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Specialty Films

US Industry Study with Forecasts for **2012 & 2017**

Study #2452 | January 2009 | \$4700 | 263 pages

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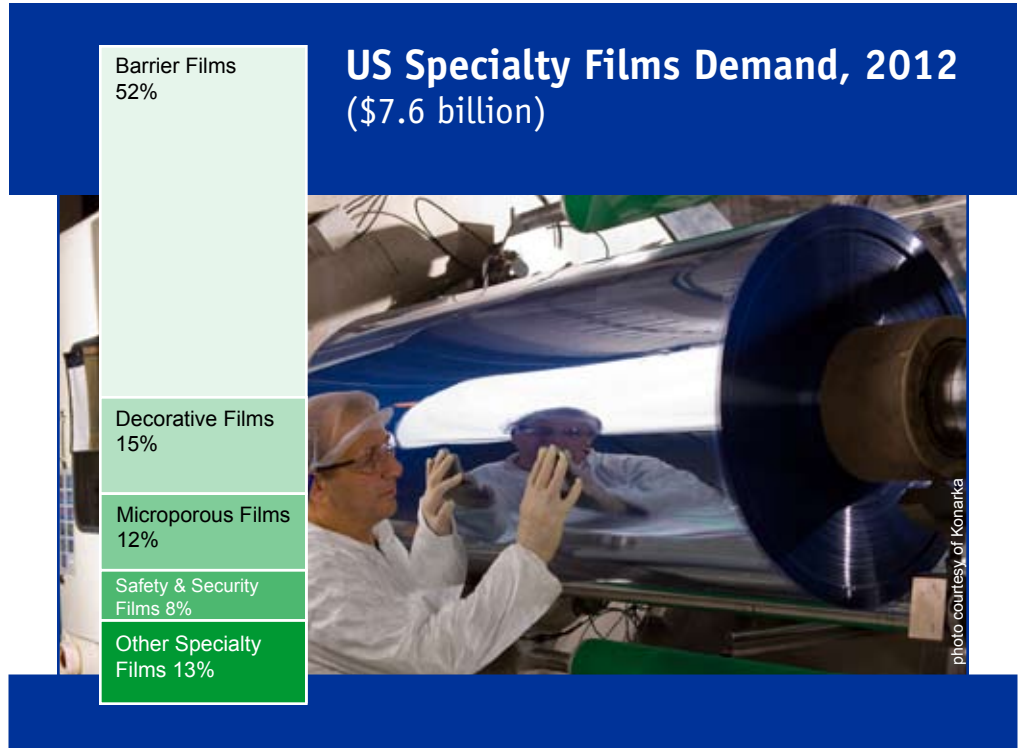
Gains will be driven in part by high-growth specialty film markets such as photovoltaic modules, biodegradable bags and modified atmosphere food packaging that can extend shelf life.

US demand to grow 4.7% annually through 2012

Demand for specialty films is forecast to advance 4.7 percent per year to \$7.6 billion in 2012. Gains will be driven by the increasing need for high-performance plastic films that offer such benefits as barrier properties, mechanical strength and chemical resistance in packaging and construction applications. The penetration of specialty films into new, high-growth market areas such as photovoltaic modules and biodegradable bags will also bolster advances in demand. The rapid adoption of modified atmosphere packaging, which can extend the shelf life of packaged food products, will fuel further gains, as will improved processing methods in film coating and metallization.

Barrier films to remain largest segment

Barrier films will remain the largest segment of the specialty films industry, accounting for over half of total demand in 2012. Above-average growth will be driven by the rapid rise of case-ready technology in meat packaging, which requires barrier films to maintain an optimum atmosphere inside the package. These opportunities will spur advances for plastic films produced from ethylene vinyl alcohol, nylon and polyvinylidene chloride resins. Gains 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, improvements in metallization technologies are allowing metallized films to become a cost-effective replacement for film/foil and film/paper laminates in food packaging applications.

Safety and security films and light control films are two closely related groups of specialty films, as both are applied to glass substrates and are used in motor vehicles and buildings. While the use of polyvinyl butyral interlayer films in laminated vehicle glass is highly mature and offers minimal opportunities for growth, better prospects are expected for light control films. These films can reduce energy costs in buildings by controlling the transmission of light through windows. Demand for light

control films will also benefit from emerging applications in the fast-growing photovoltaic module market.

