

Veradel® 3200, 3200 ULT polyethersulfone

Veradel® 3200 is a 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. Veradel® 3200 is FDA compliant and is approved for direct food contact. 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	• Appliance Components • Appliances • Automotive Electronics • Batteries • Business Equipment	• Electrical Parts • Electrical/Electronic Applications • Food Service Applications • Industrial Applications • Microwave Cookware
Agency Ratings	• FDA Food Contact	• NSF STD-51
RoHS Compliance	• Contact Manufacturer	
Appearance	• Transparent – Slight Yellow	
Forms	• Granules	
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)	20 g/10 min	ASTM D1238
Molding Shrinkage – Flow	0.60 %	ASTM D955
Water Absorption (24 hr)	0.50 %	ASTM D570
Water Absorption – 30 days	1.9 %	ASTM D570

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Mechanical	Typical Value	Unit	Test method
Tensile Modulus	2690	MPa	ASTM D638
Tensile Strength	88.9	MPa	ASTM D638
Tensile Elongation (Yield)	6.5	%	ASTM D638
Flexural Modulus	2620	MPa	ASTM D790
Flexural Strength	125	MPa	ASTM D790

Impact	Typical Value	Unit	Test method
Notched Izod Impact	53	J/m	ASTM D256

Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load 1.8 MPa, Annealed	200	°C	ASTM D648
CLTE – Flow	5.2E-5	cm/cm/°C	ASTM D696

Electrical	Typical Value	Unit	Test method
Volume Resistivity	1.7E+15	ohms·cm	ASTM D257
Dielectric Strength	15	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	3.51		
1 kHz	3.50		
1 MHz	3.54		
Dissipation Factor			ASTM D150
60 Hz	1.7E-3		
1 kHz	2.2E-3		
1 MHz	5.6E-3		

Flammability	Typical Value	Unit	Test method
Flame Rating ¹ (0.75 mm, ALL)	V-0		UL 94

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

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Extrusion	Typical Value	Unit
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.

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