

Solef® 9007

Polyvinylidene Fluoride

Solvay Specialty Polymers

Message:

Solef® 9007 PVDF homopolymer has low viscosity and is used in film extrusion and injection molding.

General Information			
Features	Homopolymer		
	Low Viscosity		
Processing Method	Film 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)			ASTM D1238
230°C/3.8 kg	16 to 26	g/10 min	
230°C/5.0 kg	20 to 38	g/10 min	
Molding Shrinkage - Flow	2.0 to 3.0	%	
Water Absorption (23°C, 24 hr)	< 0.040	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 1 sec, 2.00 mm)	73 to 80		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹ (23°C, 2.00 mm)	1400 to 2200	MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield, 23°C, 2.00 mm	45.0 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	%	
Coefficient of Friction			ASTM D1894
vs. Itself - Dynamic	0.15 to 0.35		
vs. Itself - Static	0.20 to 0.40		
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-10 Wheel)	5.00 to 10.0	mg	ASTM D4060
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁴ (23°C, 4.00 mm)	60.0 to 120	J/m	ASTM D6110
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-40.0	°C	ASTM D4065

Melting Temperature	162 to 168	°C	ASTM D3418
Peak Crystallization Temperature (DSC)	133 to 140	°C	ASTM D3418
Crystallization Heat	53.0 to 60.0	J/g	ASTM D3418
Heat of Fusion	53.0 to 60.0	J/g	ASTM D3418
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, 1.00 mm)	20 to 25	kV/mm	ASTM D149
Dielectric Constant (23°C, 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 (3.00 mm)	44	%	ASTM D2863
NOTE			
1.	Type IV, 1.0 mm/min		
2.	Type IV, 50 mm/min		
3.	Type IV, 50 mm/min		
4.	2 m/s		

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