

Overview of materials for Modified ETFE, Unreinforced

Category : Polymer , Thermoplastic , Fluoropolymer , ETFE/ECTFE , Modified ETFE, Unreinforced

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Modified ETFE, Unreinforced". 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-Modified-ETFE-Unreinforced.php

Physical Properties	Metric	English	Comments
Density	1.59 - 1.86 g/cc	0.0574 - 0.0672 lb/in ³	Average value: 1.75 g/cc Grade Count:15
Water Absorption	0.00500 - 0.100 %	0.00500 - 0.100 %	Average value: 0.0914 % Grade Count:11
Oxygen Transmission	70.0 cc-mm/m ² -24hr-atm	178 cc-mil/100 in ² -24hr-atm	Average value: 70.0 cc-mm/m ² -24hr-atm Grade Count:14
Nitrogen Transmission	20.0 - 104 cc-mm/m ² -24hr-atm	50.8 - 263 cc-mil/100 in ² -24hr-atm	Average value: 32.0 cc-mm/m ² -24hr-atm Grade Count:14
Viscosity	1.00e+6 - 1.00e+7 cP @Temperature 300 - 330 °C	1.00e+6 - 1.00e+7 cP @Temperature 572 - 626 °F	Average value: 5.50e+6 cP Grade Count:10
Linear Mold Shrinkage	0.0300 - 0.0400 cm/cm	0.0300 - 0.0400 in/in	Average value: 0.0350 cm/cm Grade Count:10
Melt Flow	2.00 - 50.0 g/10 min	2.00 - 50.0 g/10 min	Average value: 17.8 g/10 min Grade Count:16

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	75.0	75.0	Average value: 75.0 Grade Count:10
Tensile Strength, Ultimate	35.0 - 50.0 MPa	5080 - 7250 psi	Average value: 43.8 MPa Grade Count:16
Elongation at Break	300 - 460 %	300 - 460 %	Average value: 418 % Grade Count:17
Modulus of Elasticity	0.490 - 0.827 GPa	71.1 - 120 ksi	Average value: 0.654 GPa Grade Count:11
Flexural Modulus	0.647 - 1.37 GPa	93.8 - 199 ksi	Average value: 1.06 GPa Grade Count:15
Compressive Yield Strength	11.0 MPa	1600 psi	Average value: 11.0 MPa Grade Count:10
Izod Impact, Notched	100 - 5340 J/cm	187 - 10000 ft-lb/in	Grade Count:4

Mechanical Properties	Metric	English	Comments
Coefficient of Friction	0.0550 - 0.0780	0.0550 - 0.0780	Average value: 0.0665 Grade Count:10
Coefficient of Friction, Static	0.0600	0.0600	Average value: 0.0600 Grade Count:10
Taber Abrasion, mg/1000 Cycles	127 - 149	127 - 149	Average value: 141 Grade Count:10

Thermal Properties	Metric	English	Comments
CTE, linear	50.0 - 131 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	27.8 - 73.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	Average value: 75.6 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ Grade Count:11
Thermal Conductivity	0.240 W/m-K	1.67 BTU-in/hr-ft ² -°F	Average value: 0.240 W/m-K Grade Count:10
Melting Point	160 - 266 °C	320 - 510 °F	Average value: 233 °C Grade Count:15
Maximum Service Temperature, Air	150 - 154 °C	302 - 310 °F	Average value: 150 °C Grade Count:11
Flammability, UL94	V-0	V-0	Grade Count:17
Oxygen Index	31.0 - 40.0 %	31.0 - 40.0 %	Average value: 31.5 % Grade Count:17

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	Average value: 1.00e+16 ohm-cm Grade Count:10
Dielectric Constant	2.40 - 2.75	2.40 - 2.75	Average value: 2.58 Grade Count:17
Dielectric Strength	7.87 - 16.0 kV/mm	200 - 406 kV/in	Average value: 15.3 kV/mm Grade Count:11
Dissipation Factor	0.000400 - 0.00820	0.000400 - 0.00820	Average value: 0.00281 Grade Count:16

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