

Udel® GF-110 polysulfone

Udel® GF-110, resin is a 10% glass fiber reinforced polysulfone (PSU). Glass fiber substantially increases the rigidity, tensile strength, creep resistance, dimensional stability and chemical resistance of the polysulfone resin. The high

performance properties and attractive price make these resins particularly effective alternatives to metals in many engineering applications.

- Natural: Udel® GF-110 NT

General

Material Status	• Commercial: Active	
Availability	• Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Glass Fiber	
Features	• Acid Resistant • Alcohol Resistant • Alkali Resistant • Chemical Resistant • Creep Resistant • Good Dimensional Stability	• Good Strength • High Heat Resistance • High Rigidity • Hydrocarbon Resistant • Hydrolytically Stable
Uses	• Appliance Components • Appliances • Connectors • Fittings • Food Service Applications	• Industrial Parts • Microwave Cookware • Plumbing Parts • Valves/Valve Parts
Agency Ratings	• ISO 10993	• NSF STD-61 ¹
RoHS Compliance	• RoHS Compliant	
Appearance	• Natural Color	• Opaque
Forms	• Pellets	
Processing Method	• Extrusion	• Injection Molding

Physical

	Typical Value	Unit	Test method
Density / Specific Gravity	1.33		ASTM D792
Melt Mass-Flow Rate (MFR) (343°C/2.16 kg)	6.5	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.40	%	ASTM D955

Mechanical

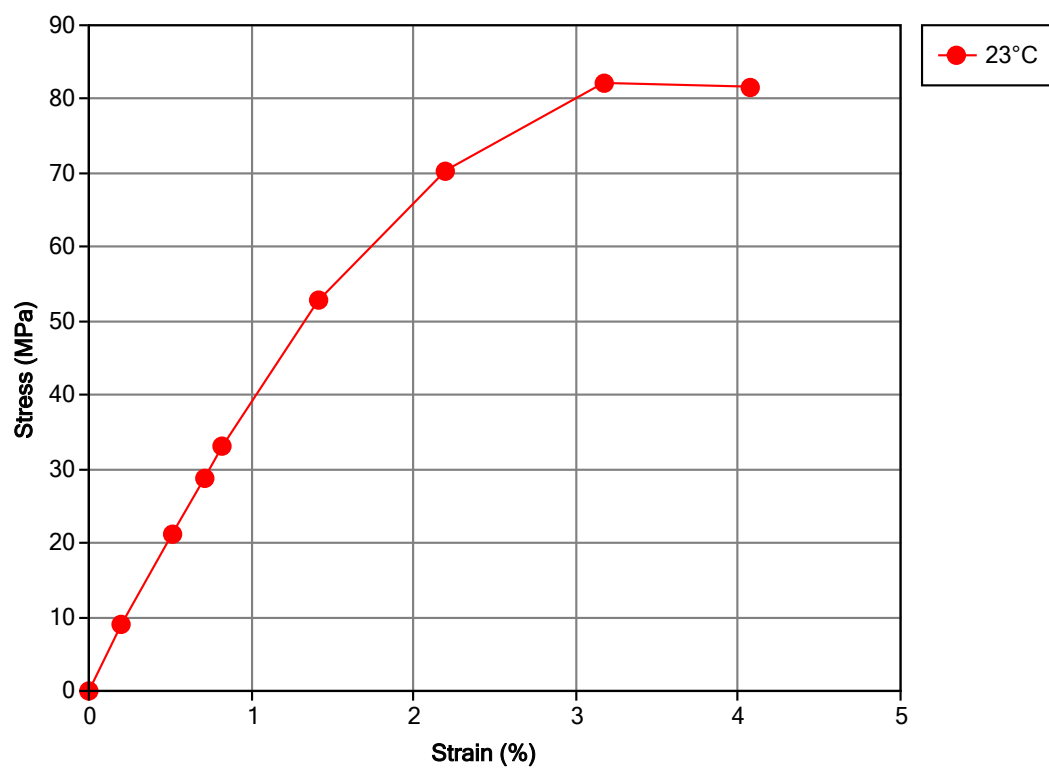
	Typical Value	Unit	Test method
Tensile Modulus	3720	MPa	ASTM D638
Tensile Strength	77.9	MPa	ASTM D638
Tensile Elongation (Break)	4.0	%	ASTM D638
Flexural Modulus	3790	MPa	ASTM D790
Flexural Strength	128	MPa	ASTM D790

