Acrypet® IR H50

Polymethyl Methacrylate Acrylic

Mitsubishi Rayon America Inc.

General			
Material Status	• Commercial: Active		
Availability	• North America		
Features	• Good Chemical Resistance • Good Impact Resistance	• Good Weather Resistance • High Clarity	• High Hardness • Pleasing Surface Appearance
Uses	• Appliances • Automotive Applications	• Electrical/Electronic Applications • Optical Applications	
Forms	• Pellets		

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.16	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	1.1	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.40 to 0.80	%	ASTM D955
Water Absorption (24 hr)	0.40	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [2]	42.1	MPa	ASTM D638
Tensile Elongation [2] (Break)	90	%	ASTM D638
Flexural Modulus (6.35 mm)	1770	MPa	ASTM D790
Flexural Strength (6.35 mm)	64.8	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (6.35 mm)	34	J/m	ASTM D256
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	53		ASTM D785
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	94.0	°C	
Vicat Softening Temperature	109	°C	ASTM D1525
CLTE - Flow	0.000095	cm/cm/°C	ASTM D696
Optical	**Nominal Value**	**Unit**	**Test Method**
Refractive Index	1.490		ASTM D542
Transmittance (3200 µm)	92.0	%	ASTM D1003

Additional Information

Surface Resistivity, JIS K6911: >10^16 ohm
Volume Resistivity, JIS K6911: >10^15 ohm-cm
Dielectric Breakdown Strength: 15 kV/mm
Dielectric Constant, 60Hz: 3.9
Dielectric Loss Tangent, 60Hz: 0.04
Arc Resistance, JIS K6911: No Trace

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] Type I