. Among raw materials, additives and colorants will benefit from demand for better performing printing inks with brighter colors. Packaging will remain the largest and fastest-growing market. This study analyzes the US printing ink industry, with forecasts for 2013 and 2018 by raw material, product and market. It also evaluates company market share and profiles industry players.

#2462 02/2009..... \$4700

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

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

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