Veradel® A-301 ULT
polyethersulfone

Veradel® A-301 ULT is a medium melt flow general purpose amorphous PESU resin for injection molding. This transparent grade offers a low amber color, 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® A-301 ULT is FDA compliant and is approved for direct food contact. This grade was formerly marketed as Radel® A PESU.

- Natural: Veradel® A-301 ULT 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	• NSF STD-51 [1]
RoHS Compliance	• RoHS Compliant	
Automotive Specifications	• ASTM D6394 SP0213	
Appearance	• Black • Colors Available	• Transparent - Slight Yellow
Forms	• Pellets	
Processing Method	• Compounding	• 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)	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			UL 94
0.8 mm, NT	V-0		
1.5 mm, BK [2]	V-0		

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	

Notes

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

[1] NT only

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

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