

Solvay Specialty Polymers Solef[®] 6010 Polyvinylidene Fluoride (PVDF)

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

Material Notes:

Solef[®] 6010 PVDF homopolymer has medium viscosity and is typically processed by extrusion. Features: Homopolymer; Medium Viscosity
 Additional Properties: Crystallization Heat - ASTM D3417 54.0 to 60.0 J/g; Heat of Fusion - ASTM D3417 57.0 to 66.0 J/g
 Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Solef-6010-Polyvinylidene-Fluoride-PVDF.php

Physical Properties	Metric	English	Comments
Density	1.75 - 1.80 g/cc	0.0632 - 0.0650 lb/in ³	ASTM D792
Water Absorption	<= 0.040 % @Time 86400 sec	<= 0.040 % @Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.020 - 0.030 cm/cm	0.020 - 0.030 in/in	
Melt Flow	4.0 - 8.0 g/10 min @Load 5.00 kg, Temperature 230 °C	4.0 - 8.0 g/10 min @Load 11.0 lb, Temperature 446 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	73 - 80	73 - 80	1 sec; ASTM D2240
Tensile Strength at Break	30.0 - 50.0 MPa @Thickness 2.00 mm	4350 - 7250 psi @Thickness 0.0787 in	50 mm/min; ASTM D638
Tensile Strength, Yield	50.0 - 60.0 MPa @Thickness 2.00 mm	7250 - 8700 psi @Thickness 0.0787 in	50 mm/min; ASTM D638
Elongation at Break	20 - 300 %	20 - 300 %	50 mm/min; ASTM D638
Elongation at Yield	5.0 - 10 %	5.0 - 10 %	50 mm/min; ASTM D638
Tensile Modulus	1.70 - 2.50 GPa @Thickness 2.00 mm	247 - 363 ksi @Thickness 0.0787 in	1.0 mm/min; ASTM D638
Izod Impact, Notched	1.00 - 2.00 J/cm @Thickness 4.00 mm	1.87 - 3.75 ft-lb/in @Thickness 0.157 in	ASTM D256
Coefficient of Friction, Dynamic	0.15 - 0.35	0.15 - 0.35	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	5.0 - 10	CS-10 Wheel, 1000 g; ASTM D1044

Mechanical Properties	Metric	English	Comments
Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	140 $\mu\text{m/m}\cdot\text{Å}^\circ\text{C}$ @Temperature 0.000 - 40.0 $\text{Å}^\circ\text{C}$	77.8 $\mu\text{in/in}\cdot\text{Å}^\circ\text{F}$ @Temperature 32.0 - 104 $\text{Å}^\circ\text{F}$	1
Specific Heat Capacity	1.20 J/g- $\text{Å}^\circ\text{C}$ @Temperature 23.0 $\text{Å}^\circ\text{C}$	0.287 BTU/lb- $\text{Å}^\circ\text{F}$ @Temperature 73.4 $\text{Å}^\circ\text{F}$	ASTM C351
	1.60 J/g- $\text{Å}^\circ\text{C}$ @Temperature 100 $\text{Å}^\circ\text{C}$	0.382 BTU/lb- $\text{Å}^\circ\text{F}$ @Temperature 212 $\text{Å}^\circ\text{F}$	ASTM C351
Thermal Conductivity	0.200 W/m-K @Temperature 23.0 $\text{Å}^\circ\text{C}$	1.39 BTU-in/hr-ft Å^2 - $\text{Å}^\circ\text{F}$ @Temperature 73.4 $\text{Å}^\circ\text{F}$	ASTM C177
Melting Point	170 - 175 $\text{Å}^\circ\text{C}$	338 - 347 $\text{Å}^\circ\text{F}$	DSC
Crystallization Temperature	137 - 144 $\text{Å}^\circ\text{C}$	279 - 291 $\text{Å}^\circ\text{F}$	Peak; ASTM D3418
Vicat Softening Point	135 - 145 $\text{Å}^\circ\text{C}$	275 - 293 $\text{Å}^\circ\text{F}$	Rate A (50 $\text{Å}^\circ\text{C/h}$), Loading 2 (50 N)
Glass Transition Temp, Tg	-40.0 $\text{Å}^\circ\text{C}$	-40.0 $\text{Å}^\circ\text{F}$	ASTM E1356
Flammability, UL94	V-0 @Thickness 0.100 mm	V-0 @Thickness 0.00394 in	
Oxygen Index	44 % @Thickness 3.00 mm	44 % @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	$\geq 1.00\text{e}+14$ ohm	$\geq 1.00\text{e}+14$ ohm	ASTM D257
Dielectric Constant	7.0 - 10 @Frequency 1000 Hz	7.0 - 10 @Frequency 1000 Hz	ASTM D150
Dielectric Strength	20.0 - 25.0 kV/mm @Thickness 1.00 mm	508 - 635 kV/in @Thickness 0.0394 in	ASTM D149

Descriptive Properties	Value	Comments
Availability	Africa & Middle East Asia Pacific	

Descriptive Properties	Value	Comments
	Latin America	
	North America	
Processing Technique	Extrusion	

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