Biodegradable, water-soluble films to pace gains

The most rapid growth in specialty films will occur in biodegradable and water soluble films, which will see double-digit gains from a small base. Demand for biodegradable films, which are used to produce compostable kitchen and lawn bags, will benefit from environmental concerns and increased commercialization of bio-based polymers. Water soluble film demand will receive a boost from the introduction of medicinal and health products in dissolvable thin film form.

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Sample Text, Table & Chart

PRODUCTS

Polyvinylidene Chloride Films

Consumption of polyvinylidene chloride (PVDC) specialty films is forecast to increase 5 million in 2009, but is expected to fall below the average for 2009-2017. Gains will be offset in part by a loss of share to high barrier specialty films such as EVOH and newer, more cost-effective polypropylene films. PVDC provides higher strength and moisture resistance than polypropylene-coated films. PVDC films are used extensively in packaging applications where superior barrier properties and moisture resistance are required. These films are, however, more expensive than most other films (though less costly than EVOH), and are therefore used in applications where high barrier properties are required.

Polyvinylidene chloride's properties include high barriers to moisture, flavors, odors and gases (oxygen and carbon dioxide), with uses encompassing mono- and multilayer films, as well as coatings. PVDC is frequently coextruded with less costly polyethylene and polypropylene films. PVDC film also provides good barriers for liquids (including food oils and organic solvents) and has good chemical resistance. Films can be dyed or pigmented to provide a wide range of colors. The material's oxygen permeability is unaffected by the presence of moisture.

PVDC is mainly used in packaging applications as a coating layer and in coextrusions with nonbarrier films. Meat and related products applications will remain dominant based on continued requirements for high oxygen and moisture barriers in meat packaging. Prospects in meat applications will, however, be constrained by flat to declining per capita red meat consumption based on health and nutritional concerns. At the same time, opportunities for PVDC are anticipated in laminations and coextrusions for retort pouches for processed meat products. In addition, a favorable outlook for seafood consumption will support gains for

**SAMPLE
TEXT**

TABLE IV-3

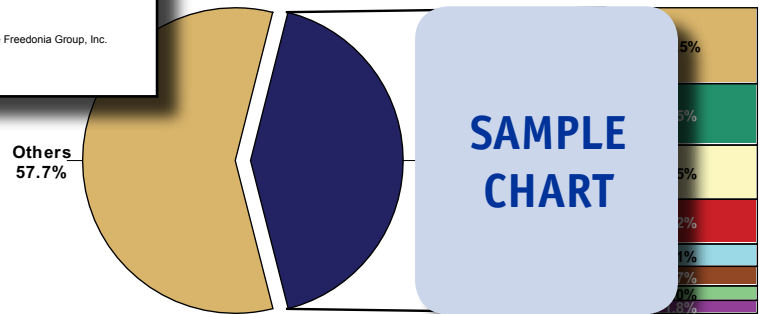
OXYGEN & GAS BARRIER FILMS DEMAND
(million dollars)

Item	1997	2002	2007	2012	2017
Packaging Shipments (bil \$)	910	1000	1100	1200	1300
\$ films/000\$ pkg	1.0	1.0	1.0	1.0	1.0
Oxygen & Gas Barrier Films Demand 1	180	200	220	240	260
Food Packaging:					
Barrier Resins	95	105	115	125	135
Metallized & Coated Films	45	50	55	60	65
Pharmaceuticals & Chemicals	35	40	45	50	55
Other Uses	55	60	65	70	75
% oxygen & gas Barrier Films Demand	8	20	20	20	20
	1640	2100	2650	3350	4970

**SAMPLE
TABLE**

CHART VI-1

SPECIALTY FILMS MARKET SHARE, 2007
(\$6.0 billion)



**SAMPLE
CHART**

Sample Profile, Table & Forecast

COMPANY PROFILES

Cortec Corporation

4119 White Bear Parkway
 St. Paul, MN 55119
 651-429-1100
<http://www.cortec.com>

Annual Sales
 Employment:

Key Products: specialty films for products protection, and fl...

Cortec Corporation is a privately held supplier of environmentally friendly corrosion control, packaging, and aerosol chemical products. It operates through several divisions and businesses, including the Advanced Films, Coated Products and Spray Technologies divisions.

