

Acrypet® IR D50

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/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	2.4 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	39.3 MPa	ASTM D638
Tensile Elongation ² (Break)	90 %	ASTM D638
Flexural Modulus (6.35 mm)	1770 MPa	ASTM D790
Flexural Strength (6.35 mm)	58.6 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)	50	ASTM D785

Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load 1.8 MPa, Unannealed	84.0 °C	ASTM D648
Vicat Softening Temperature	99.0 °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