



Teflon™ PTFE DISP 30

Fluoroplastic Dispersion

Product Information

Product Description

Teflon™ PTFE DISP 30 is a milky white aqueous PTFE dispersion stabilized with a non-ionic surfactant. It is a general-purpose product, often preferred for coating and impregnating woven goods and for some coating processes. It imparts properties unique to PTFE resin to porous structures, as well as to base materials when used as an additive. When properly processed, the PTFE resin in Teflon™ PTFE DISP 30 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 30 aqueous dispersion provides:

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

Typical Applications

- Coated woven fiber-glass fabric used in architectural, high-performance industrial, food processing, and electronics applications
- Impregnated packing made from braided fibers for severe chemical and thermal service
- Cast film for capacitor dielectrics or chemical barriers
- Surface coatings for metallic or other high-temperature substrates
- Anti-drip additive for plastics
- Binder for battery anode or cathode matrixes

Food Contact Compliance

Properly processed products (sintered at high temperatures common to the industry) made from Teflon™ PTFE DISP 30 resin can qualify for use in contact with food in compliance

with FDA 21 CFR 177.1550 and European Regulation (EU) No. 10/2011. For details and information, please contact your Chemours representative.

Processing

Conventional dip or flow techniques can be used for coating or impregnating high temperature fabrics, fibers, and other products with Teflon™ PTFE DISP 30. A continuous PTFE resin coating on woven fabrics made of fiberglass, Nomex® aramid fiber, Kevlar® aramid fiber, or other high temperature-resistant fibers can be made by dip coating. Multiple passes may be used to build the desired thickness to produce a smooth, crack-free coating. Teflon™ PTFE DISP 30 is formulated to provide good rewetting on each pass. Each coating layer is usually dried to remove water (typically at 120 °C [250 °F]), baked to remove the wetting agent (typically at 270 °C [518 °F]), sometimes calendered, and finally heated above the crystalline melting point of the resin particles (approximately 337 °C [639 °F]).

Products utilizing entrained PTFE resin particles only for their lubricating or hydrophobic properties are dried and baked, but not heated above the crystalline melting point of the particles. For example, rope-like products, such as shaft packings, can be made from braided yarn in a variety of cross sections. The dispersion wets internal surfaces and promotes penetration of the small PTFE particles. The unmelted particles are sheared and retained as an impregnant, even when compressed in service and exposed to steam or chemicals. Unmelted particles can also improve flexibility and flex life in woven fabrics used in hot-gas filtration applications.

Other solid or liquid ingredients can be added to Teflon™ PTFE DISP 30 to provide specific processing or finished product behavior.

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 30 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 30 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 to make defects in finished products. Good housekeeping and careful handling are essential.

Packaging

Teflon™ PTFE DISP 30 is packaged in 30- and 114-L (8- and 30-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 30 Fluoroplastic Dispersion*

Property	Test Method		Unit	Typical Value
Solids Content (% PTFE by weight)	ASTM D4441	ISO 12086	%	60
Density of Dispersion (at 60% solids)	ASTM D4441	ISO 12086	g/cm ³	1.51
Surfactant Content on PTFE Solids	ASTM D4441	ISO 12086	%	6
Dispersion Particle Size, average diameter	Chemours	ISO 13321	µm	0.220
pH of Dispersion	ASTM E70	ISO 976		10
Brookfield Viscosity (at 25 °C [77 °F])	ASTM D2196	ISO 2555	MPa·s	25

Teflon™ PTFE DISP 30 meets the requirements of ASTM D4441-15, Type II, Grade 6, Class A.

*Typical properties are not suitable for specification purposes.

HOW TO USE THE TEFLON™ BRAND NAME WITH YOUR PRODUCT

Teflon™ is a registered trademark of Chemours for its brand of fluoroplastic resins, coatings, films, and dispersions. The Teflon™ brand name is licensed by Chemours in association with approved applications. Without a trademark license, customers may not identify their product with the Teflon™ brand name, as Chemours does not sell such offerings with the Teflon™ trademark. Unlicensed customers may refer to the Chemours product offering with only the Chemours name and product code number descriptor as Chemours sells its product offerings. There are no fair use rights or exhaustion of rights to use the Teflon™ trademark from buying from Chemours, a Chemours customer, or a distributor without a trademark license from Chemours.

If you are interested in applying for a trademark licensing agreement for the Teflon™ brand, please visit www.teflon.com/license

CAUTION: Do not use or resell Chemours materials in medical applications involving implantation in the human body or contact with internal bodily fluids or tissues unless agreed to by Seller in a written agreement covering such use. For further information, please contact your Chemours representative. For medical emergencies, spills, or other critical situations, call (866) 595-1473 within the United States. For those outside of the United States, call (302) 773-2000.

The information set forth herein is furnished free of charge and based on technical data that Chemours believes to be reliable. It is intended for use by persons having technical skill, at their own discretion and risk. The handling precaution information contained herein is given with the understanding that those using it will satisfy themselves that their particular conditions of use present no health or safety hazards. Because conditions of product use are outside our control, Chemours makes no warranties, express or implied, and assumes no liability in connection with any use of this information. As with any material, evaluation of any compound under end-use conditions prior to specification is essential. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents.

NO PART OF THIS MATERIAL MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM OR TRANSMITTED IN ANY FORM OR BY ANY MEANS ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE WITHOUT THE PRIOR WRITTEN PERMISSION OF CHEMOURS.

For more information, visit teflon.com/industrial

For sales and technical support contacts, visit teflon.com/industrialglobalsupport

© 2020 The Chemours Company FC, LLC. Teflon™ and any associated logos are trademarks or copyrights of The Chemours Company FC, LLC. Chemours™ and the Chemours Logo are trademarks of The Chemours Company.

Nomex® and Kevlar® are registered trademarks of E.I. du Pont de Nemours and Company or its affiliates.

Replaces: K-25654

C-10146 (3/20)