Fluoropolymers

US Industry Study with Forecasts for 2019 & 2024

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US Fluoropolymer Demand, 2019
($2.3 billion)

PVDF & PVF to be fastest growing fluoropolymers

Demand for polyvinylidene fluoride (PVDF) and polyvinyl fluoride (PVF) will grow at the fastest rates through 2019. PVDF growth will benefit from a strong rebound in architectural coatings, as well as increasing use in emerging markets such as advanced batteries for electric vehicles. PVF demand will rise rapidly from a small base, mainly fueled by stellar growth in demand for photovoltaic modules. The large polytetrafluoroethylene (PTFE) segment will see good growth prospects in chemical processing and industrial filtration.

Construction markets to offer best opportunities

The construction and electrical and electronics markets will provide the fastest growth in fluoropolymer demand. Electrical and electronics will overtake industrial processing as the leading market for fluoropolymers; this shift is in large part due to rapidly increasing demand for photovoltaic modules as interest in alternative energy sources such as solar power swells due to efforts to reduce dependence on fossil fuels. Additionally, a surge in US lithium-ion battery production from Tesla’s Gigafactory will boost fluoropolymer demand over the long term. The construction market will exhibit the fastest growth of all markets, spurred by a rebound in the nonresidential construction segment where fluoropolymers find greatest use. More moderate advances are expected for the industrial processing and transportation equipment markets, restrained by a slowdown in motor vehicle and machinery output.

Advances in demand will result from continued expansion in industrial output and construction activity, as well as from strong growth in emerging markets such as photovoltaic modules and advanced batteries.
Applications

Films

Demand for fluoropolymers used in film and membrane applications is projected to rise at an annual rate of 7.8% from 2014 to 2019, with a volume of over 34 million pounds in 2019. Advances within this segment are faster than those of any other fluoropolymer application, fueled by the expansion of key end-use markets. These include photovoltaic modules, healthcare, and filtration materials. The demand for PVF films in this segment excludes films used in industrial applications (e.g., tank linings), which are included under coating and lining applications. A number of different fluoropolymers are employed in film applications, including PVF, PTFE, PVDF, FEP, and other types such as ECTFE, ETFE, and PCTFE.

PVF film demand has grown strongly over the past decade and will continue to do so going forward. In the electronics market, these films are employed as backsheet materials for photovoltaic modules. This has been the primary driver of demand growth for PVF resins. PVF films can also be used in the aerospace market to reduce the flammability of aircraft interiors. Additionally, they are utilized in the production of various interior components such as ceiling and sidewall decorative panels, window shades, stow bins, cargo bin liners, and aircraft wire markers. Due to the increased resistance to scuffing and fading provided by these films, aircraft maintenance needs -- and therefore costs -- are reduced. Similarly, the material can be applied to truck trailers to protect the side panels and roof, resist dirt and other contaminants, and eliminate the need for repainting. In the construction market, PVF film can be used in the production of ceiling and acoustical tiles, fiberglass-reinforced plastic (FRP) panels, formed or flat metal roofing panels, canopies, awnings, stadium domes, skylights, and cable wrap. In the industrial market, PVF film is typically used as pipe jacketing. Chemours (previously DuPont) produces PVF film under the TEDLAR trade name.

Table III-1

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<th>2014</th>
<th>2019</th>
<th>2024</th>
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<td>lb fluoropolymer/mil $ mfg</td>
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Source: The Freedonia Group, Inc.
Fluoropolymers, a Freedonia study, presents historical data (2004, 2009, 2014) plus forecasts (2019, 2024) by product, application and market. The study also considers market environment factors, assesses industry structure, evaluates company market share and profiles 35 competitors in the US fluoropolymer industry.
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This study analyzes the world TPE industry. It presents historical demand data (2004, 2009 and 2014) and forecasts (2019 and 2024) by market (e.g., motor vehicles; consumer goods; asphalt and roofing; adhesives, sealants and coatings; industrial products; product (e.g., SPCs, thermoplastic polyolefins, POEs, thermoplastic polyurethanes, thermoplastic vulcanizates, copolyester elastomers), world region and major country. The study also considers market environment factors, evaluates company market share and profiles industry players.

#3226............. September 2015.............$6500

World Silicones
World demand for silicones will rise 5.7 percent annually to $19.3 billion in 2019. The Asia/Pacific region will continue to be the strongest source of additional silicone demand, with electronics remaining its largest outlet. Construction will be the fastest growing market worldwide, with silicones gels among the fastest growing product types. This study examines the $14.8 billion world silicones industry, with forecasts for 2019 and 2024 by market and product for 6 world regions and 15 countries. The study also evaluates company market share and profiles industry participants.

#3277............. May 2015.............$6400

Engineering Plastics
Demand for engineering plastics in the US is expected to rise 2.6 percent per year to 5.1 billion pounds in 2019. Nylon, ABS, and polycarbonate will remain the three largest engineering plastics by volume, with nylon the fastest growing of the three. Smaller-volume engineering plastics such as polyphenylene sulfide, sulfone polymers, and fluoropolymers will grow the fastest. This study analyzes the 4.5 billion pound US engineering plastic industry, with forecasts for 2019 and 2024 by resin and market. The study also evaluates company market share and profiles industry players.

#3242.............April 2015.............$5300

World Emulsion Polymers
Global demand for emulsion polymers will rise 4.6 percent annually to 12.6 million metric tons in 2018. The Asia/Pacific region will remain the largest and fastest-growing market. The paint and coatings segment will remain the largest and fastest-growing application, followed by adhesives in size and growth rate. This study analyzes the 10 million metric ton world emulsion polymer industry, with forecasts for 2018 and 2023 by market, polymer, world region, and for 16 countries. The study also evaluates company market share and profiles industry participants.

#3216.............October 2014.............$6200

World Polyethylene
Global polyethylene demand will rise 4.0 percent yearly to 99.6 million metric tons in 2018. The Asia/Pacific region will remain the largest and fastest growing market, driven by China. Following a decade of decline, North America will add nine million tons of production capacity through 2023. This study analyzes the 82 million metric ton world polyethylene industry, with capacity, production and demand forecasts for 2018 and 2023 by product, market, world region, and for 27 countries. The study also evaluates company market share and profiles industry players.

#3210.............October 2014.............$6200

About The Freedonia Group
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