



Dyneon™

TF 2021 Z PTFE

General Purpose PTFE Fine Powder for Paste Extrusion

Dyneon TF 2021 Z PTFE is an ideal grade for pipe liner applications because of its outstanding green strength. It is the preferred grade for unsintered thread sealing tapes, expanded joint sealings, and tubings.

Product Features:

- High molecular weight
- Processable by standard paste extrusion methods
- Fine powder grade for low to medium reduction ratio
- Meets ASTM D4895-04 Type 1, Grade 1, Class B classification

Typical Properties (Not for specification purposes)

Property	Test Method	Unit	Value
Powder Properties			
Average particle size	ISO 13320	nm	500
Bulk density	DIN EN ISO 60	g/l	480
Processing			
Range of Reduction Ratios (RR)	Dyneon Method		20:1 to 500:1
Extrusion pressure @ RR 400:1	ASTM D4895	MPa	30
Mechanical Properties (measured on sintered sheets according to ISO 12086)			
Tensile strength	DIN EN ISO 527-3	MPa	30
Elongation at break	DIN EN ISO 527-3	%	340
Specific gravity	DIN EN ISO 12086	g/cm ³	2.15

Product Form and Packaging

Dyneon TF 2021 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 TF 2021 Z PTFE can be stored for 3 years from date of manufacture provided it is stored in a clean, dry place at a temperature of less than 19°C to safe guard free-flowing properties.

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 any of this product with an open flame or in a furnace.

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Important Notice:

This Dyneon product is a newly introduced product that has not been fully commercialized. As a result, the formulation, manufacturing process, performance characteristics, and other properties of this product are not guaranteed and are subject to change without notice, provided that the Dyneon product will meet Dyneon's then current product specification. User is responsible for evaluating and determining whether this Dyneon product is suitable and appropriate for a particular use and intended application. The conditions of evaluation, selection, and use of the Dyneon product can vary widely and affect the use and intended application of the Dyneon product. Because many of these conditions are uniquely within the Buyer's knowledge and control, Buyer must evaluate and determine whether the Dyneon product is suitable and appropriate for a particular use and intended application.

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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