Udel® GF-110

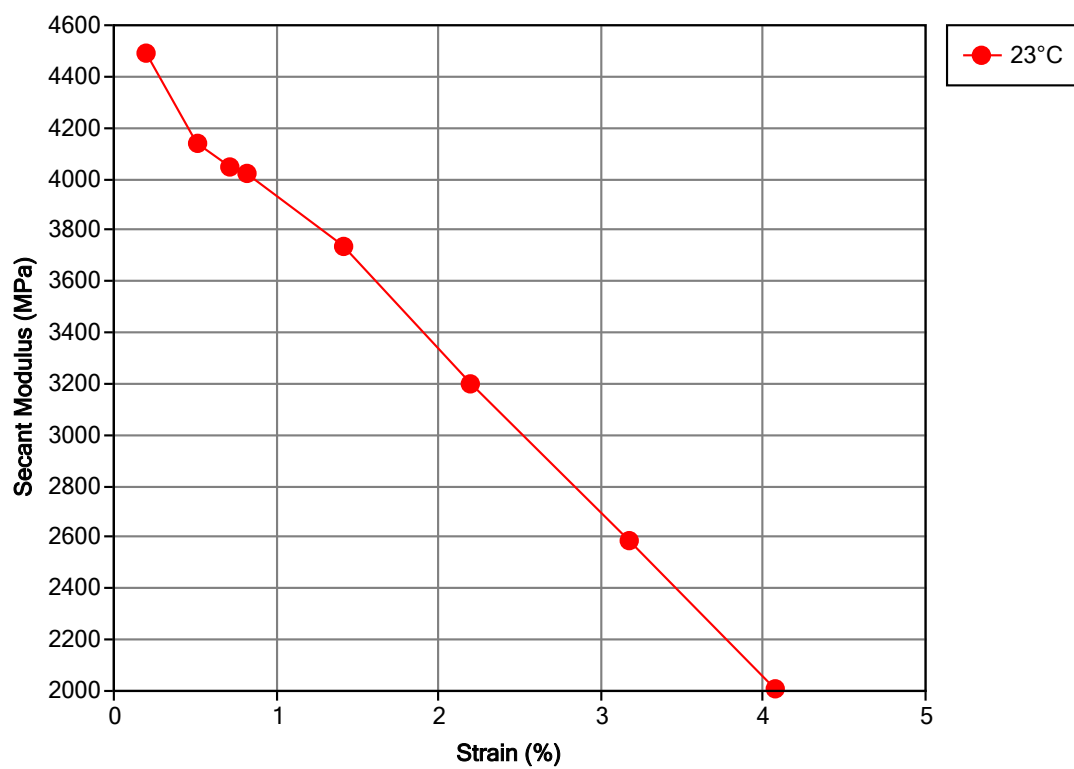
polysulfone

Impact	Typical Value	Unit	Test method
Notched Izod Impact	48	J/m	ASTM D256
Tensile Impact Strength	101	kJ/m ²	ASTM D1822
Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load 1.8 MPa, Unannealed	179	°C	ASTM D648
Electrical	Typical Value	Unit	Test method
Volume Resistivity	3.0E+16	ohms·cm	ASTM D257
Dielectric Strength	19	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	3.18		
1 MHz	3.15		
Dissipation Factor			ASTM D150
60 Hz	7.0E-4		
1 MHz	6.0E-3		
Flammability	Typical Value	Unit	Test method
Flame Rating ² (3.2 mm)	HB		UL 94
Injection	Typical Value	Unit	
Drying Temperature	149 to 163	°C	
Drying Time	3.0 to 4.0	hr	
Processing (Melt) Temp	343 to 399	°C	
Mold Temperature	121 to 163	°C	
Injection Rate	Fast		
Back Pressure	0.345 to 0.689	MPa	
Screw Compression Ratio	2.0:1.0		

Isothermal Stress vs. Strain (ISO 11403)



Secant Modulus vs. Strain (ISO 11403)



Udel® GF-110

polysulfone

Notes

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

¹ Tested at 82 °C (180 °F) (Commercial Hot)

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

www.syensqo.com

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 Syensqo 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 Syensqo'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 Syensqo'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 Syensqo or their respective owners.

© 2024 2023 Syensqo. All rights reserved.

