

Solef® 1008

polyvinylidene fluoride

Solef® 1008 PVDF is a low viscosity homopolymer resin mainly used in injection molding.

General

Material Status	• Limited Distribution		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Homopolymer • Low Viscosity		
Uses	• General Purpose		
Appearance	• White		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical	Typical Value Unit	Test method
Specific Gravity	1.75 to 1.80	ASTM D792
Melt Mass-Flow Rate (MFR)		ASTM D1238
230°C/2.16 kg	5.5 to 11 g/10 min	
230°C/5.0 kg	16 to 30 g/10 min	
Water Absorption (23°C, 24 hr)	< 0.040 %	ASTM D570
Mold Shrinkage - Linear	2.0 to 3.0 %	

Mechanical	Typical Value Unit	Test method
Tensile Modulus ^{1,2} (23°C, 2.00 mm)	1800 to 2500 MPa	ASTM D638
Tensile Strength ³		ASTM D638
Yield, 23°C, 2.00 mm	50.0 to 60.0 MPa	
Break, 23°C, 2.00 mm	30.0 to 50.0 MPa	
Tensile Elongation ³		ASTM D638
Yield, 23°C, 2.00 mm	5.0 to 10 %	
Break, 23°C, 2.00 mm	20 to 300 %	
Taber Abrasion Resistance		ASTM D4060
1000 Cycles, 1000 g, CS-10 Wheel	5.00 to 10.0 mg	
Coefficient of Friction		ASTM D1894
Dynamic	0.150 to 0.350	
Static	0.200 to 0.400	

Impact	Typical Value Unit	Test method
Charpy Notched Impact Strength - 2 m/s		ASTM D6110
23°C, 4.00 mm	40.0 to 120 J/m	

Hardness	Typical Value Unit	Test method
Shore Hardness (Shore D, 1 sec, 2.00 mm)	73 to 80	ASTM D2240

Thermal	Typical Value Unit	Test method
Glass Transition Temperature	-40.0 °C	ASTM D4065

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Thermal	Typical Value	Unit	Test method
Vicat Softening Temperature	135 to 145	°C	ASTM D1525 ⁴
Melting Temperature	170 to 175	°C	ASTM D3418
Peak Crystallization Temperature (DSC)	134 to 144	°C	ASTM D3418
CLTE - Flow (0 to 40°C)	0.00014	cm/cm/°C	ASTM D696
Specific Heat			ASTM E968
23°C	1200	J/kg/°C	
100°C	1600	J/kg/°C	
Thermal Conductivity (23°C)	0.20	W/m/K	ASTM C177
Crystallization Heat	54.0 to 60.0	J/g	ASTM D3417
Crystallization Point	137 to 144	°C	ASTM D3418
Heat of Fusion	58.0 to 67.0	J/g	ASTM D3417
Electrical	Typical Value	Unit	Test method
Surface Resistivity	> 1.0E+14	ohm	ASTM D257
Volume Resistivity	> 1.0E+14	ohm·cm	ASTM D257
Dielectric Strength (23°C)	20 to 25	kV/mm	ASTM D149
Dielectric Constant (23°C, 1.00 mm, 1 kHz)	7.00 to 10.0		ASTM D150
Flammability	Typical Value	Unit	Test method
Flame Rating (0.100 mm)	V-0		UL 94
Oxygen Index ⁵ (3.00 mm)	44	%	ASTM D2863

Notes

Typical properties: these are not to be construed as specifications.

¹ Type IV, 1.0 mm/min

² Mechanical properties are significantly affected by the sample preparation method.

³ Type IV, 50 mm/min

⁴ Rate A (50°C/h), Loading 2 (50 N)

⁵ Sheet

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