



Dyneon™

TFM™ 2001 Z PTFE

2nd - Generation PTFE for High-Performance Tubing

Dyneon™ TFM™ 2001 Z PTFE is an ideal grade for high-performance applications with reduction ratios up to 1000:1. This product has a denser polymer texture providing lower gas permeability than standard PTFE.

Product Features:

- High molecular weight
- Isotropic mechanical properties
- Smooth surfaces and high transparency
- Very good weldability
- Emulsion polymerization PTFE
- High stress cracking resistance
- Meets ASTM D4895-04 Type 1, Grade 1, Class C classification
- High pressure resistance
- Processing by standard paste extrusion method

Typical Properties (Not for specification purposes)

Property	Test Method	Unit	Value
Powder Properties			
Average particle size	ISO 13320	µm	550
Bulk density	DIN EN ISO 60	g/l	450
Processing			
Range of Reduction Ratios (RR)	Dyneon Method		20:1 to 1000:1
Extrusion pressure @ RR 400:1	ASTM D4895	MPa	26
Mechanical Properties (measured on sintered moldings according to ISO 12086)			
Tensile strength	DIN EN ISO 527-3	MPa	34
Elongation at break	DIN EN ISO 527-3	%	400
Specific gravity	DIN EN ISO 12086	g/cm ³	2.15

Product Form and Packaging

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.



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.

Storage and Material Handling

Dyneon™ TFM™ 2001 Z PTFE can be stored for 3 years from the date of manufacture provided it is stored in a clean, dry place in the original, unopened container received from Dyneon at a temperature of less than 19°C.

Safety/Toxicology

This is a PTFE material, so normal precautions observed with PTFE should be followed. Before processing this product, be sure to read and follow all precautions and directions for use contained in the product label and the Material Safety Data Sheet. General handling/processing precautions include: (1) Process only in well-ventilated areas; (2) Do not smoke in areas contaminated with powder/residue from this product; (3) Avoid eye contact; (4) After handling this product 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. Appropriate local exhaust ventilation such as vapor extractor units should be installed above processing equipment. When cleaning processing equipment, do not burn off this product with an open flame or in a furnace.

Technical Information: Technical information and data, recommendations, and other statements provided by Dyneon are based on information, tests, or experience which Dyneon believes to be reliable, but the accuracy or completeness of such information is not guaranteed. Such technical information and data are intended for persons with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any Dyneon or third party intellectual property rights is granted or implied with this information.

Important Notice:

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 following is made in lieu of all express and implied warranties (including warranties of merchantability and fitness for a particular purpose): If a Dyneon product is proved to be defective, Dyneon's only obligation, and user's only remedy, will be, at Dyneon's option, to replace the quantity of product shown to be defective when user received it or to refund user's purchase price. In no event will Dyneon be liable for any direct, indirect, special, incidental, or consequential loss or damage, regardless of legal theory, such as breach of warranty or contract, negligence, or strict liability.

Product Stewardship - Replacement Emulsifier. Dyneon fluoroplastic products identified with a "Z" following the product name indicate products that are made using Dyneon's new replacement emulsifier. The new emulsifier is a polymerization aid used to manufacture certain fluoropolymers and is not an intended ingredient in the polymers. The new emulsifier eliminates the use of the former polymerization aid, APFO (ammonium perfluorooctanoate, the ammonium salt of perfluorooctanoic acid (PFOA)), in the manufacture of these fluoropolymers. The use of the replacement emulsifier in the manufacture of these Dyneon products is consistent with Dyneon's product stewardship principles and our commitment to US EPA's Voluntary PFOA Stewardship Program under which fluoropolymer manufacturers agreed to work towards eliminating PFOA in emissions and product content by the year 2015. Dyneon is pleased to report that we will have completely eliminated the use of APFO in our manufacturing processes by the end of December 2008.

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