

Technical Information


TRINSEO

ALTUGLAS™ MI-4T

Overview

OVERVIEW : ALTUGLAS™ Impact acrylic resins have an exceptional impact resistance combined with PMMA key properties, for a higher-quality look compared to any other available impact resistant material. They offer an impact resistance from 2 to 10 times superior than standard products, keeping outstanding optical performances (90 to 92% LT / 2% max haze), and PMMA weathering and ageing resistance.

DESCRIPTION : ALTUGLAS™ MI (Medium Impact) grades offer improved flexibility for easier processing (especially during demoulding and assembly steps) while maintaining high heat and scratch resistance. Suitable for both injection & co-extrusion processes.

ALTUGLAS™ MI-4T offers a Medium impact resistance with the highest heat and scratch resistance of the Impact grades.

MARKETS / APPLICATIONS :

Automotive & Transportation
Health, Hygiene & Beauty
Building & Construction
Composites & advanced materials
Consumer Electronics
Sport & Leisure

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)	3.0 g/10 min	3.0 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	0.32 %	0.32 %	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Stress			ISO 527-2/50
Yield, 73°F (23°C)	11000 psi	76.0 MPa	
Break, 73°F (23°C)	9430 psi	65.0 MPa	
Tensile Strain			ISO 527-2/50
Yield, 73°F (23°C)	5.0 %	5.0 %	
Break, 73°F (23°C)	18 %	18 %	
Flexural Modulus (73°F (23°C))	406000 psi	2800 MPa	ISO 178
Flexural Stress (73°F (23°C))	13300 psi	92.0 MPa	ISO 178
Compressive Stress (73°F (23°C))	13200 psi	91.0 MPa	ISO 604
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength (73°F (23°C))	1.2 ft-lb/in ²	2.5 kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
73°F (23°C)	13 ft-lb/in ²	28 kJ/m ²	
Notched Izod Impact Strength (73°F (23°C))	1.0 ft-lb/in ²	2.2 kJ/m ²	ISO 180/1A
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (M-Scale)	82	82	ASTM D785

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 psi (0.45 MPa), Annealed	216 °F	102 °C	ISO 75-2/B
264 psi (1.8 MPa), Annealed	208 °F	98.0 °C	ISO 75-2/A
Vicat Softening Temperature	> 216 °F	> 102 °C	ISO 306/B50
CLTE - Flow (-22 to 73°F (-30 to 23°C))	4.2E-5 in/in/°F	7.5E-5 cm/cm/°C	ASTM D696
Specific Heat	0.500 Btu/lb/°F	2090 J/kg/°C	
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	92.0 %	92.0 %	ASTM D1003
Haze	1.00 %	1.00 %	ASTM D1003
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	185 °F	85 °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	167 to 185 °F	75 to 85 °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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