

Polikim EFALON® K-35 PTFE, 35% Carbon Filled

Category : Polymer , Thermoplastic , Fluoropolymer , PTFE , Polytetrafluoroethylene (PTFE), Carbon Fiber Filled

Material Notes:

K25 and K35 have less thermal expansion, higher wear resistance, less deformation under load properties compared to virgin Eفالون® (PTFE). Applications: Bearings, piston rings, gaskets, seal rings. Information provided by Polikim Polimer.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Polikim-EFALON-K-35-PTFE-35-Carbon-Filled.php

Physical Properties	Metric	English	Comments
Density	2.00 - 2.10 g/cc	0.0723 - 0.0759 lb/in ³	ASTM D792
Deformation	0.30 - 1.8 %	0.30 - 1.8 %	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	
	1.3 - 1.5 %	1.3 - 1.5 %	total
	@Temperature 150 °C, Time 86400 sec, Pressure 0.981 MPa	@Temperature 302 °F, Time 24.0 hour, Pressure 142 psi	
	2.3 - 4.3 %	2.3 - 4.3 %	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	
	5.0 - 6.0 %	5.0 - 6.0 %	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	66 - 70	66 - 70	ASTM D2240
Tensile Strength, Ultimate	10.8 - 15.7 MPa	1560 - 2280 psi	ASTM D638
Elongation at Break	55 - 90 %	55 - 90 %	ASTM D638
Compressive Strength	9.32 - 11.8 MPa	1350 - 1710 psi	1% Deformation; ASTM D695
Coefficient of Friction	0.16	0.16	
Coefficient of Friction, Static	0.13	0.13	
Limiting Pressure Velocity	0.00360 - 0.00376 MPa-m/sec	103 - 107 psi-ft/min	3 m/min
	0.00409 - 0.00654		

Mechanical Properties	MPa-m/sec Metric	117 - 187 psi-ft/min English	30 m/min Comments
	0.004905 - 0.008175 MPa-m/sec	140.0 - 233.4 psi- ft/min	300 m/min

Thermal Properties	Metric	English	Comments
CTE, linear	75.0 - 80.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	41.7 - 44.4 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM D696
	@Temperature 25.0 - 100 °C	@Temperature 77.0 - 212 °F	
	90.0 - 110 $\mu\text{m}/\text{m}\cdot\text{°C}$	50.0 - 61.1 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature 25.0 - 200 °C	@Temperature 77.0 - 392 °F	ASTM D696
	120 - 140 $\mu\text{m}/\text{m}\cdot\text{°C}$	66.7 - 77.8 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM D696
	@Temperature 25.0 - 300 °C	@Temperature 77.0 - 572 °F	
Thermal Conductivity	0.795 - 0.879 W/m-K	5.51 - 6.09 BTU-in/hr- ft ² -°F	
Maximum Service Temperature, Air	270 °C	518 °F	continuous
Minimum Service Temperature, Air	-260 °C	-436 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 100 ohm-cm	>= 100 ohm-cm	ASTM D257
Surface Resistance	>= 10000 ohm	>= 10000 ohm	50% rel. humidity; ASTM D257

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