

Overview of materials for Fluorocarbon ETFE, with Glass or Carbon Fiber Filler

Category : Polymer , Thermoplastic , Fluoropolymer , ETFE/ECTFE , Fluorocarbon ETFE, with Glass or Carbon Fiber Filler

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Fluorocarbon ETFE, with Glass or Carbon Fiber Filler". Each property range of values reported is minimum and maximum values of appropriate MatWeb entries. The comments report the average value, and number of data points used to calculate the average. The values are not necessarily typical of any specific grade, especially less common values and those that can be most affected by additives or processing methods.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Overview-of-materials-for-Fluorocarbon-ETFE-with-Glass-or-Carbon-Fiber-Filler.php

Physical Properties	Metric	English	Comments
Density	1.66 - 1.92 g/cc	0.0600 - 0.0694 lb/in ³	Average value: 1.77 g/cc Grade Count:15
Filler Content	10.0 - 30.0 %	10.0 - 30.0 %	Average value: 21.9 % Grade Count:8
Water Absorption	0.0100 - 0.0200 %	0.0100 - 0.0200 %	Average value: 0.0140 % Grade Count:5
Additive Loading	10.0 - 30.0 %	10.0 - 30.0 %	Average value: 20.0 % Grade Count:5
Linear Mold Shrinkage	0.000500 - 0.00800 cm/cm	0.000500 - 0.00800 in/in	Average value: 0.00304 cm/cm Grade Count:14

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	21.0 - 75.8 MPa	3050 - 11000 psi	Average value: 56.7 MPa Grade Count:15
Elongation at Break	0.550 - 78.0 %	0.550 - 78.0 %	Average value: 12.1 % Grade Count:15
Modulus of Elasticity	1.51 - 19.3 GPa	219 - 2800 ksi	Average value: 9.90 GPa Grade Count:14
Flexural Yield Strength	24.0 - 103 MPa	3480 - 15000 psi	Average value: 82.9 MPa Grade Count:15
Flexural Modulus	1.21 - 17.2 GPa	175 - 2500 ksi	Average value: 7.83 GPa Grade Count:15
Izod Impact, Notched	0.747 - 8.01 J/cm	1.40 - 15.0 ft-lb/in	Average value: 3.27 J/cm Grade Count:15
Izod Impact, Unnotched	2.14 - 16.0 J/cm	4.00 - 30.0 ft-lb/in	Average value: 8.37 J/cm Grade Count:15

Thermal Properties	Metric	English	Comments
CTE, linear	24.0 - 80.0 µm/m-°C	13.3 - 44.4 µin/in-°F	Average value: 52.7 µm/m-°C Grade Count:3
Deflection Temperature at 1.8 MPa	50.0 - 210 °C	122 - 410 °F	

(264 psi) Thermal Properties	Metric	English	Average value: 169 °C Grade Count:8 Comments
Flammability, UL94	V-0	V-0	Grade Count:9

Electrical Properties	Metric	English	Comments
Electrical Resistivity	100 - 1.00e+17 ohm-cm	100 - 1.00e+17 ohm-cm	Average value: 5.00e+16 ohm-cm Grade Count:9
Surface Resistance	1000 - 1.00e+9 ohm	1000 - 1.00e+9 ohm	Average value: 1.23e+8 ohm Grade Count:5
Static Decay	0.500 - 2.00 sec	0.500 - 2.00 sec	Average value: 0.875 sec Grade Count:4

Processing Properties	Metric	English	Comments
Processing Temperature	274 - 335 °C	525 - 635 °F	Average value: 304 °C Grade Count:8
Melt Temperature	293 - 343 °C	560 - 650 °F	Average value: 318 °C Grade Count:5
Mold Temperature	65.6 - 149 °C	150 - 300 °F	Average value: 107 °C Grade Count:13
Drying Temperature	121 °C	250 °F	Average value: 121 °C Grade Count:5
Injection Pressure	68.9 - 103 MPa	10000 - 15000 psi	Average value: 86.2 MPa Grade Count:13

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