

Technical Information



ALTUGLAS™ VSUVT

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.

ALTUGLAS™ PMMA VSUVT is a very high flow molding resin suitable for injection molding of complex parts. ALTUGLAS™ VSUVT provides exceptional UV transmission and excellent transparency, making it an excellent choice for in vitro diagnostic use.

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	1.18 g/cm ³	1.18 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	27 g/10 min	27 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	0.30 %	0.30 %	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Stress (Break, 73°F (23°C))	9430 psi	65.0 MPa	ISO 527-2/5
Tensile Strain (Break, 73°F (23°C))	5.0 %	5.0 %	ISO 527-2/5
Flexural Modulus (73°F (23°C))	421000 psi	2900 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength (73°F (23°C))	0.86 ft·lb/in ²	1.8 kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
73°F (23°C)	9.5 ft·lb/in ²	20 kJ/m ²	
Notched Izod Impact Strength (73°F (23°C))	0.86 ft·lb/in ²	1.8 kJ/m ²	ISO 180/1A
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (M-Scale)	84	84	ASTM D785
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ISO 75-2/A
264 psi (1.8 MPa), Annealed	176 °F	80.0 °C	
Vicat Softening Temperature	> 190 °F	> 88.0 °C	ISO 306/B50
CLTE - Flow (-22 to 73°F (-30 to 23°C))	3.9E-5 in/in/°F	7.0E-5 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			
--	1.490	1.490	ASTM D542
-- ¹	1.490	1.490	ISO 489
Light Transmittance	92.0 %	92.0 %	ASTM D1003
Haze	< 0.500 %	< 0.500 %	ASTM D1003

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	158 °F	70 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Rear Temperature	374 to 410 °F	190 to 210 °C
Middle Temperature	392 to 428 °F	200 to 220 °C
Front Temperature	428 to 464 °F	220 to 240 °C
Nozzle Temperature	428 to 464 °F	220 to 240 °C
Processing (Melt) Temp	428 to 464 °F	220 to 240 °C
Mold Temperature	122 to 140 °F	50 to 60 °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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