

# PFA D450

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**Everflon™ Fluoropolymers**  
Aqueous Dispersion

## DESCRIPTION

Everflon™ PFA Dispersion D450 is an off-white aqueous perfluoroalkoxy (PFA) dispersion stabilized with a non-ionic surfactant. It is a general-purpose dispersion that can be used to impart some of the unique properties of PFA to end products that would be difficult to make using traditional melt extrusion processes. It can be used to coat or impregnate porous structures or to make thin films. It can be coated and melt bonded to polytetrafluoroethylene (PTFE) resin or used as a hot melt adhesive.

The PFA resin in Everflon™ PFA D450 is a melt flowable thermoplastic, providing superior properties typical of fluoroplastic resins: retention of properties after service at 260 °C (500 °F) and useful properties at -240 °C (-400 °F).

Everflon™ PFA Dispersion D450 aqueous dispersion provides:

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- Inertness to nearly all industrial chemicals and solvents
- Stability at high temperatures
- Excellent dielectric properties
- Excellent weatherability
- Excellent anti-stick properties



## DATA LIST

### Typical Property Data for Everflon™ FEP D50

#### Particle Size

ASTM D4441



0.25

μm

#### Solids Content

ASTM D4441

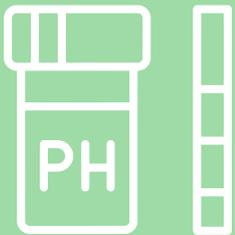


50

%

#### pH of Dispersion

ASTM D4441



9

#### Brookfield Viscosity

ASTM D2196



15 ~ 30

Mpa.s

#### Melt Flow Rate

ASTM D3307



8 ~ 12

g/10 min 5kg

#### Melting Point

ASTM D3307



310

°C

## TYPICAL APPLICATIONS

- Heat-sealable top coatings for PTFE-coated fabrics for belting, circuit boards, architectural fabrics, and electrical insulation
- Cast film for capacitor dielectrics or chemical barriers
- Hot melt adhesive for PTFE, PFA, and FEP parts
- Metal coatings

## PACKAGING

Everflon™ PFA Dispersion is packaged in 25L PE drum with 20kg (44lb) content and 1000L IBC drum with 1250kg (2750lb) content.

## PROCESSING GUIDE

Conventional coating techniques, such as dip, spray, spin, or roller coating, can be used for coating or impregnating high temperature materials with Everflon™ PFA D450. Thin coats, usually less than 5 µm (0.2 mil), are applied to prevent mud cracking as the coating dries. The water is normally removed at 120 °C [250 °F], followed by heating to remove the wetting agent (typically at 250–270 °C [482–518 °F]). Final consolidation is done above the 305 °C (581 °F) melt point. If the Everflon™ PFA D450 is being used as a top coat over a PTFE coated fabric or other parts, the coating must be heated to melt the PTFE (approximately 337 °C [639 °F]) to maximize adhesion. Prolonged heating above 370 °C (698 °F) should be avoided, as this could lead to thermal degradation of the Everflon™ PFA D450 polymer.

Other solid or liquid ingredients can be added to Everflon™ PFA D450 to provide specific processing or finished product behavior.

The details please visit [www.everflon.com](http://www.everflon.com) or refer Everflon Fluoropolymer Dispersions Application Guide.

## PRECAUTION

Equipment used to process at melt temperatures should be provided with local exhaust ventilation (LEV) to completely remove all fumes and vapors from the processing area. In addition, care should be exercised to avoid the contamination of cigarettes and other forms of smoking tobacco when using fluoroplastic resins. Before processing any fluoroplastics, read the Material Safety Data Sheet.



## STORAGE AND HANDLING

Ammonium hydroxide is used by Everflon™ to set the pH to 9.5–11.0 at the time of shipment. High ambient temperatures can deplete the ammonium hydroxide level and reduce pH.

Declining pH eventually favors bacterial growth, which causes odor and scum. The pH of opened containers should be measured and maintained between 9.5 and 11.0.

High-speed stirring, pumping, or any other violent agitation must be avoided to minimize sheared particles, coagulation, and foaming. Ideally, the dispersion should be conveyed by gravity from storage to processing stations.

Everflon™ PFA D450 must be properly stored to maximize the stability of the dispersion. The PFA particles will settle on prolonged standing and/or on prolonged heating— temperatures above 40 °C (104 °F) should be avoided.

The dispersion must be protected from freezing, which will cause irreversible settling. The optimum storage temperature range is 7–24 °C (45–75 °F). If dispersions are to be stored for extended periods, lower-temperature storage is desirable.

For optimal performance, Everflon™ PFA D450 should be gently mixed or rolled monthly and prior to use.

Storage and handling areas should be clean. Keep dispersion drums closed and clean to avoid both contamination and coagulation by drying at the liquid surface. High processing temperatures will cause even very small foreign particles to become visible and/or to make defects in finished products. Good housekeeping and careful handling are essential.



# ABOUT C&F AND EVERFLON FLUOROPOLYMERS

Everflon™ is brand of C&F Group dealing in fluoropolymers materials including PTFE.FEP.PFA.ETFE and PVDF. On the basis of Everflon, C&F also developing the fluoropolymer applications including tubing,coating and films.

More information could visit [www.everflon.com](http://www.everflon.com) or Everflon™ Fluoropolymers Introduction and C&F Chemicals Book



*For more information, visit [www.everflon.com](http://www.everflon.com)  
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