

Solvay Specialty Polymers Solef® 31508 Polyvinylidene Fluoride (PVDF) (Unverified Data**)

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

Material Notes:

Solef® 31508 PVDF copolymer is a low viscosity and very flexible grade for Wire & Cable applications. Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Solef-31508-Polyvinylidene-Fluoride-PVDF-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.75 - 1.80 g/cc	1.75 - 1.80 g/cc	ASTM D792
Water Absorption	<= 0.040 % @Temperature 23.0 °C, Time 86400 sec	<= 0.040 % @Temperature 73.4 °F, Time 24.0 hour	ASTM D570
Linear Mold Shrinkage, Flow	0.020 - 0.030 cm/cm	0.020 - 0.030 in/in	
Melt Flow	3.0 - 8.0 g/10 min @Load 2.16 kg, Temperature 230 °C	3.0 - 8.0 g/10 min @Load 4.76 lb, Temperature 446 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	53 @Thickness 2.00 mm	53 @Thickness 0.0787 in	ASTM D2240
Tensile Strength at Break	14.0 - 30.0 MPa @Thickness 2.00 mm, Temperature 23.0 °C	2030 - 4350 psi @Thickness 0.0787 in, Temperature 73.4 °F	Type IV, 50 mm/min; ASTM D638
Tensile Strength, Yield	14.0 - 35.0 MPa @Thickness 2.00 mm, Temperature 23.0 °C	2030 - 5080 psi @Thickness 0.0787 in, Temperature 73.4 °F	Type IV, 50 mm/min; ASTM D638
Elongation at Break	350 - 600 % @Thickness 2.00 mm, Temperature 23.0 °C	350 - 600 % @Thickness 0.0787 in, Temperature 73.4 °F	Type IV, 50 mm/min; ASTM D638
Elongation at Yield	10 - 12 % @Thickness 2.00 mm, Temperature 23.0 °C	10 - 12 % @Thickness 0.0787 in, Temperature 73.4 °F	Type IV, 50 mm/min; ASTM D638
Tensile Modulus	0.400 - 0.600 GPa @Thickness 2.00 mm, Temperature 23.0 °C	58.0 - 87.0 ksi @Thickness 0.0787 in, Temperature 73.4 °F	Type IV, 1.0 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched	@Thickness 4.00 mm, Temperature 23.0 °C	@Thickness 0.157 in, Temperature 73.4 °F	2 m/s, Partial Break; ASTM D6110
Coefficient of Friction, Dynamic	0.20 - 0.30	0.20 - 0.30	vs. Itself; ASTM D1894
Coefficient of Friction, Static	0.20 - 0.40	0.20 - 0.40	vs. Itself; ASTM D1894
Taber Abrasion, mg/1000 Cycles	5.0 - 10 @Load 1.00 kg	5.0 - 10 @Load 2.20 lb	CS-10 Wheel; ASTM D4060

Thermal Properties	Metric	English	Comments
Heat of Fusion	22.0 - 28.0 J/g	9.46 - 12.0 BTU/lb	Crystallization Heat; ASTM D3417
	23.0 - 29.0 J/g	9.89 - 12.5 BTU/lb	ASTM D3417
CTE, linear, Parallel to Flow	130 - 150 $\mu\text{m}/\text{m}\cdot\text{°C}$ @Temperature 0.000 - 40.0 °C	72.2 - 83.3 $\mu\text{in}/\text{in}\cdot\text{°F}$ @Temperature 32.0 - 104 °F	ASTM D696
Specific Heat Capacity	1.20 J/g-°C @Temperature 23.0 °C	0.287 BTU/lb-°F @Temperature 73.4 °F	ASTM E968
	1.60 J/g-°C @Temperature 100 °C	0.382 BTU/lb-°F @Temperature 212 °F	ASTM E968
Thermal Conductivity	0.200 W/m-K @Temperature 23.0 °C	1.39 BTU-in/hr-ft ² -°F @Temperature 73.4 °F	ASTM C177
Melting Point	167 - 171 °C	333 - 340 °F	ASTM D3418
Crystallization Temperature	125 - 131 °C	257 - 268 °F	Peak, DSC; ASTM D3418
Vicat Softening Point	110 °C	230 °F	Rate A (50°C/h), Loading 2 (50 N); ASTM D1525
Glass Transition Temp, Tg	-28.0 °C	-18.4 °F	ASTM D4065
Flammability, UL94	V-0 @Thickness 0.100 mm	V-0 @Thickness 0.00394 in	UL 94
Oxygen Index	48 % @Thickness 3.00 mm	48 % @Thickness 0.118 in	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00\text{e}+14$ ohm-cm	$\geq 1.00\text{e}+14$ ohm-cm	ASTM D257

Surface Resistance Electrical Properties	$\geq 1.00 \times 10^{14}$ ohm Metric	$\geq 1.00 \times 10^{14}$ ohm English	ASTM D257 Comments
Dielectric Constant	7.0 @Frequency 1000 Hz, Temperature 23.0 °C	7.0 @Frequency 1000 Hz, Temperature 73.4 °F	ASTM D150
Dielectric Strength	20.0 - 25.0 kV/mm @Thickness 1.00 mm, Temperature 23.0 °C	508 - 635 kV/in @Thickness 0.0394 in, Temperature 73.4 °F	ASTM D149

Descriptive Properties	Value	Comments
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Copolymer	
	Good Flexibility	
	Low Viscosity	
Forms	Granules	
Generic	PVDF	
Uses	Wire & Cable Applications	

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