

Solvay Specialty Polymers Solef® 8808/0902 Carbon Fiber Reinforced PVDF Compound (discontinued **)

Category : Polymer , Thermoplastic , Fluoropolymer , PVDF , Polyvinylidene fluoride (PVDF), with Carbon Fiber

Material Notes:

Key features of this grade: Carbon Fiber Reinforcement, Formulated. Recommended processing is injection. Available as 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-88080902-Carbon-Fiber-Reinforced-PVDF-Compound-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.78 g/cc	0.0643 lb/in ³	ISO 1183
Water Absorption	<= 0.050 %	<= 0.050 %	ISO 62 (method 1)
Linear Mold Shrinkage	<= 0.010 cm/cm	<= 0.010 in/in	
Melt Flow	3.0 g/10 min	3.0 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 230 °C	@Load 4.76 lb, Temperature 446 °F	
	9.0 g/10 min	9.0 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	82	82	ASTM D2240
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Tensile Strength, Ultimate	80.0 - 120 MPa	11600 - 17400 psi	50 mm/min; ASTM D638
Elongation at Break	1.0 - 4.0 %	1.0 - 4.0 %	50 mm/min; ASTM D638
Modulus of Elasticity	10.0 GPa	1450 ksi	1 mm/min; ASTM D638
Flexural Yield Strength	170 MPa	24700 psi	2 mm/min; ASTM D790
Flexural Modulus	7.50 GPa	1090 ksi	2 mm/min; ASTM D790
	0.600 J/cm	1.12 ft-lb/in	

Mechanical Properties	Metric	English	Comments
	@ 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

Thermal Properties	Metric	English	Comments
Heat of Fusion	59.0 J/g	25.4 BTU/lb	Crystallization Heat
	67.0 J/g	28.8 BTU/lb	80°C to end of melting
CTE, linear	70.0 - 90.0 µm/m-°C @Temperature 20.0 °C	38.9 - 50.0 µin/in-°F @Temperature 68.0 °F	ASTM D696
Thermal Conductivity	0.330 W/m-K	2.29 BTU-in/hr-ft²-°F	ASTM C177
Melting Point	174 °C	345 °F	Crystallinity by DSC; ASTM D 3418
Crystallization Temperature	140 °C	284 °F	
Deflection Temperature at 0.46 MPa (66 psi)	170 °C @Thickness 4.00 mm	338 °F @Thickness 0.157 in	after annealing 150°C 16 hr; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	158 °C @Thickness 4.00 mm	316 °F @Thickness 0.157 in	after annealing 150°C 16 hr; ASTM D648
Vicat Softening Point	172 °C @Load 1.00 kg, Thickness 4.00 mm	342 °F @Load 2.20 lb, Thickness 0.157 in	ISO 306
Brittleness Temperature	>= 0.000 °C	>= 32.0 °F	ASTM D746A
Glass Transition Temp, Tg	-35.0 °C	-31.0 °F	DMTA
Decomposition Temperature	330 - 400 °C	626 - 752 °F	Thermal Stability via TGA : beginning - and at 1% weight loss in air
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	>= 1.00e+14 ohm-cm	>= 1.00e+14 ohm-cm	Intensity = 10 mA after 2 min @ 23°C; ASTM D 257; DIN 53483

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