



Teflon®

Fluoropolymer

Teflon® 701-N PTFE granular moulding resin

Typical applications

High-quality and electrical grade skived tape, billets and other basic shapes, and as a base resin for filled compounds.

Description

Teflon® 701-N is one of DuPont's PTFE granular resins for compression moulding.

It offers the excellent combination of properties characteristic of Teflon® fluoropolymer resins: non-ageing characteristics, chemical inertness, exceptional dielectric properties, heat resistance, toughness and flexibility, low coefficient of friction, non-stick characteristics, negligible moisture absorption and excellent weather resistance.

Teflon® 701-N is a fine-cut high-property resin of medium apparent density. Because of its small particle size, this resin can be moulded into parts with excellent mechanical and dielectric properties and is also recommended as a base resin for filled compositions.

Teflon® 701-N meets the requirements of ASTM D 4894-91a, type II.

Processing

Teflon® 701-N may be converted by compression moulding techniques. A preform is made at room temperature at the recommended pressure of 14 MPa and subsequently free-sintered at 365 to 380°C.

Lower preform pressure down to 10 MPa may be used, but may result in lower end-use properties of the finished parts. Higher preform pressures up to 35 MPa have been used successfully. As with all resins, mould shrinkage and tensile properties vary with preform pressure, sintering conditions and geometry of the part.

Safety precautions

Industrial experience has proven that adequate ventilation, in properly maintained processing and handling areas, will eliminate known hazards to personnel. Resin containers should be opened and used in well-ventilated areas.

Equipment used to process at melt temperatures should be provided with local exhaust ventilation to completely remove all fumes and vapours from the processing area. In addition, care should be exercised to avoid the contamination of cigarettes and other forms of smoking tobacco when using fluoropolymer resins. Before using fluoropolymer resins, read the Material Safety Data Sheet (MSDS) and the detailed information in "Guide for the safe handling of Fluoropolymer Resins" published by APME. Copies can be obtained through your local DuPont representative.

Packaging

Teflon® 701-N is packaged in 25 kg plastic drums. For convenient shipment, orders of 200 kg (8 drums/one full pallet) are recommended.

Typical Property Data for Teflon® 701-N

Property	Test method ¹⁾	Unit	Typical value
General			
Particle size, average diameter	DuPont	µm	20
Standard specific gravity	ISO 12086 D 4894		2,160
Bulk density	ISO 12086 D 4894	g/l	440
Diameter shrinkage (at recommended preform pressure)	DuPont	%	4,9
Mechanical			
Tensile strength	ISO 12086 D 638	MPa	36,7
Elongation	ISO 12086 D 638	%	360
Electrical			
Dielectric strength, short time	IEC 243 D 149		
0,13 mm skived tape		kV/mm	100
0,25 mm skived tape		kV/mm	58
Other			
Water absorption	D 570	%	<0,01
Weather and chemical resistance			Excellent

Note: Teflon® 701-N meets the requirement of ASTM D 4894-91a, type II.
Typical properties are not suitable for specification purposes.

¹⁾ ASTM unless otherwise specified.

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Caution: Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see "DuPont Medical Caution Statement", H-51459.

Brand: The Teflon® trademark may only be used under licensing agreement granted by DuPont for use in approved applications.



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