

# 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	<ul style="list-style-type: none"> <li>• Africa &amp; Middle East</li> <li>• Asia Pacific</li> <li>• Europe</li> </ul>	<ul style="list-style-type: none"> <li>• Latin America</li> <li>• North America</li> </ul>
Features	<ul style="list-style-type: none"> <li>• Acid Resistant</li> <li>• Base Resistant</li> <li>• Biocompatible</li> <li>• Chemical Resistant</li> <li>• Creep Resistant</li> <li>• Detergent Resistant</li> <li>• Ethylene Oxide Sterilizable</li> <li>• Flame Retardant</li> <li>• Food Contact Acceptable</li> <li>• General Purpose</li> <li>• Good Adhesion</li> <li>• Good Dimensional Stability</li> </ul>	<ul style="list-style-type: none"> <li>• Good Electrical Properties</li> <li>• Good Thermal Stability</li> <li>• Good Toughness</li> <li>• High Heat Resistance</li> <li>• High Tensile Strength</li> <li>• Hydrolysis Resistant</li> <li>• Medium Flow</li> <li>• Medium Molecular Weight</li> <li>• Medium Rigidity</li> <li>• Radiation (Gamma) Resistant</li> <li>• Radiotranslucent</li> <li>• Steam Sterilizable</li> </ul>
Uses	<ul style="list-style-type: none"> <li>• Biopharma Processing</li> <li>• Hospital Goods</li> <li>• Medical Device Housings</li> </ul>	<ul style="list-style-type: none"> <li>• Medical Devices</li> <li>• Medical/Healthcare Applications</li> <li>• Transparent or Translucent Parts</li> </ul>
Agency Ratings	<ul style="list-style-type: none"> <li>• FDA Food Contact, Unspecified Rating</li> <li>• ISO 10993</li> </ul>	<ul style="list-style-type: none"> <li>• USP Class VI</li> </ul>
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 1.8 MPa, Unannealed	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 <sup>1</sup> (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.

<sup>1</sup> These flammability ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions.

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