



Teflon®

Fluoropolymer

Teflon® 807-N PTFE granular moulding resin

Typical applications

Billets for skived tape, basic shapes and mouldings by compression and automatic moulding. It can be used for such applications as: seals, valve seats, bearing pads, linings, gaskets, electrical/electronic parts.

Description

Teflon® 807-N is one of DuPont's free flowing PTFE granular resins designed for compression moulding and ram extrusion (low back pressure).

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® 807-N is a multi-purpose PTFE resin which yields high productivity due to its high fill density. It has an excellent combination of handleability, processability, machinability and end-use properties.

Teflon® 807-N meets the requirements of ASTM D 4894-91a, type IV, grade 2 (except for tensile properties).

Processing

Teflon® 807-N may be converted by all conventional PTFE processing techniques. For instance, in compression moulding a preform is made at room temperature at the recommended pressure of 35 MPa and subsequently sintered at 365 to 380°C.

Preform pressures in the range from 20 MPa to 50 MPa may be used. 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® 807-N is packaged in 50 kg plastic drums. For convenient shipment, orders of 400 kg (8 drums/one full pallet) are recommended.

Typical Property Data for Teflon® 807-N

| Property | Test method ¹⁾ | | Unit | Typical value |
|---|---------------------------|--------|------|---------------|
| General | | | | |
| Particle size, average diameter | | DuPont | µm | 600 |
| Standard specific gravity | ISO 12086 | D 4894 | | 2,156 |
| Bulk density | ISO 12086 | D 4894 | g/l | 950 |
| Diameter shrinkage (at preform pressure of 35 MPa) | | DuPont | % | 2,5 |
| Tensile strength (using 76 mm test disk) | ISO 12086 | D 4894 | MPa | 26 |
| Elongation | ISO 12086 | D 4894 | % | 260 |
| Mechanical | | | | |
| Tape skived ²⁾ from moulded billets (size 100 × 20 mm) | | | | |
| Fill density | | DuPont | g/l | 975 |
| Preform pressure | | | MPa | 35 |
| Compression ratio | | | | 2,2 |
| Height expansion | | | % | 7,2 |
| Mould shrinkage | | | % | 2,4 |
| Tensile strength MD ³⁾ | ISO 12086 | D 638 | MPa | 33 |
| Tensile strength CD ⁴⁾ | ISO 12086 | D 638 | MPa | 33 |
| Elongation MD | ISO 12086 | D 638 | % | 320 |
| | ISO 12086 | D 638 | % | 320 |
| Specific gravity | ISO 1183 | D 792 | | 2,17 |
| Other | | | | |
| Water absorption | | D 570 | % | <0,01 |
| Weather and chemical resistance | | | | Excellent |

Note: Teflon® 807-N meets the requirements of ASTM D 4894-91a, type IV, grade 2 (except for tensile properties).
Typical properties are not suitable for specification purposes.

1) ASTM unless otherwise specified.

2) Tape thickness 0,5 mm.

3) MD measured in preforming direction.

4) CD measured perpendicular to preforming direction.

For further information contact:

Deutschland

Du Pont de Nemours (Deutschland) GmbH
DuPont Straße 1
D-61343 Bad Homburg
Tel. (06172) 87 0
Telefax (06172) 87 13 18

France

Du Pont de Nemours (France) S.A.
137, rue de l'Université
F-75334 Paris Cedex 07
Tel. 01 45 50 65 50
Telefax 01 45 50 61 51

Italia

Du Pont de Nemours Italiana S.p.A.
Via A. Volta, 16
I-20093 Cologno Monzese (Mi)
Tel. (02) 25 30 21
Telefax (02) 25 47 765

Nederland

Du Pont de Nemours (Nederland) B.V.
Baanhoekweg 22
NL-3313 LA Dordrecht
Tel. (078) 630 10 11
Telefax (078) 630 16 77

United Kingdom

Du Pont (U.K.) Limited
Maylands Avenue
GB-Hemel Hempstead,
Herts. HP2 7DP
Tel. (01442) 21 85 00
Telefax (01442) 21 85 75

Requests for further information from countries not listed above should be sent to:

Du Pont de Nemours International S.A.

2, chemin du Pavillon
CH-1218 Le Grand-Saconnex, Geneva
Tel. (022) 717 51 11
Telefax (022) 717 54 11

This information corresponds to our current knowledge on the subject. It is offered solely to provide possible suggestions for your own experimentations. It is not intended, however, to substitute for any testing you may need to conduct to determine for yourself the suitability of our products for your particular purposes. This information may be subject to revision as new knowledge and experience becomes available. Since we cannot anticipate all variations in actual end-use conditions, DuPont makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent right.

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.



Teflon®

Only by DuPont