Veradel® A-301

polyethersulfone

Veradel® A-301 is a medium melt flow grade of polyethersulfone (PESU). It is transparent and 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.

Veradel® A-301 is suggested for general purpose injection molding. It is FDA compliant and therefore approved for direct food contact.

A low flow grade is available as Veradel® A-201. It can be processed by either extrusion or injection molding.

This grade was formerly marketed as Radel® A PESU

- Natural: Veradel® A-301 NT

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, Unspecified Rating	• NSF STD-51
RoHS Compliance	• RoHS Compliant	
Automotive Specifications	• ASTM D6394 SP0213	
Appearance	• Transparent - Slight Yellow	
Forms	• Pellets	
Processing Method	• Compounding	• Injection Molding

Physical	Typical Value	Unit	Test method
Specific Gravity	1.37		ASTM D792
Melt Mass-Flow Rate (MFR) (380°C/2.16 kg)	30	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			ASTM D648
1.8 MPa, Unannealed	200	°C	
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] (1.5 mm)	V-0		UL 94

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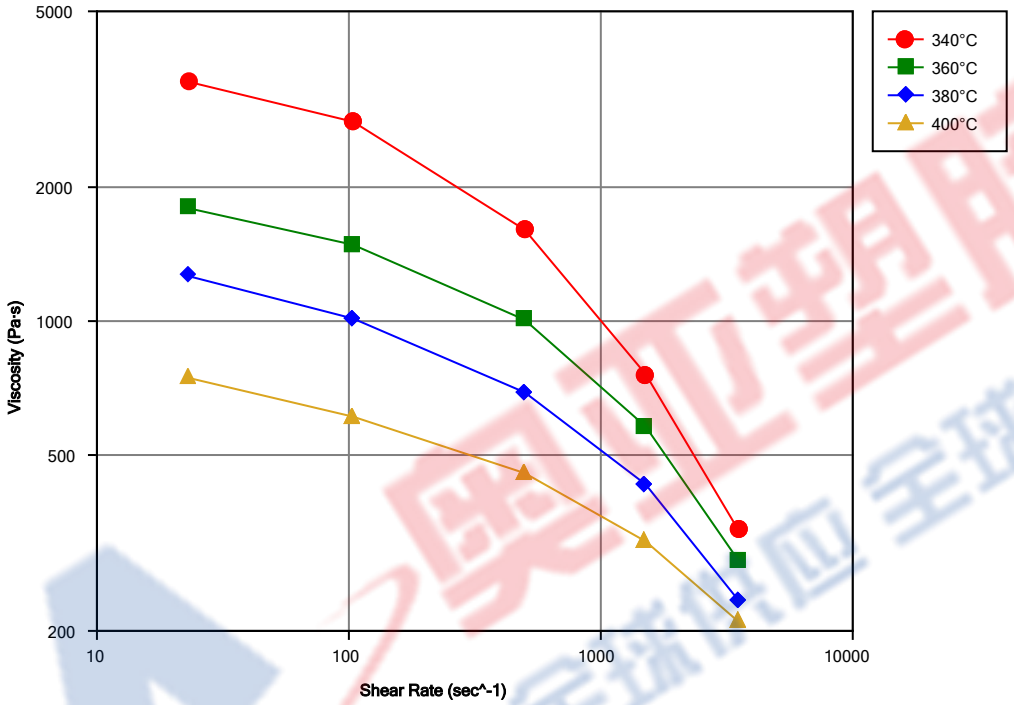
Injection	Typical Value	Unit
Drying Temperature	175	°C
Drying Time	2.5	hr
Processing (Melt) Temp	345 to 385	°C
Mold Temperature	149	°C
Screw Compression Ratio	2.2:1.0	

Viscosity vs. Shear Rate (ISO 11403-2)



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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