Plexiglas® V045i

Polymethyl Methacrylate Acrylic

Altuglas International of Arkema Inc.

Message:

Plexiglas® V045i is a lightly impact modified thermoplastic acrylic resin formulated for extrusion applications. It is characterized by its chemical and heat resistance as well a high melt flow. It is a tougher resin than Plexiglas® V045 allowing improved fabrication. 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.

General Information	
UL YellowCard	E39437-231436
Additive	Impact Modifier
Features	BPA Free Good Color Stability Good Dimensional Stability Good Flow Good Mold Release Good Thermal Stability Good Toughness Good UV Resistance Good Weather Resistance High Clarity Impact Modified Low Shrinkage Scratch Resistant
Uses	Automotive Applications Consumer Applications
Agency Ratings	FDA 21 CFR 177.1010
RoHS Compliance	RoHS Compliant
Appearance	Clear/Transparent Colors Available Opaque Translucent
Forms	Pellets
Processing Method	Extrusion

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	2.1	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.20 to 0.60	%	ASTM D955

Water Absorption (24 hr)	0.30	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	89		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2960	MPa	ASTM D638
Tensile Strength (Yield)	67.6	MPa	ASTM D638
Tensile Elongation (Break)	15	%	ASTM D638
Flexural Modulus	2930	MPa	ASTM D790
Flexural Strength (Yield)	98.6	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	21	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load [1]			ASTM D648
0.45 MPa, Annealed	92.2	°C	
1.8 MPa, Annealed	90.6	°C	
Vicat Softening Temperature			
--	101	°C	ASTM D1525 [2]
--	92.2	°C	ASTM D1525 [3]
Thermal Conductivity	0.19	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)	< 1.0	%	ASTM D1003
Additional Information	**Nominal Value**		**Test Method**
ASTM Classification	PMMA 0241V2		ASTM D788
Injection	**Nominal Value**	**Unit**	
Drying Temperature	82.2 to 87.8	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.10	%	
Suggested Shot Size	50	%	
Suggested Max Regrind	20	%	
Rear Temperature	216	°C	
Middle Temperature	221	°C	
Front Temperature	227	°C	
Nozzle Temperature	221	°C	
Processing (Melt) Temp	< 271	°C	
Mold Temperature	65.6 to 87.8	°C	
Injection Rate	Fast		
Back Pressure	0.689	MPa	
Screw Speed	50 to 100	rpm	

Screw L/D Ratio	15.0:1.0 to 20.0:1.0	
Screw Compression Ratio	2.0:1.0 to 2.5:1.0	
Vent Depth	0.051	mm

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