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# Specialty Films

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US Industry Study with Forecasts to **2010 & 2015**

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*The rapid adoption of technologies such as modified atmosphere packaging and case-ready packaging will help fuel advances, as will improved methods in film coating and metallization.*

## US demand to grow 4.8% annually through 2010

Demand for specialty films is forecast to advance 4.8 percent per year to \$7.3 billion in 2010. Gains will be driven by increasing performance requirements in a number of markets, necessitating the use of higher-value specialty materials in films. Additionally, the rapid adoption of technologies such as modified atmosphere packaging and case-ready packaging will fuel advances, as will improved processing methods in film coating and metallization. Demand will also benefit from emerging products and markets for specialty films, such as biodegradable trash bags and soluble oral delivery products. However, further gains will be inhibited by market maturity or weak demand for end-use products in applications such as PVC decorative films, breathable films for personal care products and interlayer films for motor vehicle windows.

## Barrier films to remain largest product segment

Barrier films will remain the largest segment of the specialty films industry, accounting for over half of total demand in 2010. 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. Additionally, improve-

Barrier Films  
51%

Decorative Films  
15%

Breathable Films  
11%

Safety & Security  
Films 8%

Other Specialty  
Films  
15%

## US Specialty Film Demand, 2010 (\$7.3 billion)



photo courtesy of 3M

ments in metallization technologies are allowing metallized films to become a cost-effective replacement for film/foil and film/paper laminates in food packaging applications.

## Conductive, biodegradable, and water soluble films to grow the fastest

Demand for conductive films will rise at a strong pace through 2010, fueled by a resurgent US electronics industry. In particular, the market for flexible printed circuit boards is expected to rebound from declines posted during the 2000-2005 period, which will benefit demand for polyimide and polyester films used in their manufacture. In addition, demand

for conductive and other films used in electronics will benefit from the increasing move from conventional cathode ray tube displays to flat panel technologies, which utilize a variety of polarizing, optical enhancement and protective films.

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

#### Polyvinyl Butyral Films

Demand for specialty polyvinyl butyral (PVB) films is forecast to increase in 2010. PVB film is used in laminated glass for automotive side and rear windows, and in motor vehicle side and rear windows. Demand for PVB film in laminated glass in the 2000-2005 period. However, the market will restrain further through the forecast period.

**SAMPLE  
TEXT**

Polyvinyl butyral films are extremely tough films used in the manufacture of laminated glass. A sheet of PVB film is sandwiched between two layers of glass, forming a composite structure which provides far better penetration resistance than regular glass. Laminated glass is used in automotive windshields to prevent occupant ejection in collisions and to reduce the incidence of flying shards of broken glass, which is held by the film. Laminated glass is also used in architectural applications, primarily to increase security in commercial and government buildings. Growth in demand will benefit from the increasing use of PVB films for laminated glass used in motor vehicle side and rear windows. However, the use of PVB films in side and rear windows is expected to remain limited to higher-end models of vehicles and is unlikely to become standard in all automotive windows in the near future.

The CPFilms division of Solutia is the world's leading producer of PVB films, which it manufactures under the names SAFLEX and VANCEVA. DuPont also sells PVB films under the BUTACITE name. In January 2006, Japan-based Sekisui Chemical announced that it was building a PVB plant in Winchester, Kentucky. The plant, scheduled to open in the fall of 2007, will have enough capacity to produce PVB for six million vehicles annually.

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TABLE IV-3

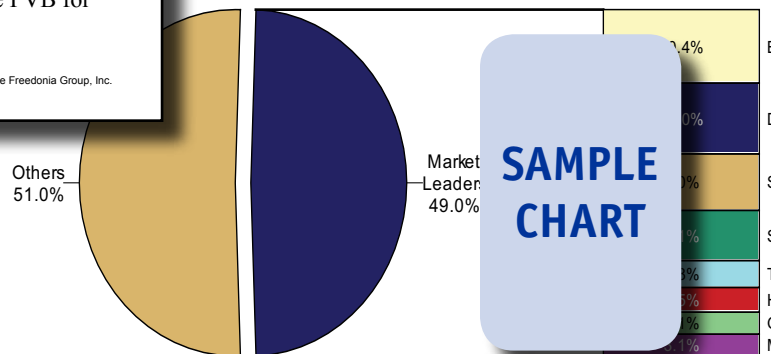
### OXYGEN & GAS BARRIER FILMS DEMAND (million dollars)

Item	1995	2000	2005	2010	2015
Packaging Shipments (bil \$)					
\$ films/000\$ pkg					
Oxygen & Gas Barrier Film Demand					
Food Packaging:					
Barrier Resins					
Metallized & Coated Film					
Pharmaceuticals & Chemicals					
Other Uses					
% oxygen & gas Barrier Films Demand					

**SAMPLE  
TABLE**

CHART VI-1

### SPECIALTY FILMS MARKET SHARE, 2005 (\$5.8 billion)



**SAMPLE  
CHART**

## Sample Profile, Table & Forecast

### COMPANY PROFILES

#### Film Technologies International Incorporated

2630 South Fairfield Avenue

St. Petersburg, FL 34607

727-327-1111

<http://www.fti.com>

Annual Sales: \$100 million

Employees: 100

Key Products: Solar control window films

**SAMPLE  
PROFILE**

Film Technologies International Incorporated (FTI) designs and manufactures solar control, safety and security window films for homes, commercial and public buildings, and motor vehicles. The privately held company's films are sold worldwide through a network of independent wholesale distributors.

