

Solvay Specialty Polymers Solef® 60512 Polyvinylidene Fluoride (PVDF) (Unverified Data**)

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

Material Notes:

Solef® 60512 PVDF copolymer has high viscosity of the melt and it is a grade for offshore piping. Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Solef-60512-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	2.5 - 4.0 g/10 min @Load 10.0 kg, Temperature 230 °C	2.5 - 4.0 g/10 min @Load 22.0 lb, Temperature 446 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	70 @Thickness 2.00 mm	70 @Thickness 0.0787 in	ASTM D2240
Tensile Strength at Break	34.0 - 40.0 MPa @Thickness 2.00 mm, Temperature 23.0 °C	4930 - 5800 psi @Thickness 0.0787 in, Temperature 73.4 °F	Type IV, 50 mm/min; ASTM D638
Tensile Strength, Yield	34.0 - 40.0 MPa @Thickness 2.00 mm, Temperature 23.0 °C	4930 - 5800 psi @Thickness 0.0787 in, Temperature 73.4 °F	Type IV, 50 mm/min; ASTM D638
Elongation at Break	100 - 300 % @Thickness 2.00 mm, Temperature 23.0 °C	100 - 300 % @Thickness 0.0787 in, Temperature 73.4 °F	Type IV, 50 mm/min; ASTM D638
Elongation at Yield	9.0 - 12 % @Thickness 2.00 mm, Temperature 23.0 °C	9.0 - 12 % @Thickness 0.0787 in, Temperature 73.4 °F	Type IV, 50 mm/min; ASTM D638
Tensile Modulus	1.25 - 1.40 GPa @Thickness 2.00 mm, Temperature 23.0 °C	181 - 203 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	41.0 - 50.0 J/g	17.6 - 21.5 BTU/lb	ASTM D3417
	42.0 - 50.0 J/g	18.1 - 21.5 BTU/lb	Crystallization Heat; ASTM D3417
CTE, linear, Parallel to Flow	130 - 180 µm/m-°C @Temperature 0.000 - 40.0 °C	72.2 - 100 µin/in-°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-ft²-°F @Temperature 73.4 °F	ASTM C177
Melting Point	170 - 174 °C	338 - 345 °F	ASTM D3418
Crystallization Temperature	142 - 146 °C	288 - 295 °F	Peak, DSC; ASTM D3418
Vicat Softening Point	167 °C	333 °F	Rate A (50°C/h), Loading 2 (50 N); ASTM D1525
Glass Transition Temp, Tg	-40.0 °C	-40.0 °F	ASTM D4065

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+14 ohm-cm	>= 1.00e+14 ohm-cm	ASTM D257
Surface Resistance	>= 1.00e+14 ohm	>= 1.00e+14 ohm	ASTM D257

Descriptive Properties	Value	Comments
Availability	Africa & Middle East	

	Asia Pacific	
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Descriptive Properties	Value	Comments
	Europe	
	North America	
	South America	
Features	Copolymer	
	High Viscosity	
Generic	PVDF	
Uses	Piping	

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