



# Teflon™

## Fluoroplastic Resins

### Teflon™ PTFE Fluoroplastic Resins at a Glance

## Product Information

Products made with Teflon™ fluoroplastic resins have exceptional resistance to high temperature, chemical reaction, corrosion, and stress-cracking.

The mechanical toughness, electrical, and low-friction properties of Teflon™ make it the preferred plastic for a host of applications and processing techniques.

#### Typical Properties of Teflon™ PTFE Dispersion Fluoroplastic Resins<sup>1, 2</sup>

Resin Type	Resin <sup>3</sup>	Solids Content (% PTFE by Weight)	Density of Dispersion (at 60% Solids) (g/cm <sup>3</sup> )	Surfactant Content on PTFE Solids (%)	Dispersion Particle Size (µm)	pH of Dispersion	Brookfield Viscosity at 25 °C (MPa·s)	Continuous Use Temperature (°C)	Select Features <sup>4</sup>
Teflon™ PTFE Dispersion	DISP 30	60	1.51	6	0.220	10	25	260	General-purpose dispersion; preferred for coating and impregnating woven goods
	DISP 33	61	1.52	6.5	0.220	10	25	260	Formulated to provide void-free coatings and enhanced surface smoothness, adhesion, gloss, and weldability
	DISP 35	35	1.25	2.2	0.245	10	25	260	Used for co-coagulation with various fillers to produce products with range of strengths, porosities, and colors
	DISP 40	60	1.51	6	0.230	10	25	260	Enhanced shear stability; can be used in coating and additive applications
	DISP 30LX	60	1.51	6	0.230	10	20	260	General-purpose dispersion; preferred for coating and impregnating woven goods; polymerized with non-fluorinated processing aid
	DISP 33LX	61	1.52	6.5	0.230	10	20	260	Formulated to provide void-free coatings and enhanced surface smoothness, adhesion, gloss, and weldability; polymerized with non-fluorinated processing aid
	DISP 40LX	60	1.51	6	0.230	10	20	260	Enhanced shear stability; can be used in coating and additive applications; polymerized with non-fluorinated processing aid

### Typical Properties of Teflon™ PTFE Fine Powder Fluoroplastic Resins<sup>1, 2</sup>

Resin Type	Resin <sup>3</sup>	Average Particle Size (µm)	Bulk Density (g/L)	Standard Specific Gravity	Thermal Instability Index	Extrusion Pressure (MPa [psi])	Initial Melting Peak Temperature (°C)	Second Melting Peak Temperature (°C)	Reduction Ratio Range	Select Features <sup>4</sup>
Teflon™ PTFE Fine Powder	6C X	475	490	2.176	<50	53.0 [7700] at 1600:1	344	327 ± 10	250–2000	Designed for processing at medium to high reduction ratios (250–2000). Particularly suitable for production of wire coating, wire jacketing, and tubing at fast sintering rates
	6CN X	400	470	2.185	<50	50.0 [7252] at 1600:1	341	327 ± 10	250–2000	Designed for processing at medium to high reduction ratios. Particularly suitable for production of wire coating, wire jacketing, and tubing at fast sintering rates
	60 X	500	500	2.185	<50	8.0 [1160] at 100:1	342	327 ± 10	10–300	Designed to facilitate the production of high-quality, low-density tape and beading
	62 X	480	495	2.152	<7	23.0 [3335] at 400:1	341	327 ± 10	100–600	Increased thermal stability, superior flex life, superior stress crack resistance, low permeability, and high clarity compared with other grades of PTFE fine powder
	62N X	480	495	2.148	<7	24.0 [3500] at 400:1	341	327 ± 10	100–600	Increased thermal stability, superior flex life, superior stress crack resistance, low permeability, and high clarity compared with other grades of PTFE fine powder
	62XT X	370	470	2.155	<7	38.5 [5584] at 1600:1	341	327 ± 10	400–1600	Increased thermal stability, superior flex life, superior stress crack resistance, low permeability, and high clarity compared with other grades of PTFE fine powder, as well as higher reduction ratios of 400–1600
	601 X	500	550	2.160	<50	9.0 [1300] at 100:1	342	327 ± 10	10–300	High molecular weight resin for unsintered stretched products and sintered products with high mechanical properties. Examples include small pore size filter membranes and gaskets
	602 X	550	550	2.172	<50	6.9 [1000] at 100:1	342	327 ± 10	10–300	Medium molecular weight resin for unsintered stretched products and sintered products with high mechanical properties. Applications include membrane applications with higher pore size and pipe liners
	605XT X	675	555	2.163	N/A	7.0 [1015] at 100:1	344	327 ± 10	10–300	Resin for unsintered stretched products and sintered products with high mechanical properties. Applications include membranes and pipe liners
	613A X	500	440	2.153	<50	27.6 [4000] at 100:1	342	327 ± 10	10–300	Designed for high-quality, low-density tape and beading
	640XT X	450	500	2.159	≤15	22.0 [3190] at 1600:1	344	327 ± 10	250–5000	High reduction ratio material for wire, cable, and tubing applications
	641XT X	400	475	2.166	<25	46.0 [6,670] at 2500:1	344	327 ± 10	250–5000	High reduction ratio material with increased extrusion line speed for wire, cable, and tubing applications
	650XT X	500	550	2.163	<20	8.8 [1276] at 100:1	344	327 ± 10	10–400	Resin for unsintered mono-axial and multidirectional stretched products and sintered products with high mechanical properties. Applications include membranes and gaskets
	669 X	450	520	2.167	N/A	7.5 [1090] at 100:1	344	327 ± 10	10–500	Designed for production of pipe liners and general tubing
	669N X	425	545	2.170	N/A	7.5 [1090] at 100:1	344	327 ± 10	10–500	Designed for production of pipe liners and general tubing
CFP 6000 X	500	460	2.183	<15	41.4 [6000] at 1600:1	342	327 ± 10	250–3000	Designed for wire coating, wire jacketing, and thin wall tubing	

