Veradel® 3100
polyethersulfone

Veradel® 3100 polyethersulfone (PESU) is a very low melt flow, transparent grade that offers high heat deflection temperatures, excellent toughness and dimensional stability, and resistance to steam, boiling water and mineral acids. Other desirable properties include thermal stability, creep resistance and inherent flame resistance.

Other grades are available: Veradel® 3200, a low melt flow grade; Veradel® 3300, a medium melt flow grade suggested for general purpose injection molding; Veradel® 3400, a high melt flow grade designed for easy molding of parts with thin walls or long flow lengths; and Veradel® 3600, a very high melt flow grade suggested for compounding, especially of glass or carbon fiber reinforced compounds.

This grade was formerly marketed as Gafone™ PESU

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 Tensile Strength • Hydrolysis Resistant • Medium Flow • Medium Molecular Weight • Medium Rigidity
Uses	• Adhesives • Coating Applications	• Compounding • Film
Agency Ratings	• NSF STD-51	
RoHS Compliance	• Contact Manufacturer	
Appearance	• Transparent - Slight Yellow	
Forms	• Powder	
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

Mechanical	Typical 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

Veradel® 3100
polyethersulfone

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

Veradel® 3100
polyethersulfone

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
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.

SOLVAY
asking more from chemistry®

Safety Data Sheets (SDS) are available by emailing us or contacting your sales representative. Always consult the appropriate SDS before using any of our products.

Neither Solvay Specialty Polymers nor any of its affiliates makes any warranty, express or implied, including merchantability or fitness for use, or accepts any liability in connection with this product, related information or its use. Some applications of which Solvay's products may be proposed to be used are regulated or restricted by applicable laws and regulations or by national or international standards and in some cases by Solvay's recommendation, including applications of food/feed, water treatment, medical, pharmaceuticals, and personal care. Only products designated as part of the Solviva® family of biomaterials may be considered as candidates for use in implantable medical devices. The user alone must finally determine suitability of any information or products for any contemplated use in compliance with applicable law, the manner of use and whether any patents are infringed. The information and the products are for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right.