

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"> • Africa & Middle East • Asia Pacific • Europe 	<ul style="list-style-type: none"> • Latin America • North America
Features	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Biopharma Processing • Hospital Goods • Medical Device Housings 	<ul style="list-style-type: none"> • Medical Devices • Medical/Healthcare Applications • Transparent or Translucent Parts
Agency Ratings	<ul style="list-style-type: none"> • FDA Food Contact, Unspecified Rating • ISO 10993 	<ul style="list-style-type: none"> • 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

Veradel® HC A-301

polyethersulfone

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 ¹ (1.5 mm)	V-0		UL 94

Veradel[®] HC A-301

polyethersulfone

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.

www.solvay.com

SpecialtyPolymers.EMEA@solvay.com | Europe, Middle East and Africa

SpecialtyPolymers.Americas@solvay.com | Americas

SpecialtyPolymers.Asia@solvay.com | Asia and Australia

Safety Data Sheets (SDS) are available by emailing us or contacting your sales representative. Always consult the appropriate SDS before using any of our products.

Neither Solvay Specialty Polymers nor any of its affiliates makes any warranty, express or implied, including merchantability or fitness for use, or accepts any liability in connection with this product, related information or its use. Some applications of which Solvay's products may be proposed to be used are regulated or restricted by applicable laws and regulations or by national or international standards and in some cases by Solvay's recommendation, including applications of food/feed, water treatment, medical, pharmaceuticals, and personal care. Only products designated as part of the Solviva[®] family of biomaterials may be considered as candidates for use in implantable medical devices. The user alone must finally determine suitability of any information or products for any contemplated use in compliance with applicable law, the manner of use and whether any patents are infringed. The information and the products are for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right.

All trademarks and registered trademarks are property of the companies that comprise the Solvay Group or their respective owners.

© 2019 Solvay Specialty Polymers. All rights reserved.

