

Solef® 6010

Polyvinylidene Fluoride

Solvay Specialty Polymers

Message:

Solef® 6010 PVDF homopolymer has medium viscosity and is typically processed by extrusion.

General Information			
Features	Homopolymer		
	Medium Viscosity		
Processing Method	Extrusion		
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/5.0 kg)	4.0 to 8.0	g/10 min	ASTM D1238
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)	1700 to 2500	MPa	ASTM D638
Tensile Strength ²			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	%	
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)	100 to 200	J/m	ASTM D6110
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-40.0	°C	ASTM D4065
Vicat Softening Temperature	135 to 145	°C	ASTM D1525 ⁵
Melting Temperature	170 to 175	°C	ASTM D3418
Peak Crystallization Temperature (DSC)	137 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
Crystallization Heat	54.0 to 60.0	J/g	ASTM D3417
Heat of Fusion	57.0 to 66.0	J/g	ASTM D3417
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		
5.	Rate A (50°C/h), Loading 2 (50 N)		

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

