Veradel® HC A-301
polyethersulfone

Veradel® HC A-301 polyethersulfone (PESU) is a rigid, high-temperature, transparent polymer offered for use in high-performance healthcare applications. The material is inherently flame retardant and highly resistant to a wide range of healthcare cleaning and disinfecting agents. It retains its transparency, mechanical properties and dimensional stability in humid, high-heat environments.

Veradel® HC A-301 offers the highest flow rate of all sulfone polymers, making it particularly suited for injection molding thin-walled parts and complex geometries. It is compatible with sterilization via ethylene oxide, vaporized hydrogen peroxide, gamma radiation and steam.

- Natural: Veradel® HC A-301 NT

General		
Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Features	• Acid Resistant • Base Resistant • Biocompatible • Chemical Resistant • Creep Resistant • Detergent Resistant • Ethylene Oxide Sterilizable • Flame Retardant • Food Contact Acceptable • General Purpose • Good Adhesion • Good Dimensional Stability	• Good Electrical Properties • Good Thermal Stability • Good Toughness • High Heat Resistance • High Tensile Strength • Hydrolysis Resistant • Medium Flow • Medium Molecular Weight • Medium Rigidity • Radiation (Gamma) Resistant • Radiotranslucent • Steam Sterilizable
Uses	• Biopharma Processing • Hospital Goods • Medical Device Housings	• Medical Devices • Medical/Healthcare Applications • Transparent or Translucent Parts
Agency Ratings	• FDA Food Contact, Unspecified Rating • ISO 10993	• USP Class VI
RoHS Compliance	• RoHS Compliant	
Appearance	• 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

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

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Mechanical	Typical Value	Unit	Test method
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	

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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