Plexiglas® MI7G

Polymethyl Methacrylate Acrylic

Altuglas International of Arkema Inc.

Message:

Plexiglas® MI7G is an impact modified thermoplastic acrylic resin formulated for injection molding and extrusion applications.This grade is formulated for approved medical applications and has improved gamma resistance compared to MI7. It is heat resistant, has high melt flow and provides 7 times the impact resistance of standard acrylics while maintaining excellent optical properties. It offers an excellent balance between melt flow and increased resistance to breakage, while providing weatherability superior to that provided by other high-impact plastics. Supplemental moldflow simulation data is available.

General Information	
Additive	Impact Modifier
Features	BPA Free E-beam Sterilizable Ethylene Oxide Sterilizable Good Color Stability Good Dimensional Stability Good Flow Good Thermal Stability Good Toughness Good UV Resistance Good Weather Resistance High Clarity High Heat Resistance Impact Modified Low Shrinkage Medium Impact Resistance Radiation (Gamma) Resistant Scratch Resistant
Uses	Medical Devices Medical/Healthcare Applications
Agency Ratings	USP Class VI
RoHS Compliance	RoHS Compliant
Appearance	Clear/Transparent
Forms	Pellets
Processing Method	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)	3.2	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)	68		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2520	MPa	ASTM D638
Tensile Strength (Yield)	48.3	MPa	ASTM D638
Tensile Elongation (Break)	35	%	ASTM D638
Flexural Modulus	2380	MPa	ASTM D790
Flexural Strength (Yield)	77.2	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 [1]			ASTM D648
0.45 MPa, Annealed	91.1	°C	
1.8 MPa, Annealed	85.0	°C	
Vicat Softening Temperature			
--	98.9	°C	ASTM D1525 [2]
--	90.0	°C	ASTM D1525 [3]
Thermal Conductivity	0.20	W/m/K	ASTM C177
Flammability	**Nominal Value**		**Test Method**
Flame Rating	HB		UL 94
Optical	**Nominal Value**	**Unit**	**Test Method**
Refractive Index [4]	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 0221V3		ASTM D788
Injection	**Nominal Value**	**Unit**	
Drying Temperature	85.0	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.30	%	
Suggested Max Regrind	25	%	
Rear Temperature	216 to 238	°C	
Middle Temperature	216 to 238	°C	
Front Temperature	216 to 238	°C	
Nozzle Temperature	216 to 238	°C	
Processing (Melt) Temp	238	°C	
Mold Temperature	37.8 to 87.8	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	50 to 100	rpm	
Screw L/D Ratio	16.0:1.0		

Screw Compression Ratio	2.0:1.0 to 3.0:1.0

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)
4.	ND @ 72°F

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China