

Overview of materials for ECTFE Fluoropolymer

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

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "ECTFE Fluoropolymer". 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-ECTFE-Fluoropolymer.php

Physical Properties	Metric	English	Comments
Density	1.18 - 1.87 g/cc	0.0426 - 0.0676 lb/in ³	Average value: 1.67 g/cc Grade Count:34
Water Absorption	0.0100 - 0.100 %	0.0100 - 0.100 %	Average value: 0.0550 % Grade Count:8
Water Absorption at Saturation	0.100 %	0.100 %	Average value: 0.100 % Grade Count:14
Linear Mold Shrinkage	0.00200 - 0.0250 cm/cm	0.00200 - 0.0250 in/in	Average value: 0.0232 cm/cm Grade Count:13
Melt Flow	1.00 - 550 g/10 min	1.00 - 550 g/10 min	Average value: 31.9 g/10 min Grade Count:22

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	73.0 - 120	73.0 - 120	Average value: 90.8 Grade Count:16
Hardness, Shore D	69.0 - 85.0	69.0 - 85.0	Average value: 75.2 Grade Count:17
Tensile Strength, Ultimate	19.0 - 55.0 MPa	2760 - 7980 psi	Average value: 47.8 MPa Grade Count:18
Tensile Strength, Yield	29.0 - 68.9 MPa	4210 - 10000 psi	Average value: 32.2 MPa Grade Count:17
Elongation at Break	1.00 - 300 %	1.00 - 300 %	Average value: 222 % Grade Count:20
Elongation at Yield	1.00 - 10.0 %	1.00 - 10.0 %	Average value: 5.04 % Grade Count:14
Modulus of Elasticity	1.20 - 1.96 GPa	174 - 284 ksi	Average value: 1.67 GPa Grade Count:19
Flexural Yield Strength	26.2 - 114 MPa	3800 - 16500 psi	Average value: 49.8 MPa Grade Count:17
Flexural Modulus	1.65 - 6.21 GPa	240 - 900 ksi	Average value: 1.94 GPa Grade Count:18
Izod Impact, Notched	0.250 J/cm - NB	0.468 ft-lb/in - NB	Average value: 2.26 J/cm Grade Count:17

Mechanical Properties	Metric 1.22 J/cm	English 29 ft-lb/in	Comments
	@Temperature -40.0 - -40.0 °C	@Temperature -40.0 - -40.0 °F	Average value: 1.86 J/cm Grade Count:2
	0.190 - 2.10 J/cm @Temperature -40.0 - -40.0 °C	0.356 - 3.93 ft-lb/in @Temperature -40.0 - -40.0 °F	Average value: 1.86 J/cm Grade Count:12
	0.190 - 2.10 J/cm @Thickness 3.20 - 3.20 mm	0.356 - 3.93 ft-lb/in @Thickness 0.126 - 0.126 in	Average value: 1.86 J/cm Grade Count:12
Coefficient of Friction	0.190 - 0.860	0.190 - 0.860	Average value: 0.252 Grade Count:18
Coefficient of Friction, Static	0.190 - 0.300	0.190 - 0.300	Average value: 0.279 Grade Count:15
Taber Abrasion, mg/1000 Cycles	5.00	5.00	Average value: 5.00 Grade Count:15

Thermal Properties	Metric	English	Comments
CTE, linear	18.0 - 101 µm/m-°C	10.0 - 56.0 µin/in-°F	Average value: 91.5 µm/m-°C Grade Count:19
	135 - 135 µm/m-°C @Temperature 85.0 - 125 °C	75.0 - 75.0 µin/in-°F @Temperature 185 - 257 °F	Average value: 135 µm/m-°C Grade Count:2
Specific Heat Capacity	0.946 - 0.962 J/g-°C	0.226 - 0.230 BTU/lb-°F	Average value: 0.960 J/g-°C Grade Count:15
Thermal Conductivity	0.150 - 0.231 W/m-K	1.04 - 1.60 BTU-in/hr-ft ² -°F	Average value: 0.167 W/m-K Grade Count:5
	0.150 - 0.150 W/m-K @Temperature 40.0 - 40.0 °C	1.04 - 1.04 BTU-in/hr-ft ² -°F @Temperature 104 - 104 °F	Average value: 0.150 W/m-K Grade Count:13
Melting Point	220 - 242 °C	428 - 468 °F	Average value: 237 °C Grade Count:31
Crystallization Temperature	205 - 222 °C	401 - 432 °F	Average value: 221 °C Grade Count:13
Maximum Service Temperature, Air	140 - 150 °C	284 - 302 °F	Average value: 148 °C Grade Count:7
Deflection Temperature at 0.46 MPa (66 psi)	90.0 - 232 °C	194 - 450 °F	Average value: 100 °C Grade Count:17
Deflection Temperature at 1.8 MPa (264 psi)	62.8 - 210 °C	145 - 410 °F	Average value: 72.8 °C Grade Count:19
Brittleness Temperature	-76.0 - 20.0 °C	-105 - 68.0 °F	Average value: -69.6 °C Grade Count:15
Glass Transition Temp, Tg	85.0 °C	185 °F	Average value: 85.0 °C Grade Count:13

Thermal Properties	Metric	English	Comments
Oxygen Index	52.0 - 60.0 %	52.0 - 60.0 %	Average value: 53.1 % Grade Count:19

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+15 - 1.00e+17 ohm-cm	1.00e+15 - 1.00e+17 ohm-cm	Average value: 4.71e+16 ohm-cm Grade Count:18
Surface Resistance	1.00e+12 - 1.00e+17 ohm	1.00e+12 - 1.00e+17 ohm	Average value: 5.25e+16 ohm Grade Count:4
Dielectric Constant	2.47 - 2.60	2.47 - 2.60	Average value: 2.55 Grade Count:19
Dielectric Strength	13.8 - 105 kV/mm	350 - 2670 kV/in	Average value: 28.7 kV/mm Grade Count:20
Dissipation Factor	0.00120 - 0.0140	0.00120 - 0.0140	Average value: 0.00525 Grade Count:4
Comparative Tracking Index	600 V	600 V	Average value: 600 V Grade Count:3

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China