

Technical Information



ALTUGLAS™ SG10

Overview

OVERVIEW : ALTUGLAS™ medical resins grades provide very good optical transparency combined with outstanding bonding characteristics, excellent scratch resistance and sterilization recovery. In addition, these resins offer ease of processing and very good flow properties, allowing for a wide range of manufacturing processes.

DESCRIPTION : ALTUGLAS™ medical resins provide excellent ethyl/isopropyl alcohol (IPA) and lipid resistance. In addition, the inherent water-white clarity, transparency and ease processing of ALTUGLAS™ grades make them suitable for medical devices and diagnostic lab-ware applications:

ALTUGLAS™ SG-10 impact-modified resins is designed specifically for the medical market. This resin can meet some of the toughest device requirements in terms of processing, sterilization, clarity, performance and regulatory compliance. It is specifically engineered for intricate and multi-compartment parts, making them excellent for applications such as dialysis cassettes, IV components, drug delivery systems and canisters. Molded medical devices using this resin also offer good resistance to lipids, moisture, most inorganic aqueous solutions, saline solutions, mineral oil, and limited exposure to IPA in water.

APPLICATIONS :

Dialysis and other blood therapy systems
IV components and drug delivery
Devices
Fluid control valves
Luers
Connectors
Spikes
Y-joints
Filter housings
Blood separators
Cardiopulmonary housings
Respiratory canisters
Yankauer suction apparatus
In vitro diagnostic systems

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.15 g/cm ³	1.15 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	4.5 g/10 min	4.5 g/10 min	ISO 1133
Molding Shrinkage - Flow	2.0E-3 to 6.0E-3 in/in	0.20 to 0.60 %	ASTM D955
Water Absorption			ISO 62
Equilibrium, 73°F (23°C), 50% RH	0.36 %	0.36 %	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Stress			ISO 527-2/50
Yield, 73°F (23°C)	6960 psi	48.0 MPa	
Break, 73°F (23°C)	6090 psi	42.0 MPa	
Tensile Strain			ISO 527-2/50
Yield, 73°F (23°C)	5.0 %	5.0 %	
Break, 73°F (23°C)	45 %	45 %	
Flexural Modulus (73°F (23°C))	247000 psi	1700 MPa	ISO 178
Flexural Stress (73°F (23°C))	8700 psi	60.0 MPa	ISO 178

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength (73°F (23°C))	2.4 ft-lb/in ²	5.0 kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength 73°F (23°C)	36 ft-lb/in ²	75 kJ/m ²	ISO 179/1eU
Notched Izod Impact Strength (73°F (23°C))	2.4 ft-lb/in ²	5.0 kJ/m ²	ISO 180/1A
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (M-Scale)	37	37	ASTM D785
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 264 psi (1.8 MPa), Annealed	178 °F	81.0 °C	ISO 75-2/A
Vicat Softening Temperature	194 °F	90.0 °C	ISO 306/B50
CLTE - Flow (-22 to 73°F (-30 to 23°C))	5.6E-5 in/in/°F	1.0E-4 cm/cm/°C	ASTM D696
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating	HB	HB	UL 94
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Refractive Index ¹	1.490	1.490	ISO 489
Light Transmittance	90.0 %	90.0 %	ASTM D1003
Haze	2.00 %	2.00 %	ASTM D1003
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	167 to 176 °F	75 to 80 °C	
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr	
Rear Temperature	428 to 464 °F	220 to 240 °C	
Middle Temperature	446 to 482 °F	230 to 250 °C	
Front Temperature	464 to 500 °F	240 to 260 °C	
Nozzle Temperature	464 to 500 °F	240 to 260 °C	
Processing (Melt) Temp	464 to 500 °F	240 to 260 °C	
Mold Temperature	140 to 158 °F	60 to 70 °C	

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ Method B

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