

Solvay Specialty Polymers Solef® 11008 PVDF Copolymer (discontinued **)

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

Material Notes:

Key features of this grade: Low Viscosity, Wire & Cable, Plenum, Formulated. Recommended processing is extrusion. Available as powder & granules. General information about SOLEF® PVDF: SOLEF® PVDF is a fluorinated semi-crystalline thermoplastic which is obtained by polymerizing vinylidene fluoride. Important properties include excellent chemical resistance to most aggressive substances and solvents, excellent mechanical strength and toughness, high abrasion resistance, high temperature capabilities, excellent aging resistance, high purity, resistance to UV and nuclear radiation, excellent intrinsic fire resistance, resistance to weathering, low permeability to most gases and liquids, and easily melt-processed by standard methods of molding and extrusion. Tensile properties are achieved with varying methods of sample fabrication. Information provided by Solvay Solexis, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Solef-11008-PVDF-Copolymer-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.78 g/cc	0.0643 lb/in ³	ISO 1183
Water Absorption	<= 0.040 %	<= 0.040 %	ISO 62 (method 1)
Linear Mold Shrinkage	0.020 - 0.030 cm/cm	0.020 - 0.030 in/in	
Melt Flow	8.0 g/10 min	8.0 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 230 °C	@Load 4.76 lb, Temperature 446 °F	
	24 g/10 min	24 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 230 °C	@Load 11.0 lb, Temperature 446 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	72	72	ASTM D2240
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Tensile Strength, Ultimate	20.0 - 40.0 MPa	2900 - 5800 psi	50 mm/min; ASTM D638
Tensile Strength, Yield	30.0 - 35.0 MPa	4350 - 5080 psi	50 mm/min; ASTM D638
Elongation at Break	200 - 600 %	200 - 600 %	50 mm/min; ASTM D638
Elongation at Yield	10 - 12 %	10 - 12 %	50 mm/min; ASTM D638
Modulus of Elasticity	1.10 GPa	160 ksi	1 mm/min; ASTM D638
Flexural Yield Strength	40.0 MPa	5800 psi	2 mm/min; ASTM D790
Flexural Modulus	1.00 GPa	145 ksi	2 mm/min; ASTM D790

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched	@Thickness 4.00 mm, Temperature 23.0 °C	@Thickness 0.157 in, Temperature 73.4 °F	Notched V 10 mm; ASTM D256
Coefficient of Friction	0.20 - 0.30	0.20 - 0.30	ASTM D1894
Coefficient of Friction, Static	0.20 - 0.40	0.20 - 0.40	ASTM D1894
Taber Abrasion, mg/1000 Cycles	5.0 - 15	5.0 - 15	CS10 / 1 kg

Thermal Properties	Metric	English	Comments
Heat of Fusion	37.0 J/g	15.9 BTU/lb	Crystallization Heat
	39.0 J/g	16.8 BTU/lb	80°C to end of melting
CTE, linear	140 - 160 µm/m-°C @Temperature 20.0 °C	77.8 - 88.9 µin/in-°F @Temperature 68.0 °F	ASTM D696
Specific Heat Capacity	1.20 J/g-°C	0.287 BTU/lb-°F	
	1.60 J/g-°C @Temperature 100 °C	0.382 BTU/lb-°F @Temperature 212 °F	
Thermal Conductivity	0.190 W/m-K	1.32 BTU-in/hr-ft²-°F	ASTM C177
Melting Point	160 °C	320 °F	Crystallinity by DSC; ASTM D 3418
Crystallization Temperature	12.0 °C	53.6 °F	
Deflection Temperature at 0.46 MPa (66 psi)	100 °C @Thickness 4.00 mm	212 °F @Thickness 0.157 in	after annealing 150°C 16 hr; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	52.0 °C @Thickness 4.00 mm	126 °F @Thickness 0.157 in	after annealing 150°C 16 hr; ASTM D648
Vicat Softening Point	150 °C @Load 1.00 kg, Thickness 4.00 mm	302 °F @Load 2.20 lb, Thickness 0.157 in	ISO 306
Brittleness Temperature	-17.0 °C	1.40 °F	ASTM D746A
Glass Transition Temp, Tg	-29.0 °C	-20.2 °F	DMTA
Decomposition Temperature	330 - 370 °C	626 - 698 °F	Thermal Stability via TGA : beginning - and at 1% weight loss in air
Flammability, UL94	V-0	V-0	
Oxygen Index	44 - 65 %	44 - 65 %	sheet; ASTM D2863

Thermal Properties	@Thickness 3.00 mm Metric	@Thickness 0.118 in English	Comments
Electrical Properties	Metric	English	Comments
Electrical Resistivity	$\geq 1.00 \times 10^{14}$ ohm-cm	$\geq 1.00 \times 10^{14}$ ohm-cm	Intensity = 10 mA after 2 min @ 23°C; ASTM D 257; DIN 53483
Surface Resistance	$\geq 1.00 \times 10^{14}$ ohm	$\geq 1.00 \times 10^{14}$ ohm	Voltage < 1 V after 2 min - 500 V; ASTM D 257/DIN 53483
Dielectric Constant	7.0 @Frequency 1e+6 Hz	7.0 @Frequency 1e+6 Hz	ASTM D150

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