

Altuglas® Luctor™ HI

Polymethyl Methacrylate Acrylic
Altuglas International of Arkema Inc.

Message:

Altuglas® Luctor™ HI is an impact-modified acrylic resin suitable for injection molding and extrusion. It is designed to provide outstanding chemical resistance and the highest impact resistance possible. It is well suited for intravenous and other medical devices where maximum resistance to alcohol, lipid emulsions, TPN solutions or new generation oncology drugs is paramount.

Some of the features and benefits of Altuglas® Luctor™ HI are:

- Impact Resistance
 - One of the most impact resistant of the Plexiglas/Altuglas acrylic polymers
- Chemical Resistance
 - Outstanding resistance to lipids and drug formulations
 - Superior resistance to isopropyl alcohol (IPA)
 - Property retention after exposure to hospital antiseptics, acids and bases
- Sterilization
 - Stable to gamma radiation, E-beam, and ETO
 - Rapid recovery with very good color stability
 - Retention of transparency and clarity
 - Retention of mechanical properties
- Processability
 - Excellent melt processability
 - Reduced cycle times
- Suitable for thin-wall applications and complex multi-cavity molds
- Good bondability using solvent, ultrasonic, or radio frequency methods
- Biofriendly
 - Contains more than 25% bio-renewable carbon content

General Information	
Additive	Impact Modifier
Features	Acid Resistant
	Alcohol Resistant
	Base Resistant
	Biocompatible
	Bondability
	BPA Free
	E-beam Sterilizable
	Ethylene Oxide Sterilizable
	Fast Molding Cycle
	Good Chemical Resistance
	Good Color Stability
	Good Impact Resistance
	Good Moldability
	Good Processability
	High Clarity
	High ESCR (Stress Crack Resist.)
	Impact Modified
	Radiation (Gamma) Resistant

Renewable Resource Content

Uses	Medical Devices Medical/Healthcare Applications
Agency Ratings	ISO 10993 Part 10 ISO 10993 Part 4 ISO 10993 Part 5 USP Class VI
RoHS Compliance	RoHS Compliant
Appearance	Clear/Transparent
Forms	Pellets
Processing Method	Extrusion Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.16	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	4.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.20 to 0.60	%	ASTM D955
Water Absorption (24 hr)	0.40	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	53		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1590	MPa	ASTM D638
Tensile Strength (Yield)	32.4	MPa	ASTM D638
Tensile Elongation (Break)	110	%	ASTM D638
Flexural Modulus	1860	MPa	ASTM D790
Flexural Strength (Yield)	55.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	120	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Annealed	67.2	°C	
1.8 MPa, Annealed	62.2	°C	
Vicat Softening Temperature			
--	73.9	°C	ASTM D1525 ¹
--	68.3	°C	ASTM D1525 ²
Thermal Conductivity	0.23	W/m/K	ASTM C177
Flammability	Nominal Value		Test Method
Flame Rating	HB		UL 94
Optical	Nominal Value	Unit	Test Method

Refractive Index ³	1.470		ASTM D542
Transmittance (3180 μm)	84.0	%	ASTM D1003
Haze (3180 μm)	4.0	%	ASTM D1003

NOTE

1. Rate A (50°C/h), Loading 1 (10 N)
2. Rate A (50°C/h), Loading 2 (50 N)
3. ND @ 72°F

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