



Technical Information



3M™ Dyneon™

PTFE Paste TF 2035Z

PTFE for pipe liner applications

Features

- Meets ASTM D 4895-04 Type I, Grade 1, Class B classification.
- High molecular weight PTFE fine powder produced by emulsion polymerization
- 3M™ Dyneon™ PTFE Paste TF 2035Z is the preferred grade for pipe liners with reduction ratios from RR 15 to RR 300
- PTFE Paste TF 2035Z is an improved fine powder with good mechanical properties
- Low transversal shrinkage
- Improved permeation behavior compared to 3M™ Dyneon™ PTFE Paste TF 2025Z

Powder Properties*

Properties	Test Method	Unit	Value
Bulk density	DIN EN ISO 60	g/l	450
Average particle size	ISO 13320	µm	600
Extrusion pressure (reduction ratio 400)	ASTM D 4895	MPa	35
Reduction ratio range	Dyneon intern		15 -300

Mechanical properties*, measured at 23 °C on an ASTM-plate

Tensile strength	DIN EN ISO 527-3	MPa	37
Elongation at break	DIN EN ISO 527-3	%	460
Specific gravity	DIN EN ISO 12086	g/cm ³	2.16

Mechanical properties* at 23 °C, measured on a pipe liner with dimension 52 mm x 48 mm with RR = 23; 19 weight parts lubricant

Specific gravity	DIN EN ISO 12086	g/cm ³	2.16
Elongation at break, longitudinal	DIN EN ISO 527-3	%	440
Elongation at break, transverse	DIN EN ISO 527-3	%	520
Tensile strength, longitudinal	DIN EN ISO 527-3	MPa	38
Tensile strength, transverse	DIN EN ISO 527-3	MPa	34
Shrinkage	Dyneon internal	%	3.5

*average values

Processing

3M™ Dyneon™ PTFE Paste TF 2035Z can be processed by conventional fine powder 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 fine powder is mixed with a suitable lubricant, stored for at least 24 h at a temperature higher than 25 °C and compacted into a pre-form, which is then extruded through a die on a ram extruder to produce pipes. The lubricant is then removed by drying and the pipe is sintered.

Supply form

PTFE Paste TF 2035Z is supplied in moisture and dust tight plastic drums.

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

Storage and Material Handling

PTFE Paste TF 2035Z 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.



3M™ Dyneon™ PTFE Paste TF2035Z



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.eu) 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.

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