3M[™] Dyneon[™] TFM[™] Modified PTFE TFM 2001Z

Polytetrafluoroethylene

3M Advanced Materials Division

Message:

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

High Clarity High ESCR (Stress Crack Resist.) High Molecular Weight
High Molecular Weight
Weldable
Tubing
Powder
Ram Extrusion
Sintering

Physical	Nominal Value	Unit	Test Method
Density			ISO 12086
1	2.14	g/cm³	
2	2.15	g/cm³	
Apparent Density	0.45	g/cm³	ISO 60
Average Particle Size	520	μm	ISO 13320
Extrusion Pressure - Reduction Ratio 400	26.0	MPa	ASTM D4895
Reduction Ratio	20-1000:1		Internal Method
Films	Nominal Value	Unit	Test Method
Tensile Strength			ISO 527-3
3	38.0	MPa	
MD ⁴	31.0	MPa	
TD ⁵	30.0	MPa	

Tensile Elongation ⁶ (Break)	440	%	ISO 527-3
NOTE			
	Mechanical properties of a tube		
1.	with the dimension 12 x 10 mm		
2.	Measured on sintered moldings		
3.	Measured on sintered moldings		
	Mechanical properties of a tube		
4.	with the dimension 12 x 10 mm		
	Mechanical properties of a tube		
5.	with the dimension 12 x 10 mm		
6.	Measured on sintered moldings		

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