

Solvay Specialty Polymers Hylar® 460 PVDF Polyvinylidene Fluoride (discontinued **)

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

Material Notes:

Data provided by the manufacturer. Hylar® polymers have the characteristic stability of fluoropolymers combined with a unique polarity that influences its solubility and electrical properties. In addition to standard molding and extrusion, Hylar® polymers lend themselves well to solution-applied coatings.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Hylar-460-PVDF-Polyvinylidene-Fluoride-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.75 - 1.77 g/cc	0.0632 - 0.0639 lb/in ³	ASTM D792
Water Absorption	0.040 %	0.040 %	ASTM D570
Linear Mold Shrinkage	0.025 - 0.030 cm/cm	0.025 - 0.030 in/in	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	74 - 80	74 - 80	ASTM D2240
Tensile Strength, Ultimate	31.0 - 41.0 MPa	4500 - 5950 psi	ASTM D638
Tensile Strength, Yield	28.0 - 41.0 MPa	4060 - 5950 psi	ASTM D638
Elongation at Break	50 - 250 %	50 - 250 %	ASTM D638
Elongation at Yield	10 %	10 %	ASTM D638
Tensile Modulus	1.03 - 1.38 GPa	149 - 200 ksi	ASTM D638
Flexural Yield Strength	45.0 - 52.0 MPa	6530 - 7540 psi	ASTM D790
Flexural Modulus	1.138 - 1.793 GPa	165.1 - 260.1 ksi	ASTM D790
Izod Impact, Notched	1.06 - 2.12 J/cm	1.99 - 3.97 ft-lb/in	
Izod Impact, Unnotched	8.00 - 20.0 J/cm	15.0 - 37.5 ft-lb/in	Low Temp; ASTM D256
Coefficient of Friction, Dynamic	0.10 - 0.25	0.10 - 0.25	ASTM D1894
Coefficient of Friction, Static	0.14 - 0.20	0.14 - 0.20	ASTM D1894

Thermal Properties	Metric	English	Comments
CTE, linear	80.0 - 140 µm/m-°C	44.4 - 77.8 µin/in-°F	ASTM D696
	@Temperature 20.0 °C	@Temperature 68.0 °F	

Thermal Properties	Metric	English	Comments
Specific Heat Capacity	1.50 J/g-°C	0.359 BTU/lb-°F	
Thermal Conductivity	0.190 - 0.220 W/m-K	1.32 - 1.53 BTU-in/hr-ft ² -°F	ASTM C177
Melting Point	160 °C	320 °F	ASTM D3418
Maximum Service Temperature, Air	150 °C	302 °F	No oxidative or thermal degradation after 5 years at 150°C (300°F)
Deflection Temperature at 1.8 MPa (264 psi)	80.0 - 90.0 °C	176 - 194 °F	TMA
Brittleness Temperature	<= -62.0 °C	<= -79.6 °F	ASTM D2236
Flammability, UL94	V-0	V-0	
Oxygen Index	43 %	43 %	ASTM D2863

Optical Properties	Metric	English	Comments
Refractive Index	1.42	1.42	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.10e+15 ohm-cm	1.10e+15 ohm-cm	ASTM D257
Dielectric Constant	6.0	6.0	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Constant	7.2	7.2	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	
Dielectric Strength	10.4 kV/mm	264 kV/in	Short-Time 500 V/sec
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.030	0.030	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	
Dissipation Factor	0.16	0.16	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Arc Resistance	>= 50 sec	>= 50 sec	ASTM D495

Processing Properties	Metric	English	Comments
Processing Temperature	215 - 232 °C	419 - 450 °F	Preheat

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