

Solvay Specialty Polymers Solef® 1008 PVDF Homopolymer

Polyvinylidene fluoride (PVDF), Molded/Extruded

Solvay Specialty Polymers

产品说明

Key features of this grade: Low Viscosity, All Purpose, Injection, Virgin. Recommended processing is injection. Available as powder & granules. General information about SOLEF® PVDF: SOLEF® PVDF is a fluorinated semi-crystalline thermoplastic which is obtained by polymerizing vinylidene fluoride. Important properties include excellent chemical resistance to most aggressive substances and solvents, excellent mechanical strength and toughness, high abrasion resistance, high temperature capabilities, excellent aging resistance, high purity, resistance to UV and nuclear radiation, excellent intrinsic fire resistance, resistance to weathering, low permeability to most gases and liquids, and easily melt-processed by standard methods of molding and extrusion. Tensile properties are achieved with varying methods of sample fabrication. Information provided by Solvay Solexis, Inc.

物理性能	额定值 (公制)	额定值 (英制)	测试方法
密度	1.78 g/cc	0.0643 lb/in ³	ISO 1183
吸水率	<= 0.040 %	<= 0.040 %	ISO 62 (method 1)
线性成型收缩率	0.020 - 0.030 cm/cm	0.020 - 0.030 in/in	
熔体流动速率	8.0 g/10 min @Load 2.16 kg, Temperature 230 °C	8.0 g/10 min @Load 4.76 lb, Temperature 446 °F	ASTM D1238
	24 g/10 min @Load 5.00 kg, Temperature 230 °C	24 g/10 min @Load 11.0 lb, Temperature 446 °F	ASTM D1238
机械性能	额定值 (公制)	额定值 (英制)	测试方法
肖氏硬度 (邵氏 D)	78 @Thickness 2.00 mm	78 @Thickness 0.0787 in	ASTM D2240
极限抗拉强度	35.0 - 50.0 MPa	5080 - 7250 psi	50 mm/min; ASTM D638
抗张强度(屈服)	53.0 - 57.0 MPa	7690 - 8270 psi	50 mm/min; ASTM D638
伸长率 (断裂)	20 - 50 %	20 - 50 %	50 mm/min; ASTM D638
屈服伸长率	5.0 - 10 %	5.0 - 10 %	50 mm/min; ASTM D638
弹性模量	2.60 GPa	377 ksi	1 mm/min; ASTM D638
弯曲强度	78.0 MPa	11300 psi	2 mm/min; ASTM D790
弯曲模量	2.20 GPa	319 ksi	2 mm/min; ASTM D790
悬臂梁缺口冲击强度	0.550 J/cm @Thickness 4.00 mm, Temperature 23.0 °C	1.03 ft-lb/in @Thickness 0.157 in, Temperature 73.4 °F	Notched V 10 mm; ASTM D256
摩擦系数	0.20 - 0.30	0.20 - 0.30	ASTM D1894
静态摩擦系数	0.20 - 0.40	0.20 - 0.40	ASTM D1894
泰伯磨损, 毫克/1000次	5.0 - 10	5.0 - 10	CS10 / 1 kg
电气性能	额定值 (公制)	额定值 (英制)	测试方法
电阻率	>= 1.00e+14 ohm-cm	>= 1.00e+14 ohm-cm	Intensity = 10 mA after 2 min @ 2
表面电阻	>= 1.00e+14 ohm	>= 1.00e+14 ohm	Voltage < 1 V after 2 min - 500
热性能	额定值 (公制)	额定值 (英制)	测试方法
Heat of Fusion	59.0 J/g	25.4 BTU/lb	Crystallization Heat
	67.0 J/g	28.8 BTU/lb	80°C to end of melting
线性热膨胀系数	120 - 140 μm/m-°C @Temperature 20.0 °C	66.7 - 77.8 μin/in-°F @Temperature 68.0 °F	ASTM D696
	比热容	1.20 J/g-°C	0.287 BTU/lb-°F
导热系数	1.60 J/g-°C @Temperature 100 °C	0.382 BTU/lb-°F @Temperature 212 °F	
	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	ASTM C177

熔融温度	174 °C	345 °F	Crystallinity by DSC; ASTM D 3418
Crystallization Temperature	140 °C	284 °F	
载荷下热变形温度(0.46 MPa)	148 °C @Thickness 4.00 mm	298 °F @Thickness 0.157 in	after annealing 150°C 16 hr; ASTM
载荷下热变形温度(1.8 MPa)	115 °C @Thickness 4.00 mm	239 °F @Thickness 0.157 in	after annealing 150°C 16 hr; ASTM
维卡软化温度	171 °C @Load 1.00 kg, Thickness 4.00 mm	340 °F @Load 2.20 lb, Thickness 0.157 in	ISO 306
脆化温度	0.000 - 10.0 °C	32.0 - 50.0 °F	ASTM D746A
玻璃化转变温度, Tg	-30.0 °C	-22.0 °F	DMTA
分解温度	375 - 400 °C	707 - 752 °F	Thermal Stability via TGA : beginn
可燃性(UL94)	V-0	V-0	
极限氧指数	44 % @Thickness 3.00 mm	44 % @Thickness 0.118 in	sheet; ASTM D2863