

Solef® 1006

Polyvinylidene Fluoride
Solvay Specialty Polymers

Message:

Solef® 1006 PVDF is a very low viscosity homopolymer resin mainly used in injection molding or in multifilament extrusion.

General Information			
Features	Homopolymer		
	Low Viscosity		
Uses	General Purpose		
Appearance	White		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.75 to 1.80	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	30 to 40	g/10 min	ASTM D1238
Water Absorption (23°C, 24 hr)	< 0.040	%	ASTM D570
Mold Shrinkage - Linear	2.0 to 3.0	%	
Coefficient of Friction			ASTM D1894
Dynamic	0.150 to 0.350		
Static	0.200 to 0.400		
Charpy Notched Impact Strength - 2 m/s (23°C, 4.00 mm)	25.0 to 75.0	J/m	ASTM D6110
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

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

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C, 2.00 mm)	1800 to 2600	MPa	ASTM D638
Tensile Strength ¹			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 ²			ASTM D638
Yield, 23°C, 2.00 mm	5.0 to 10	%	
Break, 23°C, 2.00 mm	20 to 300	%	

Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-10 Wheel)	5.00 to 10.0	mg	ASTM D4060
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-40.0	°C	ASTM D4065
Vicat Softening Temperature	135 to 145	°C	ASTM D1525 ³
Melting Temperature	170 to 175	°C	ASTM D3418
Peak Crystallization Temperature (DSC)	134 to 144	°C	ASTM D3418
CLTE - Flow (0 to 40°C)	1.4E-4	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
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+14	ohms	ASTM D257
Volume Resistivity	> 1.0E+14	ohms·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	Nominal Value	Unit	Test Method
Flame Rating (0.100 mm)	V-0		UL 94
Oxygen Index ⁴ (3.00 mm)	44	%	ASTM D2863
NOTE			
1.	Type IV, 50 mm/min		
2.	Type IV, 50 mm/min		
3.	Rate A (50°C/h), Loading 2 (50 N)		
4.	Sheet		

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