

Polikim EFALON® B-40 PTFE, 40% Bronze Filled

Category : Polymer , Thermoplastic , Fluoropolymer , PTFE , Polytetrafluoroethylene (PTFE), Bronze Filled

Material Notes:

Bronze-filled Eفالon® (PTFE) has better heat insulation, less thermal expansion, higher wear resistance properties and less deformation under load compared to virgin Eفالon®. Applications: bearings, piston rings, valve sets, valve components. Information provided by Polikim Polimer.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Polikim-EFALON-B-40-PTFE-40-Bronze-Filled.php

Physical Properties	Metric	English	Comments
Density	3.05 - 3.15 g/cc	0.110 - 0.114 lb/in³	ASTM D792
Deformation	1.1 - 1.2 %	1.1 - 1.2 %	total
	@Temperature 150 °C, Time 86400 sec, Pressure 0.981 MPa	@Temperature 302 °F, Time 24.0 hour, Pressure 142 psi	
	1.4 - 2.1 %	1.4 - 2.1 %	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	
	3.8 - 4.9 %	3.8 - 4.9 %	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	
	10 - 11 %	10 - 11 %	total
	@Temperature 150 °C, Time 86400 sec, Pressure 4.90 MPa	@Temperature 302 °F, Time 24.0 hour, Pressure 711 psi	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	64 - 68	64 - 68	ASTM D2240
Tensile Strength, Ultimate	14.7 - 27.5 MPa	2130 - 3980 psi	ASTM D638
Elongation at Break	120 - 280 %	120 - 280 %	ASTM D638
Compressive Strength	9.81 - 10.3 MPa	1420 - 1490 psi	1% Deformation; ASTM D695
Izod Impact, Notched (ISO)	11.0 - 12.0 kJ/m²	5.23 - 5.71 ft-lb/in²	ASTM D256
Coefficient of Friction	0.12	0.12	
Coefficient of Friction, Static	0.060	0.060	

Limiting Pressure Velocity Mechanical Properties	Metric 0.00409 - 0.00441 MPa-m/sec	English 117 - 126 psi-ft/min	3 m/min Comments
	0.00572 - 0.00621 MPa-m/sec	163 - 177 psi-ft/min	30 m/min
	0.00654 - 0.08175 MPa-m/sec	187 - 2334 psi-ft/min	300 m/min

Thermal Properties	Metric	English	Comments
CTE, linear	80.0 - 95.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	44.4 - 52.8 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM D696
	@ Temperature 25.0 - 100 $^\circ\text{C}$	@ Temperature 77.0 - 212 $^\circ\text{F}$	
	95.0 - 110 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	52.8 - 61.1 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM D696
	@ Temperature 25.0 - 200 $^\circ\text{C}$	@ Temperature 77.0 - 392 $^\circ\text{F}$	
	125 - 135 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	69.4 - 75.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM D696
	@ Temperature 25.0 - 300 $^\circ\text{C}$	@ Temperature 77.0 - 572 $^\circ\text{F}$	
Thermal Conductivity	0.711 - 0.837 W/m-K	4.93 - 5.80 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	$\geq 1.00\text{e}+8$ ohm-cm	$\geq 1.00\text{e}+8$ ohm-cm	ASTM D257
Surface Resistance	$\geq 1.00\text{e}+10$ ohm	$\geq 1.00\text{e}+10$ ohm	50% rel. humidity; ASTM D257

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