Teflon™ PTFE NXT 85

Modified Granular Fluoroplastic Resin

Product Information

Description

Teflon™ PTFE NXT 85 is a free-flowing, pelletized, chemically modified granular resin (its equivalent fine-cut resin is Teflon™ NXT 75). It provides superior processing characteristics in addition to properties of chemically modified resins. When properly processed, it offers an excellent combination of properties that are characteristic of Teflon™ fluoroplastic resins:

- Chemical inertness
- Exceptional dielectric properties
- Heat resistance
- Toughness and flexibility
- Low coefficient of friction
- Non-stick characteristics
- Negligible water absorption
- Excellent weather resistance

This chemically modified resin offers improved resistance to deformation under load, increased resistance to permeation of chemicals, and higher dielectric breakdown strength. Teflon™ PTFE NXT 85 provides a high degree of weldability for applications where the use of elevated temperature and pressure are limited.

Typical Applications

Teflon™ PTFE NXT 85 can be converted to parts by isostatic, billet, and sheet molding methods, as well as ram extrusion. It can be used for:

- Valve seats
- Fittings
- Pipe valve and vessel liners
- Seal rings
- Bearing pad
- Electrical insulation

This resin is particularly useful in applications where welding of parts to other fluoropolymers such as PFA or standard PTFE is required, e.g., fluid handling systems.

Processing

Teflon™ PTFE NXT 85 can be processed by all methods used for conversion of free-flow granular PTFE resins to parts. Traditional billet and sheet molding techniques can be used to produce large shapes. More complex parts can be fabricated by automatic and isostatic molding methods. This resin can also be converted to rods and tubes by ram extrusion. All molding methods, except ram extrusion, produce preforms that must be sintered in ovens. Finished product properties depend on preform pressure and the sintering cycle. The sintering cycle is defined by temperature, time, and the cooling rate. Typical properties are listed in Table 1.

Food Contact Compliance

Properly processed products (sintered at high temperatures common to the industry) made from Teflon™ PTFE NXT 85 resin can qualify for use in contact with food in compliance with FDA Regulation 21 CFR 177.1550.

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).

Chemours™

Storage and Handling

Preforming is easiest when the resin is between 21–27 °C (70–80 °F). As temperature declines below this range, the resin will be increasingly difficult to mold without cracks and problems with condensed moisture. Higher temperatures inhibit flow and promote lumping. Storage conditions should be set accordingly.

Cleanliness is a critical requirement for successful use of Teflon™ PTFE NXT 85. The white resin and high sintering temperatures cause even very small foreign particles to become visible in finished moldings. Keep resin drums closed and clean. Good housekeeping and careful handling are essential.

Packaging

Teflon™ PTFE NXT 85 is packaged in 45-kg (100-lb) drums. Each drum has a bag liner made of polyethylene resin.

Table 1. Typical Property Data for Teflon™ PTFE NXT 85 Modified Granular Fluoroplastic Resin*

Property	Test Method	Unit	Typical Value
Average Bulk Density	ASTM D4894	g/L	700
Average Particle Size	ASTM D4894	µm	550
Standard Specific Gravity	ASTM D4894		2.17
Tensile Strength	ASTM D4894	psi (MPa)	4000 (27.6)
Elongation at Break	ASTM D4894	%	450
Deformation Under Load 14 MPa (2,000 psi), 23 °C (73 °F), 24 hr	D621 Method A	%	3.5

Teflon™ PTFE NXT 85 meets the requirements of ASTM D4894-15, Type III, Grade 2, except Bulk Density and Average Particle Size.
*Typical properties are not suitable for specification purposes.

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

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