INDUSTRY MARKET RESEARCH FOR BUSINESS LEADERS, STRATEGISTS, DECISION MAKERS

Specialty Films

US Industry Study with Forecasts for **2017 & 2022**

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Specialty Films

US Industry Study with Forecasts for ***2017 & 2022***

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MARKET ENVIRONMENT

FUNCTIONS

RESINS

MARKETS

INDUSTRY STRUCTURE

Specialty Films

US Industry Study with Forecasts for ***2017 & 2022***

Gains will be driven by the increasing need for high-performance plastic films that offer barrier properties, mechanical strength, and chemical resistance in packaging applications.

US demand to rise 5.2% annually through 2017

US demand for specialty films is forecast to advance 5.2 percent per year to $8.0 billion in 2017. Gains will be driven by the increasing need for high-performance plastic films that offer barrier properties, mechanical strength, and chemical resistance in packaging applications. Increasing use in small, but high-growth market areas, such as photovoltaic modules and biodegradable packaging, will also bolster advances, as will a rebound in the construction market.

US Specialty Films Demand, 2017
($8 billion)

Barrier films to remain key in packaging market

Packaging is the largest market for specialty films, accounting for two-thirds of overall demand. Growth in the dominant barrier film segment will be driven by the rapid rise in the use of vacuum packaging, oxygen scavenging, and low-oxygen case-ready technologies in meat packaging, as these technologies utilize high-barrier films to maintain an optimum atmosphere inside the package. Meat packaging opportunities will spur advances for films produced from ethylene vinyl alcohol, nylon, and polyvinylidene chloride resins. Demand for barrier films will also benefit from the increased use of specialty barrier films in pharmaceutical blister packaging applications, particularly fluoropolymer and nylon films in multilayer constructions. Additionally, improved metallized films are replacing film/foil and film/paper laminates in barrier packaging applications.

A rebound in building construction will benefit safety and security films, as double-digit annual growth in both residential and nonresidential building spending will boost demand for films used in windows for safety and security as well as light control. While the use of interlayer films in laminated motor vehicle glass is mature and offers limited opportunities for growth, better prospects are expected for safety and security films used in buildings. Light control films will also benefit from the rebound in construction activity as both residential and commercial customers seek to reduce energy costs. Demand for light control films will be further boosted by emerging applications in the fast-growing photovoltaic market and continuing usage in motor vehicle windows.

Biodegradable, water soluble films to grow fastest

The most rapid growth in specialty films, albeit from a small base, will occur in biodegradable and water soluble films, which will benefit as the technologies improve and new applications are developed. Demand for biodegradable films, which are used to produce compostable packaging and bags for organic waste, will benefit from environmental concerns and the increased commercialization of bio-based polymers. Water soluble film demand will receive a boost from the introduction of pharmaceutical and health products in dissolvable thin film form, as well as the introduction of edible, water soluble food packaging.

Sample Text, Table & Chart

TABLE V-3

PACKAGING MARKETS FOR SPECIALTY FILMS
(million dollars)

Item	2002	2007	2012	2017	2022
Packaging Shipments (bil $)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
$ films/000$ pkg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Specialty Packaging Films Demand	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
By Segment:					
Food Packaging	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Meat, Poultry, & Seafood	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Snacks	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Produce	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Other Food	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Nonfood Packaging	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Pharmaceutical & Medical	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Other Nonfood	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
By Function:					
Barrier Films	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Microporous Films	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Other Products	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
% packaging	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Specialty Films Demand	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

SAMPLE TABLE

FUNCTIONS

Corrosion Barrier Films

Demand for corrosion barrier specialty films is forecast ... 80 million in 2017, an acceleration ... t trailing the barrier film average. ... olatile corrosion inhibitor (VCI) c... gases. These films are used to pr... d storage from damage caused by ... ompounds such as chlorine, sulfur ... will reflect an acceleration in the pr... product market, which is the leading consumer of corrosion b... However, growth will be constrained by the increasing use o... in lieu of metal products. Suppliers of VCI packaging includ... Protective Packaging, Cortec, Daubert Industries, and Northe... nologies International.

SAMPLE TEXT

Corrosion inhibitor films accounted for nearly three-qua... of corrosion barrier films in 2012. These films are impregnate... compounds that contain molecules that form a protective lay... surfaces by vaporizing from the film or paper at very low concentrations. When exposed to metal, the molecules are attracted to the charged surfaces of the metal and form a barrier to prevent oxidation, thereby protecting goods from corrosion. Products packaged with corrosion inhibitor films do not require additional cleaning when ready for use.

Gains in corrosion scavenger film will improve from the performance of the 2007-2012 period based on a recovery in manufa... activity from a depressed base due to the 2007-2009 recessio... tion, advances will outpace those for corrosion inhibitor film... of inroads into typical VCI packaging applications due to en... and efficiency advantages achieved through eliminating the ... removal of preservation oils. Leading markets for corrosion ... scavenger packaging include primary metal products, militar...

