



Technical Information



Dyneon™

TFM™ 2001 Z PTFE

2nd-generation PTFE for high-performance tubing

Features

- Meets ASTM D 4895-04 Type I, Grade 1, Class B classification.
- High molecular weight PTFE powder, produced by the emulsion polymerization method.
- Dyneon™ TFM™ 2001 Z PTFE is recommended for high-performance applications with reduction ratios up to 1000:1
- Denser polymer structure providing lower gas permeability
- Isotropic mechanical properties
- Smooth surfaces and high transparency
- High stress cracking resistance
- High pressure resistance under surge stress
- Lower flexural modulus
- Very good weldability
- Processing by standard paste extrusion method

Powder Properties*

Properties	Test Method	Unit	Value
Bulk density	DIN EN ISO 60	g/l	450
Average particle size	ISO 13320	µm	520
Extrusion pressure (reduction ratio 400)	ASTM D 4895	MPa	26
Reduction ratio range	Dyneon intern		20-1000 : 1

Mechanical properties, measured at 23 °C on sintered moldings*

Tensile strength	DIN EN ISO 527-3	MPa	38
Elongation at break	DIN EN ISO 527-3	%	440
Specific gravity	DIN EN ISO 12086	g/cm ³	2.15

Mechanical properties* of a tube with the dimension 12 x 10 mm at 23 °C

Tensile strength, longitudinal	DIN EN ISO 527-3	MPa	31
Tensile strength, transverse	DIN EN ISO 527-3	MPa	30
Specific gravity	DIN EN ISO 12086	g/cm ³	2,14

* average values

Processing

Dyneon™ TFM™ 2001 Z PTFE can be processed by the standard paste extrusion methods. To achieve optimum extrudate quality, all processing parameters such as temperature settings, extrusion pressure, lubricant content, extrusion rate and profile dimensions must be carefully balanced. The paste powder is pre-mixed with a suitable lubricant, stored for at least 24 h at a temperature higher than 25 °C and compacted into a pre-form before it is extruded through the die of a suitable ram extruder. The lubricant is then removed through drying and the tube sintered.

Supply form

Dyneon™ TFM™ 2001 Z PTFE is supplied in moisture and dust tight plastic drums.

Capacity per drum: 25 kg
Order quantity per pallet: 300 kg



Dyneon™ TFM™ 2001 Z PTFE



Storage and Material Handling

Dyneon™ TFM™ 2001 Z PTFE can be stored for a relatively long period of time provided it is stored in a clean, dry place at a temperature of less than 19 °C to safeguard free-flowing properties.

Safety/Toxicology

This is a PTFE material, so normal precautions observed with PTFE should be followed. Before processing these products, consult the Material Safety Data Sheet and follow all label directions and handling precautions. General handling/processing precautions include: (1) Process only in well ventilated areas; (2) Do not smoke in areas contaminated with powder/residue from these products; (3) Avoid eye contact; (4) After handling these products wash any contacted skin with soap and water. (5) Avoid contact with hot fluoropolymer. Potential hazards, including evolution of toxic vapors, can exist if processing occurs under excessively high temperature conditions. Vapor extractor units should be installed above processing equipment. When cleaning processing equipment, do not burn off any of this product with an open flame or in a furnace.

Our Worldwide Commitment to Quality

Indicative of our commitment, most Dyneon design, development, production and service facilities have achieved global quality management certification. Production facilities have also received certification for their environmental management system. Please see the Dyneon website (www.dyneon.com) for the most up-to-date certification details.

Important Notice

All information set forth herein is based on our present state of knowledge and is intended to provide general notes regarding products and their uses. It should not therefore be construed as a guarantee of specific properties of the products described or their suitability for a particular application. Because conditions of product use are outside Dyneon's control and vary widely, user must evaluate and determine whether a Dyneon product will be suitable for user's intended application before using it. The quality of our products is warranted under our General Terms and Conditions of Sale as now are or hereafter may be in force.

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General recommendations on health and safety in processing, on work hygiene and on measures to be taken in the event of accident are detailed in our material safety data sheets.

You will find further notes on the safe handling of fluoropolymers in the brochure "Guide for the safe handling of Fluoropolymers Resins" by PlasticsEurope, Box 3, B-1160 Brussels, Tel. +32 (2) 676 17 32.

The present edition replaces all previous versions. Please make sure and inquire if in doubt whether you have the latest edition.

Dyneon Customer Service

Europe Phone: 00 800 396 366 27
Fax: 00 800 396 366 39

Italy Phone: 00 800 7 910 18
Fax: 00 800 7 810 19

USA Phone: +1 800 810 8499
Fax: +1 800 635 8061

Dyneon GmbH

Industrieparkstr. 1
D-84508 Burgkirchen
Germany
Phone: +49 8679 7 4709
Fax: +49 8679 7 5037

Dyneon GmbH

Carl-Schurz-Str. 1
D-41453 Neuss
Germany
Phone: +49 2131 14 2265
Fax: +49 2131 14 3857

Dyneon LLC

6744 33rd Street North
Oakdale, MN 55128
USA
Phone: +1 651 733 5353
Fax: +1 651 737 7686

Please contact us if you wish to know further addresses of any of our sales offices worldwide.

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Printed in Germany
Issue: April 2010
98-0504-2171-2