

# **High-Performance Films: The U.S. Market**

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## **Abstracts**

### Report Scope:

High-performance films can be defined in any of several ways: by volume, price, performance, end-use markets, resin types, or a combination of two or more of these characteristics.

For this study, high-performance films are defined as thin-gauge, mostly extruded or solution-cast polymer sheets that generally meet at least one of the following criteria: pricing above commodity film levels, continuous-use temperature above commodity plastics, and end-uses requiring technical capability and thickness at or below 30 mils. These are films that are primarily selected for their performance characteristics, not their price. Emphasis is on those markets and products where opportunities are the greatest.

Therefore, the distinguishing characteristics of high-performance films are as follows -

Relatively expensive.

Thin gauge (compared to sheet).

Possess special performance characteristics.

Significant applications outside of packaging.

High-performance films generally are fabricated (or converted) in relatively small volumes (at least compared to commodity films). Much of their value is created after the film is extruded.



The focal point is on high-performance resins and their chemistries, including the following

Polyesters, primarily PET. (Note: PET is used interchangeably with "polyester" throughout this report.) Polyolefin-based specialty film resins. Nylons (more properly and chemically called polyamides). Polycarbonates (PCs). Bioplastics, a newer group of plastics. Fluoropolymers. Acrylic films based on PMMA chemistry. Polyimides (PIs). Cyclic olefin copolymers (COCs). Polyethylene naphthalate (PEN). Liquid crystal polymers (LCPs). Polysulfones. Polyetherimides.

We also introduce some newer film resins whose markets at present are too small to measure with any precision. These include polyketones, benzocyclobutenes and polyacetals.

Basic polyolefins, such as polyethylene (PE) and polypropylene (PP), are not included in our scope since they are true commodities used in commodity film applications like grocery and garbage bags. Also excluded are other commodity resins like polyvinyl chloride (PVC) and polystyrene.



Specialty polyolefin-based films are included, primarily and particularly when multilayer construction is involved. These specialty films are ethylene vinyl alcohol (EVOH), ionomers, polyvinylidene chloride (PVdC), polyvinyl alcohol (PVOH) and polymethyl pentene (PMP).

Fluoropolymer films are an important focus of this report. They include the following -

Polytetrafluoroethylene (PTFE).

Polyvinyl fluoride (PVF).

Fluorinated ethylene-propylene (FEP).

Polychlorotrifluoroethylene (PCTFE).

Polyvinylidene fluoride (PVdF).

Perfluoroalkoxy (PFA).

Ethylene tetrafluoroethylene (ETFE).

Ethylene chlorotrifluoroethylene (ECTFE).

Although geographic scope of this report is the U.S. market, it also includes some international discussion, for example of foreign-owned firms that are active in these markets.

The market estimates are by resin volumes in millions of pounds, and these estimates are rounded to the nearest million pounds. The numbers are rounded to millions since market estimates, which integrate so many products and applications, many of which are similar and can overlap, are by nature just that—estimates—and thus not precise beyond millions of pounds, if that. Many applications markets for particular films are small, less than a million pounds, but precision here is not greater than that for larger numbers, and numbers are round up to 1 million those estimated volumes greater than a half-million. Also, compound annual growth rates (CAGRs) for table entries with small volumes may not agree exactly with the 2019 and 2025 volumes; this is again caused by rounding.



### Report Includes:

21 data tables and 10 additional tables

An overview of the U.S. market for high-performance films

Analyses of market trends with data from 2019, estimates for 2020 and projections of CAGRs through 2025

Identification of trends affecting high-performance polymer films and market analysis of the various applications

Explanation of the major drivers and regional dynamics of the high-performance films industry and a look at the recent developments and market investments

Highlights of current and future market potential and a detailed analysis of the current market trends, market size, and regulatory scenarios

Market share analysis of the leading suppliers of the industry and detailed company profiles of major players in the market, including BASF Corp., Dow Chemical Co., Honeywell International Inc., Mitsubishi Polyester Film Inc., Saint-Gobain Performance Plastics, and Toray Plastics (America) Inc.



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AJEDIUM FILMS

ALTUGLAS INTERNATIONAL

AMERICAN DURAFILM CO. INC.

ARKEMA INC.

BASF CORP.

BEMIS COMPANY INC.

BIAXIS PACKAGING SALES INC.

BERRY GLOBAL GROUP INC.

COORSTEK

COVESTRO LLC

DAIKIN AMERICA INC.

DEWAL INDUSTRIES INC.

DOW CHEMICAL CO.

**DUPONT** 

DUPONT TEIJIN FILMS U.S. LIMITED PARTNERSHIP

EASTMAN CHEMICAL CO.

EASTMAN KODAK CO.

**ENSINGER/PENN FIBRE** 



EVONIK CORP.

FILMQUEST GROUP INC.

FILMTECH CORP.

THE GRIFF NETWORK

HONEYWELL INTERNATIONAL INC.

INNOVIA FILMS INC.

INVISTA INC.

KANEKA TEXAS CORP.

KLOCKNER PENTAPLAST OF AMERICA INC.

KNF CORP.

KURARAY AMERICA INC.

M&Q PLASTIC CORP./M&Q PLASTIC PRODUCTS INC.

MITSUBISHI POLYESTER FILM INC.

MITSUI CHEMICALS AMERICA INC.

MULTIFILM PACKAGING CORP.

NORDSON EXTRUSION DIES INDUSTRIES LLC

PARKINSON TECHNOLOGIES INC.

PIEDMONT PLASTICS INC.

POLYONICS INC.

RMS PACKAGING/AURORA SPECIAL EFFECT FILMS

ROWLAND TECHNOLOGIES INC.

SABIC INNOVATIVE PLASTICS

SAINT-GOBAIN PERFORMANCE PLASTICS

SEKISUI SPECIALTY CHEMICALS AMERICA LLC

SKC INC.

SOARUS LLC

SOLIANT LLC/AKZO NOBEL

SOLUTIA PERFORMANCE FILMS

SPARTECH CORP./POLYONE DESIGNED STRUCTURES AND SOLUTIONS LLC

TRANSCONTINENTAL ADVANCED COATINGS

TEKNI-PLEX INC./TEKNI-FILMS

TOPAS ADVANCED POLYMERS INC.

TORAY PLASTICS (AMERICA) INC.

TREDEGAR FILM PRODUCTS CORP./TERPHANE

UBE AMERICA INC.

UNITIKA AMERICA CORP.

VICTREX USA INC.

WELCH FLUOROCARBON INC.

WESTLAKE PLASTICS



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