

CPC - Vycom FLAMETEC™ KYTEC® PVDF

Category : Polymer , Thermoplastic , Fluoropolymer , PVDF

Material Notes:

Kytec® PVDF, the homopolymer of 1, 1-difluoroethene, is a tough engineering thermoplastic that offers a unique balance of properties.

Kytec has the characteristic stability of fluoropolymers when exposed to harsh thermal, chemical, and ultraviolet environments. Kytec has a continuous use temperature of 235° F. Kytec is chemically resistant to most acids, bases, and organic solvents and is ideally suited for handling wet or dry chlorine, bromine and other halogens.

FEATURES AND BENEFITS Weldability- Easy to fabricate and thermoplastically weldable. Strength- Good tensile strength and mechanical abrasion resistance. Purity- An ultra-pure material. Chemical Resistance-

Resistance to a broad range of chemistries. Fire Safe- Meets FM4910 criteria and is FM listed. Information provided by Compression

Polymers Corp - Vycom

Order this product through the following link:

http://www.lookpolymers.com/polymer_CPC-Vycom-FLAMETEC-KYTEC-PVDF.php

Physical Properties	Metric	English	Comments
Density	1.77 - 1.79 g/cc	0.0639 - 0.0647 lb/in ³	ASTM D792
Water Absorption	0.020 %	0.020 %	ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	76 - 80	76 - 80	ASTM D2240
Tensile Strength, Ultimate	41.4 MPa	6000 psi	ASTM D638
Tensile Strength, Yield	44.8 MPa	6500 psi	ASTM D638
Elongation at Break	50 - 250 %	50 - 250 %	ASTM D638
Elongation at Yield	10 %	10 %	ASTM D638
Tensile Modulus	1.55 GPa	225 ksi	ASTM D638
Flexural Strength	48.0 - 55.2 MPa	6960 - 8000 psi	ASTM D790
Flexural Modulus	1.72 GPa	250 ksi	ASTM D790
Compressive Strength	>= 61.0 MPa	>= 8850 psi	ASTM D695
Izod Impact, Unnotched	0.801 - 1.33 J/cm	1.50 - 2.50 ft-lb/in	ASTM D256
Coefficient of Friction	0.10 - 0.25	0.10 - 0.25	ASTM D1894
Coefficient of Friction, Static	0.15 - 0.25	0.15 - 0.25	ASTM D1894

Thermal Properties	Metric	English	Comments
	101 - 121 µm/m-°C	56.0 - 67.0 µin/in-°F	

CTE linear Thermal Properties	Metric @ Temperature 20.0 °C	English @ Temperature 68.0 °F	ASTM D696 Comments
Thermal Conductivity	0.190 - 0.220 W/m-K	1.32 - 1.53 BTU-in/hr-ft ² -°F	ASTM C177
Deflection Temperature at 0.46 MPa (66 psi)	125 - 140 °C	257 - 284 °F	
Deflection Temperature at 1.8 MPa (264 psi)	105 - 116 °C	221 - 240 °F	
Brittleness Temperature	-43.3 °C	-46.0 °F	ASTM D2236
Oxygen Index	43 %	43 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.40e+15 ohm-cm	1.40e+15 ohm-cm	ASTM D257
Dielectric Constant	6.0	6.0	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	6.8	6.8	
	@Frequency 60 Hz	@Frequency 60 Hz	ASTM D150
	6.9	6.9	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	12.2 kV/mm	310 kV/in	ASTM D149
	@Thickness 3.17 mm	@Thickness 0.125 in	
Dissipation Factor	0.013	0.013	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.032	0.032	
	@Frequency 60 Hz	@Frequency 60 Hz	ASTM D150
	0.153	0.153	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Arc Resistance	>= 50 sec	>= 50 sec	ASTM D495

Descriptive Properties	Value	Comments
Factory Mutual	4910 Listed	File #3D1Q5.AM

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