

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
- Black: Veradel® A-301 BK 184

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 • Chemical Resistant • Creep Resistant • Flame Retardant • Food Contact Acceptable • General Purpose • Good Adhesion • Good Dimensional Stability 	<ul style="list-style-type: none"> • Good Thermal Stability • Good Toughness • High Heat Resistance • High Tensile Strength • Hydrolysis Resistant • Medium Flow • Medium Molecular Weight • Medium Rigidity
Uses	<ul style="list-style-type: none"> • Appliance Components • Appliances • Automotive Electronics • Batteries • Business Equipment 	<ul style="list-style-type: none"> • Electrical Parts • Electrical/Electronic Applications • Food Service Applications • Industrial Applications • Microwave Cookware
Agency Ratings	• FDA Food Contact, Unspecified Rating	• NSF STD-51 ¹
RoHS Compliance	• RoHS Compliant	
Automotive Specifications	• ASTM D6394 SP0213	
Appearance	<ul style="list-style-type: none"> • 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

Veradel® A-301

polyethersulfone

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 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			UL 94
0.8 mm, NT	V-0		
1.5 mm, BK ²	V-0		

Veradel® A-301

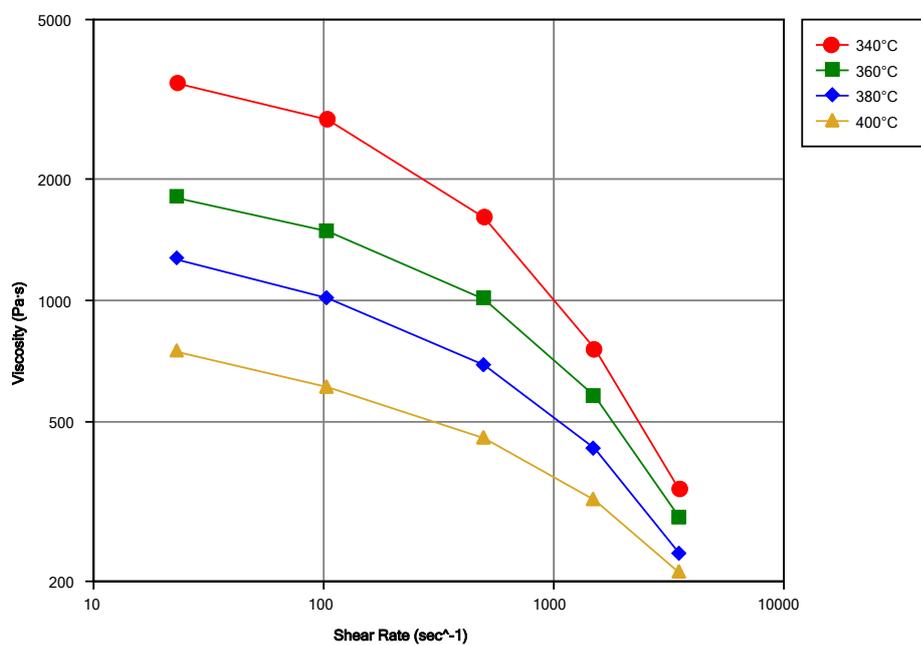
polyethersulfone

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

Viscosity vs. Shear Rate (ISO 11403-2)



Veradel® A-301

polyethersulfone

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.

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.