The Company is active in the specialty film industry through the manufacture and sale of SUN-GARD and ELITE solar control window films and GLASS-GARD and SAFE-GARD safety and security window films. FTI manufactures these polyester products at its headquarters complex in St. Petersburg, Florida. These films are sold via a worldwide distribution network.

SUN-GARD solar control polyester films are made with dyes and/or micro-thin layers of embedded metals to reduce the amount of solar heat and glare that is transmitted through window glass. These films are designed for both automotive and architectural applications. SUN-GARD films are engineered to prevent the transmission of between 95 and 99 percent of the sun's ultraviolet (UV) rays in order to protect floors, carpets, furnishings, merchandise and vehicle interiors. This effect also affords privacy benefits and reduces the risk of skin problems

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TABLE V-3

### PACKAGING MARKETS FOR SPECIALTY FILMS (million dollars)

Item	1995	2000	2005	2010	2015
Packaging Shipments (bil \$)	90.4	104.0	110.8	126.5	144.0
\$ films/000\$ pkg	16.7	19.9	25.8	29.7	34.0
Specialty Packaging Films Demand					200
By Segment:					
Meat, Poultry & Seafood					30
Snacks					30
Pharmaceutical & Medical					55
Produce					30
Other Packaging					25
By Function:					
Barrier Films					55
Breathable Films					30
Other Products					15
% packaging Specialty Films Demand					240

**SAMPLE  
TABLE**

"Demand for specialty films in meat packaging markets is forecast to expand 6.1 percent annually to \$1.5 billion in 2010. Growth will derive from increased use of barrier films to create lighter, more attractive and more convenient packages which also extend product shelf life. Innovations such as shelf stable tuna pouches and case-ready packaging for fresh poultry and red meats will continue to propel demand for specialty films. Value demand will also be fueled by ..."

--Section V, pg. 106

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**Metalloocene & Single-Site Polymers**

US metallocene and single-site polymer demand will grow 17.7% annually through 2011. mLLDPE will remain dominant while mHDPE and polypropylene will lead gains. Film and sheet will stay the most common application, but will be outpaced by injection and blow molding uses. This study analyzes the \$2.4 billion US metallocene and single-site polymer industry, with forecasts for 2011 and 2016 by polymer, application and market. It also evaluates company market share and profiles leading competitors.

#2218 ..... 07/2007..... \$4400

**World Pressure Sensitive Tapes**

The \$20 billion global pressure sensitive tape industry will expand over 5% annually through 2010. Gains will be buoyed by a firming global economy, which will boost key markets such as motor vehicles and corrugated packaging. This study analyzes the world tape industry to 2010 and 2015 by type (e.g., carton sealing, masking, medical, electric, double-sided); material (e.g., polypropylene, PVC, paper); world region and key country. It also details market share and profiles major suppliers and converters.

#2169 ..... 03/2007..... \$5500

**Natural Polymers**

US natural polymer demand will grow 5.9% annually through 2010 based on increased food production and opportunities in packaging and medical uses. Starch and fermentation products will grow the fastest and surpass cellulose ethers as the dominant type by 2015. The food and beverage market will remain dominant while medical uses will lead gains. The study analyzes the \$2.7 billion US natural polymer industry to 2010 and 2015 by product and market. It also details market share and profiles major players.

#2156 ..... 01/2007..... \$4300

**Degradable Plastic**

US degradable plastic demand will grow 16.8% annually through 2010 as these products become more price competitive and continue to benefit from various sustainable resource initiatives. Biodegradable/compostable plastic will remain dominant and grow the fastest, led by polyactic acid (PLA). Packaging will lead market gains. This study analyzes the \$335 million US degradable plastic industry to 2010 and 2015 by type and market. It also evaluates company market share and profiles leading industry players.

#2107 ..... 09/2006..... \$4400

**Produce Packaging**

US produce packaging demand will grow 4.6% per year through 2010. Growth will be fueled by rising demand for fresh-cut, ready-to-eat produce, which favors more value-added packaging than bulk produce. Corrugated boxes will remain the leading format while plastic containers and bags and liners will grow faster. The study analyzes the \$3.4 billion US produce packaging industry to 2010 and 2015 by type, application and end user. It also evaluates company market share and profiles major competitors.

#2094 ..... 08/2006..... \$4400

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