3M™ Dyneon™ TFM™ Modified PTFE TFM 1610

Polytetrafluoroethylene

3M Advanced Materials Division

Message:

Free-flow PTFE of the 2nd generation for compression moulding
Features
Suspension polymerisate
High-flow powder guarantees easy feeding and good mould fill behaviour.
Low stretch-void-index
High surface quality, low content of pores and low permeation
Reduced deformation under load (cold flow)
Very good electrical properties
Good weldability
Typical applications
Especially suitable for automatic moulding
Static seals in industrial and mechanical engineering
Pumps
Sealing elements for fittings
Good elasticity enables special processing technologies like deep-drawing and blow-moulding

General Information	
Features	Good Electrical Properties Good Surface Finish High Flow Weldable
Uses	Pump Parts Seals
Forms	Powder
Processing Method	Blow Molding Compression Molding Sintering

Physical	Nominal Value	Unit	Test Method
Density	2.16	g/cm³	ISO 12086
Apparent Density	0.76	g/cm³	ISO 60
Molding Shrinkage	3.5	%	Internal Method
Average Particle Size	430	µm	ISO 13320
Compression Molding Molding Pressure	30.0	MPa	
Compression Molding Temperature	23 to 26	°C	
Sintering Temperature	375 to 380	°C	

Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	59		ISO 868
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (23°C)	650	MPa	ISO 527-2
Deformation Under Load			ASTM D621
15 MPa [1]	4.00	%	
15 MPa [2]	10.0	%	
15 MPa [3]	8.00	%	
Films	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (200 µm)	35.0	MPa	ISO 527-3
Tensile Elongation (Break, 200 µm)	600	%	ISO 527-3
Thermal	**Nominal Value**	**Unit**	**Test Method**
CLTE - Flow			DIN 53752
30 to 100°C	1.2E-4	cm/cm/°C	
30 to 200°C	1.4E-4	cm/cm/°C	
30 to 260°C	1.7E-4	cm/cm/°C	
Thermal Conductivity	0.22	W/m/K	DIN 52612
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+17	ohms	IEC 60093
Volume Resistivity	1.0E+18	ohms·cm	IEC 60093
Electric Strength (0.200 mm)	82	kV/mm	ISO 12086
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating	V-0		UL 94
NOTE			
1.	permanent		
2.	100 hr		
3.	24 hr		

Recommended distributors for this material

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