



# Teflon™ PFA 9724

## Molding and Extrusion Resin

## Product Information

For inventory control purposes, product name may be followed by an X.

Products labeled PFA 9724 and PFA 9724 X are equivalent, and all information in this document is applicable to both.

### Typical Applications

Teflon™ PFA 9724 is an ideal resin for applications involving compounding and compression molding, as well as extruded tubing and other profiles for hose, electrical insulators, and sleeving; industrial film and products made from film; and injection or compression molded articles requiring superior electrical, chemical, and thermal properties. Teflon™ PFA 9724 offers a slightly higher melt flow rate than Teflon™ PFA TE9725, providing greater processing ease.

### Description

Teflon™ PFA 9724 is a general-purpose fluoroplastic resin available as loosely compacted fluff. It is intended for use in special application processes in consultation with Chemours. Compared with other grades of Teflon™ PFA, its most unique features are a relatively high flow rate and properties that make it suitable for a variety of processes and demanding end uses, especially compounding and compression molding. Table 1 shows the typical property data for Teflon™ PFA 9724.

Teflon™ PFA 9724 is used when traditional extrusion and molding processes are required for producing products with the superior properties of a fluoroplastic resin. Compared to other thermoplastics, the high melt strength and thermal stability of Teflon™ PFA 9724 can be used to improve processing rates. Compared with other thermoplastics, Teflon™ PFA 9724 provides a superior balance and level of end-use properties at high service temperatures. Teflon™ PFA 9724 combines the processing ease of conventional thermoplastics with many properties similar to those of polytetrafluoroethylene.

Properly processed products made from neat Teflon™ PFA 9724 resin provide the superior properties characteristic of fluoroplastic resins: chemical inertness, exceptional dielectric properties, heat resistance, toughness and flexibility, low coefficient of friction, non-stick characteristics, negligible moisture absorption, low flammability, performance at temperature extremes, and excellent weather resistance.

In a flame situation, products of Teflon™ PFA 9724 resist ignition and do not promote flame spread. When ignited by flame from

other sources, their contribution of heat is very small and added at a slow rate with very little smoke.

### Processing

Teflon™ PFA 9724 can be processed by conventional melt extrusion, and by injection, compression, and transfer molding processes. High melt strength and heat stability permit the use of relatively large die openings and high temperature draw-down techniques that increase production rates. Reciprocating screw injection molding machines are preferred. Corrosion-resistant metals should be used in contact with molten fluoroplastic resin. Extruder barrel should be long, relative to diameter, to provide residence time for heating the resin to approximately 390 °C (730 °F). For more detailed processing information, including recommended draw-down ratios, consult your Chemours sales representative.

### Safety Precautions

WARNING! VAPORS CAN BE LIBERATED THAT MAY BE HAZARDOUS IF INHALED.

Before using Teflon™ PFA 9724 resin, refer to the Safety Data Sheet and the latest edition of "The Guide to the Safe Handling of Fluoropolymer Resins," published by The Society of the Plastics Industry, Inc. ([www.fluoropolymers.org](http://www.fluoropolymers.org)) or by PlasticsEurope ([www.plasticseurope.org](http://www.plasticseurope.org)). Open and use containers only in well-ventilated areas using local exhaust ventilation (LEV). Vapors and fumes liberated during hot processing of Teflon™ PFA 9724 should be exhausted completely from the work area. Contamination of tobacco with these polymers must be avoided. Vapors and fumes liberated during hot processing that are not properly exhausted, or from smoking tobacco or cigarettes contaminated with Teflon™ PFA 9724, may cause flu-like symptoms, such as chills, fever, and sore throat. This may not occur until several hours after exposure and will typically pass within about 24 hours. Mixtures with some finely divided metals, such as magnesium or aluminum, can be flammable or explosive under some conditions.

### Storage and Handling

The properties of Teflon™ PFA 9724 resin are not affected by storage time. Ambient storage conditions should be designed to avoid airborne contamination and water condensation on the resin when it is removed from containers.

### Freight Classifications

Teflon™ PFA 9724 resin is classified as "Plastics, Materials, Pellets"

### Packaging

Teflon™ PFA 9724 is available in various kilogram quantities; contact your Chemours sales representative for more information.



**Table 1: Typical Property Data for Teflon™ PFA 9724 Molding and Extrusion Resin**

| Property  | Test Method |                         | Unit          | Typical Value    |
|---|-------------|-------------------------|---------------|------------------|
| <b>GENERAL</b>                                      |             |                         |               |                  |
| Melt Flow Rate                                      | ISO 12086   | ASTM D3307              | g/10 min      | 12.0             |
| Melting Point                                       | —           | ASTM D4591              | °C (°F)       | 305 (581)        |
| Specific Gravity                                    | —           | ASTM D792               | —             | 2.15             |
| <b>MECHANICAL</b>                                   |             |                         |               |                  |
| Tensile Strength                                    | ISO 12086   | ASTM D3307              | MPa (psi)     |                  |
| 23 °C (73 °F)                                       |             |                         |               | 25 (3,600)       |
| Ultimate Elongation                                 | ISO 12086   | ASTM D3307              | %             |                  |
| 23 °C (73 °F)                                       |             |                         |               | 300              |
| Flexural Modulus                                    | ISO 178     | ASTM D790               | MPa (psi)     |                  |
| 23 °C (73 °F)                                       |             |                         |               | 590 (85,000)     |
| MIT Folding Endurance (0.20 mm, 8 mil film)         | —           | ASTM D2176 <sup>†</sup> | Cycles        | 15,000*          |
| Hardness Durometer                                  | ISO 868     | ASTM D2240              | —             | D55              |
| <b>ELECTRICAL</b>                                   |             |                         |               |                  |
| Dielectric Strength, Short Time, 0.25 mm (0.010 in) | IEC 243     | ASTM D149               | kV/mm (V/mil) | 80 (2,000)       |
| Dielectric Constant, 1 MHz (10 <sup>6</sup> Hz)     | IEC 250     | ASTM D150               | —             | 2.03             |
| Dissipation Factor, 1 MHz (10 <sup>6</sup> Hz)      | IEC 250     | ASTM D150               | —             | <0.0002          |
| Volume Resistivity                                  | ISO 1325    | ASTM D257               | ohm-cm        | 10 <sup>18</sup> |
| <b>OTHER</b>  |             |                         |               |                  |
| Water Absorption, 24 hr                             | —           | ASTM D570               | %             | <0.03            |
| Weather and Chemical Resistance                     | —           | —                       | —             | Outstanding      |
| Limiting Oxygen Index                               | ISO 4589    | ASTM D2863              | %             | >95              |
| Flammability Classification <sup>†</sup>            | —           | UL 94                   | —             | V-0              |

\* Depending on fabrication conditions

<sup>†</sup> Historical standard

\* These results are based on laboratory tests under controlled conditions and do not reflect performance under actual fire conditions; current rating is a typical theoretical value.

Note: Teflon™ PFA 9724 meets the requirements of ASTM D3307, Type I

Typical properties have been determined on the pelletized form of this product and are not suitable for specification purposes.

Statements or data regarding behavior in a flame situation are not intended to reflect hazards presented by this or any other material when under actual fire conditions.

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