SONGHAN Plastic Technology Co., Ltd.

Omnia Plastica PVDF Kynar

Category : Polymer , Thermoplastic , Fluoropolymer , PVDF , Polyvinylidinefluoride (PVDF), Molded/Extruded

Material Notes:

PVDF is a relatively new fluoropolymer. Like the other fluoropolymers, its best feature is its chemical resistance. The mechanical features of PVDF are notably higher than PTFE and it does not suffer strain under load.Features:Chemical: it has the typical high chemical properties of the fluoropolymers.Mechanical: compared to PTFE it has higher mechanical features, such as tensile stress and compressive strength.Very good resistance to low and high temperatures up to 150° C. as well as UV. ray resistance.Excellent dimensional stability.Low flammabilityLow friction coefficientColour: naturalWeak Point:Compared to PTFE the resistance to high temperature is lower (150 °C).Application:Chemical: the excellent chemical resistance to acids and alkali is typical of the fluoropolymers. It is used for components in the petrochemical and chemical industries.Food contact: physiologically inert, it is approved for food contact by the most important international standards organisations. Thanks to this feature, it is widely used for components in food machinery, pumps for liquid food, etc.Electrical: very good dielectric properties, halogen-free self-extinguishing power, weatherproof: these features make PVDF increasingly indispensable in this field.Mechanical: thanks to the low friction coefficient, it is ideal for bearings, even when operating in water.Information provided by Omnia Plastica s.p.a. for semifinished products such as sheet, rod, and tube.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Omnia-Plastica-PVDF-Kynar.php

Physical Properties	Metric	English	Comments
Density	1.78 g/cc	0.0643 lb/in³	ISO.1183 DIN.53479
Moisture Absorption at Equilibrium	0.00 %	0.00%	50% relative humidity
Water Absorption at Saturation	0.00 %	0.00 %	23°C

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	62	62	dry sample; ISO2039.2
Ball Indentation Hardness	100 MPa	14500 psi	ISO2039.1 DIN.53456
Tensile Strength at Break	55.0 MPa	7980 psi	ISO.527 DIN.53455
Elongation at Break	300 %	300 %	ISO.527 DIN.53455
Tensile Modulus	2.00 GPa	290 ksi	ISO.527 DIN.53455
Compressive Strength	3.00 MPa	435 psi	1% strain over 1000 hours; ISO.899 DIN.53444
Charpy Impact Unnotched	NB	NB	7.5 J; ISO.R179 DIN.53453
Charpy Impact, Notched	0.700 J/cm ²	3.33 ft-lb/in ²	ISO179/3C DIN.53453
Coefficient of Friction, Dynamic	0.30	0.30	on dry ground steel; load =0.05MPa; speed =0.6 m/s

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Thermal Properties	Metric	English	Comments
	130 μm/m-°C	72.2 µin/in-°F	
CTE, linear	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °F	
Thermal Conductivity	0.110 W/m-K	0.763 BTU-in/hr-ft²-°F	DIN.52612
Melting Point	180 °C	356 °F	
Maximum Service Temperature, Air	140 °C	284 °F	Maximum operating temperature continuously for 5000 hours based on a tensile stress of 50% at 23° C.
	155 °C	311 °F	short period, no load
Deflection Temperature at 1.8 MPa (264 psi)	95.0 °C	203 °F	ISO.75 DIN.53461
Minimum Service Temperature, Air	-50.0 °C	-58.0 °F	impact conditions and heavy loads not considered
Flammability, UL94	V-0	V-0	
Oxygen Index	43 %	43 %	ISO.4589

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	ISO.93 DIN.53482
Dielectric Constant	8.0	8.0	ISO.250 DIN.53483
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	120 kV/mm	3050 kV/in	ISO.243 DIN.53481
Dissipation Factor	0.060	0.060	ISO.250 DIN.53483
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

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