

3M Dyneon™ 1645 PTFE Powder (discontinued **)

Category : Polymer , Thermoplastic , Fluoropolymer , PTFE , Polytetrafluoroethylene (PTFE), Molded

Material Notes:

Type IV, gr. 2 PTFE. The unique properties of polytetrafluoroethylene (PTFE) makes it an indispensable material for modern industry. PTFE offers the following exceptional characteristics: Inert to a wide range of aggressive chemical agents Ultra-low friction coefficient Continuous service temperature range from cryogenic -330°F to 500°F Extremely resistant to embrittlement, aging or weathering PTFE has rapidly become the material choice where low friction, high durability, excellent thermal resistance and chemical inertness characteristics are required. Data provided by Dyneon.

Order this product through the following link:

http://www.lookpolymers.com/polymer_3M-Dyneon-1645-PTFE-Powder-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	2.15 g/cc	0.0777 lb/in ³	ASTM D4894
Apparent Bulk Density	0.830 g/cc	0.0300 lb/in ³	ASTM D4894
Particle Size	450 µm	450 µm	ASTM D4894
Deformation	4.0 %	4.0 %	Permanent; ASTM D621
	@Pressure 15.00 MPa	@Pressure 2175 psi	
	7.0 %	7.0 %	ASTM D621
	@Time 86400 sec, Pressure 15.00 MPa	@Time 24.0 hour, Pressure 2175 psi	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	62	62	Initial; ASTM D2240
	58	58	ASTM D2240
	@Time 15.0 sec	@Time 0.00417 hour	
Tensile Strength at Break	27.6 MPa	4000 psi	ASTM D4894
Elongation at Break	350 %	350 %	ASTM D4894
Tensile Modulus	0.600 GPa	87.0 ksi	ASTM D638

Thermal Properties	Metric	English	Comments
CTE, linear	65.0 µm/m-°C	36.1 µin/in-°F	ASTM E1530
	@Temperature 30.0 - 100 °C	@Temperature 86.0 - 212 °F	
	87.0 µm/m-°C	48.3 µin/in-°F	ASTM E1530

Thermal Properties	Metric @Temperature 100 - 200 °C	English @Temperature 212 - 392 °F	Comments
	110 µm/m-°C	61.1 µin/in-°F	ASTM E1530
	@Temperature 200 - 300 °C	@Temperature 392 - 572 °F	
Thermal Conductivity	0.310 W/m-K	2.15 BTU-in/hr-ft²-°F	ASTM E1530
	@Temperature 100 °C	@Temperature 212 °F	
	0.320 W/m-K	2.22 BTU-in/hr-ft²-°F	ASTM E1530
	@Temperature 250 °C	@Temperature 482 °F	
Shrinkage	2.5 %	2.5 %	ASTM D4894

Electrical Properties	Metric	English	Comments
Dielectric Strength	2.50 kV/mm	63.5 kV/in	ASTM D149

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