## Plexiglas® SG7

## Polymethyl Methacrylate Acrylic

Altuglas International of Arkema Inc.

## Message:

Plexiglas <sup>®</sup> SG7 is an impact modified acrylic resin suitable for injection molding and extrusion. This grade is formulated for approved medical applications. It is a high flow resin designed to provide outstanding light transmission and water white clarity for disposable medical applications. Some of the features and benefits of Plexiglas <sup>®</sup> SG7 are:
Chemical Resistance
Good resistance to lipids and drug formulations
Good 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 excellent color stability
Retention of transparency and clarity
Retention of mechanical properties
Durability and Processability
Moldflow simulation data available
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

General Information	
UL YellowCard	E39437-102073164
Additive	Impact Modifier
Features	Alcohol Resistant
	Biocompatible
	Bondability
	BPA Free
	E-beam Sterilizable
	Ethylene Oxide Sterilizable
	Good Chemical Resistance
	Good Moldability
	High Clarity
	High ESCR (Stress Crack Resist.)
	Impact Modified
	Medium Impact Resistance
	Radiation (Gamma) Resistant
Uses	Medical Devices
	Medical/Healthcare Applications
Agency Ratings	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	1.17	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	10	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.30 to 0.60	%	ASTM D955
Water Absorption (24 hr)	0.30	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	60		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2450	MPa	ASTM D638
Tensile Strength (Break)	46.9	MPa	ASTM D638
Tensile Elongation (Break)	35	%	ASTM D638
Flexural Modulus	2450	MPa	ASTM D790
Flexural Strength (Yield)	85.5	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	32	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load <sup>1</sup>			ASTM D648
0.45 MPa, Annealed	88.0	°C	
1.8 MPa, Annealed	81.7	°C	
Vicat Softening Temperature			
	93.9	°C	ASTM D1525 <sup>2</sup>
	83.3	°C	ASTM D1525 <sup>3</sup>
Thermal Conductivity	0.20	W/m/K	ASTM C177
Flammability	Nominal Value		Test Method
Flame Rating	НВ		UL 94
Optical	Nominal Value	Unit	Test Method
Refractive Index <sup>4</sup>	1.490		ASTM D542
Transmittance (3180 µm)	91.0	%	ASTM D1003
Haze (3180 µm)	< 2.0	%	ASTM D1003
Additional Information	Nominal Value		Test Method
ASTM Classification	PMMA 0231V4		ASTM D788
NOTE			
1.	Annealing cycle: 4hrs @ 176°F		
2.	Rate A (50°C/h), Loading 1 (10 N)		
3.	Rate A (50°C/h), Loading 2 (50 N)		

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