

Polikim EFALON® T-100 Virgin PTFE

Category : Polymer , Thermoplastic , Fluoropolymer , PTFE

Material Notes:

Applications: Gaskets, seals, O-rings, V-Rings, compression packings and similar sealing parts, Bushes, bearings and piston rings, Electrical insulators, Sliding supports, Conveyor belts, Coated tubes, valves and joint components for transfer of corrosive material, Non-stick surface applications, PTFE coated glass fabric manufacturing, Laboratory equipment that requires chemical resistance. In military units and marine industry due to resistance to water, humidity, micro-organisms and sunlight. Information provided by Polikim Polymer.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Polikim-EFALON-T-100-Virgin-PTFE.php

Physical Properties	Metric	English	Comments
Density	2.10 - 2.20 g/cc	0.0759 - 0.0795 lb/in ³	ASTM D792
Deformation	7.5 - 8.5 %	7.5 - 8.5 %	permanent; ASTM D621
	@Temperature 23.0 °C, Time 86400 sec, Pressure 13.7 MPa	@Temperature 73.4 °F, Time 24.0 hour, Pressure 1990 psi	
	14 - 16.8 %	14 - 16.8 %	total; ASTM D621
	@Temperature 23.0 °C, Time 86400 sec, Pressure 13.7 MPa	@Temperature 73.4 °F, Time 24.0 hour, Pressure 1990 psi	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	54 - 60	54 - 60	ASTM D2240
Tensile Strength, Ultimate	13.7 - 37.3 MPa	1990 - 5400 psi	ASTM D638
Elongation at Break	200 - 400 %	200 - 400 %	ASTM D638
Compressive Strength	4.41 - 4.90 MPa	640 - 711 psi	1% Deformation; ASTM D695
Izod Impact, Notched (ISO)	15.5 - 16.5 kJ/m ²	7.38 - 7.85 ft-lb/in ²	ASTM D256
Coefficient of Friction	0.060	0.060	
Coefficient of Friction, Static	0.040	0.040	
Limiting Pressure Velocity	0.000376 - 0.000409 MPa-m/sec	10.7 - 11.7 psi-ft/min	3 m/min
	0.000605 - 0.000654 MPa-m/sec	17.3 - 18.7 psi-ft/min	30 m/min
	0.0008502 - 0.0009156 MPa-m/sec	24.27 - 26.14 psi-ft/min	300 m/min

Thermal Properties	Metric	English	Comments
CTE, linear	125 - 160 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	69.4 - 88.9 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM D696
	@Temperature 25.0 - 100 $^{\circ}\text{C}$	@Temperature 77.0 - 212 $^{\circ}\text{F}$	
	150 - 190 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	83.3 - 106 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	
	@Temperature 25.0 - 200 $^{\circ}\text{C}$	@Temperature 77.0 - 392 $^{\circ}\text{F}$	ASTM D696
	215 - 250 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	119 - 139 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	
	@Temperature 25.0 - 300 $^{\circ}\text{C}$	@Temperature 77.0 - 572 $^{\circ}\text{F}$	
Specific Heat Capacity	0.962 - 1.05 J/g- $^{\circ}\text{C}$	0.230 - 0.251 BTU/lb- $^{\circ}\text{F}$	
Thermal Conductivity	0.230 - 0.251 W/m-K	1.59 - 1.74 BTU-in/hr-ft ² - $^{\circ}\text{F}$	
Maximum Service Temperature, Air	270 $^{\circ}\text{C}$	518 $^{\circ}\text{F}$	continuous
Minimum Service Temperature, Air	-260 $^{\circ}\text{C}$	-436 $^{\circ}\text{F}$	

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00\text{e}+18$ ohm-cm	$\geq 1.00\text{e}+18$ ohm-cm	ASTM D257
Surface Resistance	$\geq 1.00\text{e}+16$ ohm	$\geq 1.00\text{e}+16$ ohm	50% rel. humidity; ASTM D257
Dielectric Constant	2.0 - 2.1	2.0 - 2.1	ASTM D150
	@Frequency 50.0 - 1.00e+7 Hz	@Frequency 50.0 - 1.00e+7 Hz	
Dielectric Strength	40.0 - 80.0 kV/mm	1020 - 2030 kV/in	short term; ASTM D149
	@Thickness 0.100 mm	@Thickness 0.00394 in	
Dielectric Loss Index	0.000050	0.000050	dry
	@Frequency 50.0 Hz	@Frequency 50.0 Hz	

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