



Teflon™ PTFE DISP 35

Fluoroplastic Dispersion

Product Information

Description

Teflon™ PTFE DISP 35 is a milky white aqueous PTFE dispersion stabilized with an anionic dispersant. It is used for co-coagulation with various fillers to produce products with a range of strengths, porosities, and colors required for the application. The use of reinforcing agents can offer such advantages as improved resistance to cut-through and abrasion, increased dimensional and form stability, higher rate of heat dissipation and greater resistance to wear. When properly processed, the PTFE resin in Teflon™ PTFE DISP 35 exhibits the superior properties typical of the fluoroplastic resin: retention of properties after service at 260 °C (500 °F) and useful properties at -240 °C (-400 °F).

Teflon™ PTFE DISP 35 aqueous dispersion provides:

- Ability for co-coagulation
- Inertness to nearly all industrial chemicals and solvents
- Stability at high temperatures
- Excellent dielectric properties
- Lowest coefficient of friction of any solid material
- Non-stick characteristics

Typical Applications

Teflon™ PTFE DISP 35 is used in the preparation of blends for coating of high performance bearings and seals. Teflon™ PTFE DISP 35 can also be co-coagulated with special ingredients to be formed into specific end-uses, such as fuel cell electrodes.

Processing

Compositions of Teflon™ PTFE DISP 35 resins are reinforced with inorganic particles, such as graphite and powdered metals, by using various co-coagulation processes. Co-coagulation is accomplished by chemical addition or mechanical agitation. The viscosity and wetting power of the dispersion can be increased by adding wetting agents, such as anionic or nonionic dispersants.

Safety Precautions

Before processing any fluoroplastics, read the Material Safety Data Sheet, available upon request from our Customer Service Group at (844) 773-CHEM/2436 in the U.S. or (302) 773-1000 outside of the U.S. Also read the detailed information in the latest edition of the "Guide to the Safe Handling of Fluoropolymer Resins," published by the Fluoropolymers Division of The Society of the Plastics Industry (www.fluoropolymers.org) or by PlasticsEurope (www.plasticseurope.org).

Storage and Handling

Teflon™ PTFE DISP 35 must be properly stored to maximize the stability of the dispersion. The PTFE 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, Teflon™ PTFE DISP 35 should be gently mixed or rolled monthly and prior to use.

Ammonium hydroxide is used by Chemours 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.

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 make defects in finished products. Good housekeeping and careful handling are essential.

Packaging

Teflon™ PTFE DISP 35 is packaged in 30-L (8-gal) non-returnable drums and 1000-L (264-gal) recyclable

containers. Contact the local Chemours sales office for package sizes available in your specific geographic area.

Typical Property Data for Teflon™ PTFE DISP 35 Fluoroplastic Dispersion*

Property	Test Method		Unit	Typical Value
Solids Content (% PTFE by weight)	ASTM D4441	ISO 12086	%	35
Density of Dispersion (at 35% solids)	ASTM D4441	ISO 8962	g/cm ³	1.246
Surfactant Based on PTFE Solids	ASTM D4441	ISO 12086	%	2.2
Dispersion Particle Size, average diameter		Chemours	µm	0.245
pH of Dispersion	ASTM E70	ISO 1148		10
Brookfield Viscosity (at 25 °C [77 °F])	ASTM D2196	ISO 2555	MPa·s	25

Teflon™ PTFE DISP 35 meets the requirements of ASTM D4441-15, Type I, Grade 2, Class A.

*Typical properties are not suitable for specification purposes.

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