

Veradel® 3100

polyethersulfone

Veradel® 3100 is a very low melt flow general purpose amorphous PESU resin for extrusion and injection molding. This transparent grade offers high heat deflection temperature, excellent toughness and dimensional stability and resistance to mineral acids. Other desirable properties include

thermal stability, creep resistance and inherent flame resistance. This grade was formerly marketed as Gafone™ PESU.

Similar available grade:

- Veradel 3100 ULT

General

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Features	• Acid Resistant • Chemical Resistant • Creep Resistant • Flame Retardant • Food Contact Acceptable • General Purpose • Good Adhesion • Good Dimensional Stability	• Good Thermal Stability • Good Toughness • High Heat Resistance • High Molecular Weight • High Tensile Strength • Hydrolysis Resistant • Low Flow • Medium Rigidity
Uses	• Adhesives • Coating Applications	• Compounding • Film
Agency Ratings	• NSF STD-51	
RoHS Compliance	• Contact Manufacturer	
Appearance	• Transparent - Slight Yellow	
Forms	• Pellets	
Processing Method	• Compounding • Extrusion	• Injection Molding

Physical	Typical Value	Unit	Test method
Density / Specific Gravity	1.37		ASTM D792
Melt Mass-Flow Rate (MFR) (380°C/2.16 kg)	10 to 13	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.60	%	ASTM D955
Water Absorption (24 hr)	0.56	%	ASTM D570



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Mechanical	Typical Value	Unit	Test method
Tensile Modulus	2600	MPa	ASTM D638
Tensile Strength	91.0	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield	6.9	%	
Break	> 50	%	
Flexural Modulus	2700	MPa	ASTM D790
Flexural Strength	124	MPa	ASTM D790

Impact	Typical Value	Unit	Test method
Notched Izod Impact	70	J/m	ASTM D256

Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Annealed	200	°C	
Melting Temperature	225	°C	
CLTE - Flow	5.7E-5	cm/cm/°C	ASTM D696
Maximum Service Temperature	180	°C	UL 746B

Electrical	Typical 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	Typical Value	Unit	Test method
Flame Rating ¹ (0.8 mm)	V-0		UL 94
Oxygen Index	40	%	ASTM D2863

Injection	Typical Value	Unit
Drying Temperature	177	°C
Drying Time	2.5	hr
Processing (Melt) Temp	343 to 385	°C
Mold Temperature	149 to 163	°C
Injection Rate	Fast	
Screw Compression Ratio	2.0:1.0	

Extrusion	Typical Value	Unit
Drying Temperature	177	°C
Drying Time	2.5	hr
Cylinder Zone 1 Temp.	335 to 391	°C
Cylinder Zone 2 Temp.	335 to 391	°C
Cylinder Zone 3 Temp.	335 to 391	°C



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Extrusion	Typical Value	Unit
Cylinder Zone 4 Temp.	335 to 391	°C
Cylinder Zone 5 Temp.	335 to 391	°C
Adapter Temperature	327 to 371	°C
Melt Temperature	343 to 391	°C
Die Temperature	327 to 371	°C

Notes

Typical properties: these are not to be construed as specifications.

¹ These flammability ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions.

