Plexiglas® DR®

Polymethyl Methacrylate Acrylic

Altuglas International of Arkema Inc.

Message:

Plexiglas® DR® is an impact modified thermoplastic acrylic resin formulated for injection molding and extrusion applications. It is a heat resistant resin with minimal edge color and provides 10 times the impact resistance of standard acrylics. It is an all-acrylic resin that combines the toughness associated with other impact plastics and the outstanding transparency and UV resistance of conventional acrylic materials. Moldflow simulation data is available.

General Information		
UL YellowCard	E39437-231405	E39437-231406
Additive	Impact Modifier	
Features	BPA Free Good Color Stability Good Dimensional Stability Good Thermal Stability Good Toughness Good UV Resistance Good Weather Resistance High Clarity High Impact Resistance Impact Modified Low Shrinkage Scratch Resistant	
Uses	Automotive Applications Capstock Consumer Applications Displays Lighting Diffusers Sanitary Products	
Agency Ratings	FDA 21 CFR 177.1010	
RoHS Compliance	RoHS Compliant	
Appearance	Clear/Transparent Colors Available Opaque Translucent	
Forms	Pellets	
Processing Method	Extrusion Injection Molding	

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.15	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	1.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.30 to 0.80	%	ASTM D955
Water Absorption (24 hr)	0.40	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	45		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	1860	MPa	ASTM D638
Tensile Strength (Break)	37.9	MPa	ASTM D638
Tensile Elongation (Break)	50	%	ASTM D638
Flexural Modulus	1860	MPa	ASTM D790
Flexural Strength (Yield)	71.0	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	59	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load [1]			ASTM D648
0.45 MPa, Annealed	88.9	°C	
1.8 MPa, Annealed	79.4	°C	
Vicat Softening Temperature			
--	97.8	°C	ASTM D1525 [2]
--	86.1	°C	ASTM D1525 [3]
Thermal Conductivity	0.22	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)	90.0	%	ASTM D1003
Haze (3180 µm)	< 2.0	%	ASTM D1003
Additional Information	**Nominal Value**		**Test Method**
ASTM Classification	PMMA 0231V1		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)		
4.	ND @ 72°F		

Recommended distributors for this material

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