## Typical Properties of Teflon™ PTFE Granular Fluoroplastic Resins<sup>1,2</sup>

Resin Type	Resin <sup>3</sup>	Average Particle Size (µm)	Bulk Density (g/L)	Standard Specific Gravity	Tensile Strength (MPa [psi])	Elongation at Break (%)	Initial Melting Peak Temperature (°C)	Second Melting Peak Temperature (°C)	Thermal Instability Index	Water Content (%)	Select Features <sup>4</sup>
Teflon™ PTFE Granular	7A X	38	460	2.16	48.3 [7000]	375	344 ± 10	327 ± 10	3	<0.04	Designed to be molded into shapes for skived films and sheets, gaskets, packings, mechanical seals, and similar products
	7C X	31	260	2.16	39.3 [5700]	350	342 ± 10	327 ± 10	3	<0.04	Used in applications where excellent flex life is required
	8A X	490	680	2.15	41.4 [6000]	330	342 ± 10	327 ± 10	8	<0.04	Resin designed for low preform pressure that allows for shallow molds and improved surface smoothness
	807N X	550	900	2.16	33.0 [4786]	320	344 ± 10	327 ± 10	5	<0.04	Multi-purpose resin that yields high productivity, due to its high fill density
	NXT 70	33	400	2.17	38.6 [5600]	550	N/A	327 ± 10	N/A	N/A	Modified PTFE designed for compression molding
	NXT 75	33	400	2.17	41.4 [6000]	600	N/A	327 ± 10	N/A	N/A	Modified PTFE designed for compression molding with improved weldability
	NXT 85	550	700	2.17	27.6 [4000]	450	N/A	327 ± 10	N/A	N/A	Pelletized version of the NXT75 product

<sup>1</sup> See product information sheets for ASTM/ISO test methods.

<sup>2</sup> Typical properties are not suitable for specification purposes. The User is responsible for evaluating and determining whether this Chemours product is suitable and appropriate for a particular use and intended application. The conditions of evaluation, selection, and use of the Chemours product can vary widely and affect the use and intended application of the Chemours product. Because many of these conditions are uniquely within the User's knowledge and control, User must evaluate and determine whether the Chemours product is suitable and appropriate for a particular use and intended application.

<sup>3</sup> For inventory control purposes, product name may be followed by an X. Products labeled with or without an X following the grade name are equivalent, and all information in this document is applicable to both.

<sup>4</sup> See individual product information sheets for additional information.

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