



Technical Information



3M™ Dyneon™

PTFE Paste TF 2021Z

PTFE fine powder for unsintered thread sealing tape joint sealing and tubing applications

Features

- Meets ASTM D 4895-04 Type I, Grade 1, Class B classification.
- 3M™ Dyneon™ PTFE Paste TF 2021Z is the preferred grade for unsintered thread sealing tapes, expanded joint sealings and tubings
- High molecular weight PTFE powder produced by emulsion polymerization
- Fine powder grade for low to medium reduction ratios
- Providing high stretch ratio
- Product grade with lower extrusion pressure and green strength level than 3M™ Dyneon™ PTFE Paste TF 2025Z.
- Processing by standard paste extrusion methods

Powder Properties*

Properties	Test Method	Unit	Value
Bulk density	DIN EN ISO 60	g/l	470
Average particle size	ISO 13320	µm	510
Extrusion pressure (reduction ratio 400)	ASTM D 4895	MPa	30
Reduction ratio range	Dyneon intern		20-500:1

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

Tensile strength	DIN EN ISO 527-3	MPa	34
Elongation at break	DIN EN ISO 527-3	%	380
Specific gravity	DIN EN ISO 12086	g/cm ³	2.15

* average values

Processing

3M™ Dyneon™ PTFE Paste TF 2021Z can be processed by 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 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 tubing, rod or cord. Tapes are produced by calendaring cord which still contains lubricant. The lubricant is evaporated and the tape/cord is stretched or the tube is sintered.

Supply form

PTFE Paste TF 2021Z is supplied in moisture and dust tight plastic drums.

Capacity per drum:
Order quantity per pallet:

25 kg
300 kg



3M™ Dyneon™ PTFE Paste TF 2021Z



Storage and Material Handling

3M™ Dyneon™ PTFE Paste TF 2021Z 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.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.

Technical information, test data, and advice provided by Dyneon personnel are based on information and tests we believe are reliable and are intended for persons with knowledge and technical skills sufficient to analyze test types and conditions, and to handle and use raw polymers and related compounding ingredients. No license under any Dyneon or third party intellectual rights is granted or implied by virtue of this information.

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-11160 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

3M

3M Center
St. Paul, MN 55144
USA
Phone: +1 651 737 6501

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

Web Site: www.dyneon.eu
Dyneon is a 3M company.

© Dyneon 2011
All Rights Reserved

3M and Dyneon are trademarks of 3M company
Used under license.

Printed in Germany
Issue: January 2011
98-0504-2163-9