

Veradel® 3100

Polyethersulfone
Solvay Specialty Polymers

Message:

Veradel 3100 polyethersulfone (PESU) is a transparent resin with very low melt flow rate and high thermal deformation temperature, excellent toughness and dimensional stability, and is resistant to water vapor, boiling water and inorganic acid. Other excellent characteristics include thermal stability, creep resistance and inherent flame retardancy. Other available grades are: low melt flow rate grade 3200 Veradel; Medium melt flow rate grade Veradel 3300, recommended for conventional injection molding; High melt flow rate grade Veradel 3400, which is easy to process into thin-walled or long flow distance parts; Very high melt flow rate grades are Veradel 3600, and compounding is recommended, especially glass fiber or carbon fiber reinforced composites. The brand was originally Gafone™PESU sales.

General Information	
UL YellowCard	E36098-100036985
Features	Good dimensional stability
	High tensile strength
	Good creep resistance
	Good adhesion
	Medium liquidity
	Good chemical resistance
	Heat resistance, high
	Hydrolysis resistance
	acid resistance
	Thermal stability, good
	Good toughness
	Compliance of Food Exposure
	General
	Medium molecular weight
Uses	Medium hardness
	Flame retardancy
	Films
	Composite
	Coating application
Agency Ratings	Adhesive
	NSF 51
	Contact manufacturer
	Transparent-Slightly Yellow
Appearance	
Forms	Powder
Processing Method	Composite
	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.37	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (380°C/2.16 kg)	10 - 13	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.60	%	ASTM D955
Water Absorption (24 hr)	0.56	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2600	MPa	ASTM D638
Tensile Strength	91.0	MPa	ASTM D638
Tensile Elongation (Break)	> 50	%	ASTM D638
Flexural Modulus	2700	MPa	ASTM D790
Flexural Strength	124	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	70	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Annealed)	200	°C	ASTM D648
Melting Temperature	225	°C	
CLTE - Flow	5.7E-5	cm/cm/°C	ASTM D696
Maximum Service Temperature	180	°C	UL 746B
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+14	ohms	ASTM D257
Volume Resistivity	1.0E+16	ohms · cm	ASTM D257
Dielectric Strength	16	kV/mm	ASTM D149
Dielectric Constant (60 Hz)	3.20		ASTM D150
Dissipation Factor (60 Hz)	4.0E-3		ASTM D150
Arc Resistance	50.0	sec	ASTM D495
Comparative Tracking Index	150	V	ASTM D3638
Flammability	Nominal Value	Unit	Test Method
Flame Rating ¹ (0.8 mm)	V-0		UL 94
Oxygen Index	40	%	ASTM D2863
Injection	Nominal Value	Unit	
Drying Temperature	177	°C	
Drying Time	2.5	hr	
Processing (Melt) Temp	343 - 385	°C	
Mold Temperature	149 - 163	°C	
Injection Rate	Fast		
Screw Compression Ratio	2.0:1.0		
Extrusion	Nominal Value	Unit	
Drying Temperature	177	°C	
Drying Time	2.5	hr	
Cylinder Zone 1 Temp.	335 - 391	°C	

Cylinder Zone 2 Temp.	335 - 391	°C
Cylinder Zone 3 Temp.	335 - 391	°C
Cylinder Zone 4 Temp.	335 - 391	°C
Cylinder Zone 5 Temp.	335 - 391	°C
Adapter Temperature	327 - 371	°C
Melt Temperature	343 - 391	°C
Die Temperature	327 - 371	°C

NOTE

1.
- These flammability ratings do not represent the risk of these materials or any other materials in actual fire situations.

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