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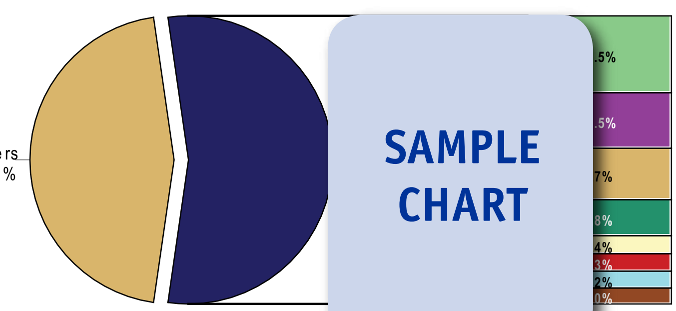
Copyright 2013

CHART VI-1

SPECIALTY FILMS MARKET SHARE
($6.2 billion, 2012)



SAMPLE CHART

Sample Profile, Table & Forecast

TABLE IV-2

SPECIALTY POLYOLEFIN FILMS DEMAND
(million dollars)

Item	2002	2007	2012	2017	2022
Packaging Shipments (bil $)					
$ films/000$ pkg					
Specialty Polyolefin Films Demand					
By Function:					
Barrier Films					
Microporous Films					
Other Specialty Films					
By Resin:					
Polypropylene					
Polyethylene & Other Resins					
% polyolefins					
Specialty Films Demand					

SAMPLE TABLE

COMPANY PROFILES

Raven Industries Incorporated
205 East 6th Street
Sioux Falls, SD 57117
605-336-
http://w

Sales: $
Employ

SAMPLE PROFILE

Key Pro… …ction films; and industrial … …hylene vinyl alcohol, metalloc…

Raven Industries makes reinforced plastic sheeting, electronic precision agriculture products, electronics manufacturing services, and specialty aerostats and sewn products. The Company operates through three segments: Engineered Films, Applied Technology, and Aerostar.

The Company participates in the US specialty films industry through the Engineered Films segment, which had sales of $142 million and employed 240 in FY 2013. The Engineered Films segment, which operates via the Raven Engineered Films division (Sioux Falls, South Dakota), is engaged in the manufacture of specialty film products for geosynthetic, construction, industrial, and other applications.

The division's specialty film products for the geosynthetic market consist of geomembranes used as liners and covers in pond, landfill cap, canal lining, irrigation reservoir, secondary containment, and other applications. Raven Engineered Films' geomembranes are available through the ABSOLUTE BARRIER, CANVEX, DURA-SKRIM, and RUFCO product lines. For example, ABSOLUTE BARRIER products are seven layer coextruded geomembranes made from flexible, linear

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"Specialty films are used in barrier functions to produce lightweight packages that protect the contents from air, light, and moisture. Gains will be driven by rising snack food shipments along with the trend toward more individually wrapped products and expanded offerings of snacks in single-serving sizes for increased convenience and portability as well as portion control. Additionally, the rising ..."
--Section V, pg. 119

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Other Studies

World Bioplastics

Global demand for biobased and biodegradable plastics will rise 19 percent per year to 960,000 metric tons in 2017. Starch-based resins and polylactic acid (PLA) will remain the leading products, while the most rapid gains in demand are expected for biobased commodity resins such as polyethylene and polypropylene. This study analyzes the 408,000 metric ton world bioplastic industry, with forecasts for 2017 and 2022 by product, market, world region, and for 17 countries. The study also evaluates company market share and profiles industry players.

#3089 .... November 2013 .... $6300

Fiber-Reinforced Plastic Composites

US demand for fiber-reinforced plastic (FRP) composites will climb 4.7 percent annually to 4.3 billion pounds in 2017, valued at $22.9 billion. Motor vehicles will remain the largest market while construction will grow the fastest as it rebounds from the 2007-2012 period. Both thermoset and thermoplastic FRP composites will grow in line with the average. This study analyzes the 3.5 billion pound US FRP composites industry, with forecasts for 2017 and 2022 by fiber, product and market. The study also evaluates company market share and profiles industry players.

#3092 .... October 2013 .... $5100

High-Temperature Plastics

US demand for high-temperature plastics will rise 5.8 percent per year to $3.1 billion in 2017. Advances in the key fluoropolymers segment will trail the average growth rate, but these resins will continue to offer the best opportunities for growth. Polyketones, polyphenylene sulfide, and sulfone polymers will achieve the fastest gains from smaller bases. This study analyzes the $2.4 billion US high-temperature plastics industry, with forecasts for 2017 and 2022 by resin and market. The study also evaluates company market share and profiles industry players.

#3053 .... June 2013 .... $5100

Specialty Plastic Additives

US demand for specialty plastic additives is forecast to rise 4.5 percent annually to 4.0 billion pounds in 2017, driven by a rebound in the key construction market. Processing aids and property modifiers are expected to be the fastest growing types, while plasticizers will remain the largest segment. PVC will remain the dominant resin and will grow the fastest. This study analyzes the 3.2 billion pound US plastic additives industry, with forecasts for 2017 and 2022 by type and resin. The study also evaluates company market share and profiles major producers.

#3016 .... April 2013 .... $4900

Custom Thermoplastic Compounding

US demand for custom compounded thermoplastics is forecast to rise 5.0 percent annually to 11.4 billion pounds in 2017, valued at $14.3 billion (resin content only). Construction will offer the best market prospects, as the industry recovers from recession. PVC represents the largest and fastest growing compounded thermoplastic. This study analyzes the 8.9 billion pound US custom compounded thermoplastic industry, with forecasts for 2017 and 2022 by resin and market. The study also evaluates company market share and profiles industry players.

#2991 .... February 2013 .... $5100

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