The Company participates in the US specialty films industry through the Advanced Films division (Cambridge, Minnesota). Through this division, Cortec manufactures a range of high-performance, custom, flexible films, including monolayer and coextruded types. Among these products are specialty films that offer such high-performance characteristics as corrosion protection, flame retardancy, ultraviolet (UV) stability and static dissipative properties. These films can be used to make packaging materials for industrial, food and other applications; electronic products protection materials; and protection films for use in flat-rolled steel manufacturing processes. Specific products include VPCI-125 low-density polyethylene shrink film, which features corrosion protection and static dissipative properties; and VPCI-129 barrier films for steel protection in high temperature and high humidity environments. Additional specialty films are sold under the COR-PAK, CORR-LAM, MILCORR, CORSHRINK and other



TABLE V-10

CONSTRUCTION MARKETS FOR SPECIALTY FILMS (million dollars)

Item	1997	2002	2007	2012	2017
Bldg Construction Expenditures (bil \$)	570.0	600.0	650.0	700.0	750.0
\$ films/000\$ construction	0.3	0.3	0.3	0.3	0.3
Specialty Films in Construction	15	15	15	15	15
By Segment:					
Cabinets	0	0	0	0	0
Windows	5	5	5	5	5
Vapor Barriers	5	5	5	5	5
Other Construction	5	5	5	5	5
By Function:					
Decorative Films	5	5	5	5	5
Safety & Security Films	0	0	0	0	0
Barrier Films	0	0	0	0	0
Other Films	0	0	0	0	0
% construction	9	9	9	9	9
Specialty Films Demand	50	50	50	50	50



"Demand for specialty films in kitchen and bathroom cabinets is projected to expand 3.2 percent per year to \$480 million in 2012. Growth will be driven by increasing use in remodeling and renovation applications. In addition, the trend toward more cabinet space per home will also benefit demand. However, a slowdown in residential improvement and repair activity coupled with generally sluggish demand for PVC decorative laminates will inhibit gains."

--Section V, pg. 133

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OTHER STUDIES

Green Packaging

This study analyzes the US market for environmentally friendly and sustainable packaging. It presents historical recycled content and reusable packaging demand data (1998, 2003, 2008) and forecasts for 2013 and 2018 by material (paper, metal, glass, plastic, biodegradable plastic) and market (e.g., food, beverage, consumer products, shipping, foodservice). The study also discusses source reduction and recycling activity, competitive strategies and merger and acquisition trends, and profiles industry competitors.

#2471 03/2009..... \$4700

World Membranes

This study analyzes the global market for membrane materials used in separation applications. It presents historical demand data (1997, 2002, 2007) and forecasts for 2012 and 2017 by type (e.g., microfiltration, reverse osmosis, ultrafiltration), market (e.g., water treatment, wastewater treatment, food and beverage processing, pharmaceutical and medical), world region and major country. The study also considers market environmental trends and indicators, evaluates company market share and profiles industry players.

#2468 03/2009..... \$5700

Natural Polymers

US demand for natural polymers will grow 7.1% annually through 2012. Best opportunities are anticipated in packaging uses based on the increased availability and cost competitiveness of novel polymers such as polylactic acid (PLA). Cellulose ether will remain the largest segment while starch and fermentation products jump at double-digit rates. This study analyzes the \$2.9 billion US natural polymer industry, with forecasts for 2012 and 2017 by market and product. It also evaluates company market share and profiles industry players.

#2422 11/2008..... \$4600

Biodegradable Plastic

US demand for biodegradable plastic will grow 15.5% yearly through 2012. Gains will be driven by escalating costs for petroleum-based resins and growing initiatives that favor renewable resources. Polyester-based and polylactic acid resins will grow the fastest, while starch-based types remain the largest segment. This study analyzes the 350 million pound US biodegradable plastic industry, with forecasts for 2012 and 2017 by type and market. It also details market share and profiles industry players.

#2387 08/2008..... \$4600

Plastic Film

US demand for plastic film will reach 16 billion pounds in 2012. Gains will reflect film's cost, performance and source reduction advantages over rigid packaging, as well as opportunities in products such as pouches and modified atmosphere packaging. LDPE will remain the top film, while the lower volume degradable plastic segment leads gains. This study analyzes the \$25.4 billion US plastic film industry, with forecasts for 2012 and 2017 by type, application and market. It also evaluates market share and profiles industry players.

#2371 07/2008..... \$4700

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