

NOVAREX™ 7027R

Mitsubishi Engineering-Plastics Corp - Polycarbonate

General Information			
Product Description			
High viscosity, Extrusion, Basic grade			
General			
Features	• High Viscosity		
Uses	• General Purpose		
Processing Method	• Extrusion		
ASTM & ISO Properties ¹			
Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	6.0	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	5.7	cm³/10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow	0.50 to 0.70	%	
Flow	0.50 to 0.70	%	
Water Absorption (24 hr, 23°C)	0.24	%	Internal Method
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2400	MPa	ISO 527-1/1
Tensile Stress (Yield)	60.0	MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/50
Yield	5.5	%	
Break	100	%	
Flexural Modulus ²	2300	MPa	ISO 178
Flexural Stress ²	93.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	84	kJ/m²	ISO 179
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	145	°C	ISO 75-2/B
1.8 MPa, Unannealed	131	°C	ISO 75-2/A
CLTE			ISO 11359-2
Flow	6.5E-5	cm/cm/°C	
Transverse	6.6E-5	cm/cm/°C	



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Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	6.0E+15	ohms	IEC 60093
Volume Resistivity	3.0E+16	ohms·cm	IEC 60093
Electric Strength			IEC 60243-1
2.00 mm	24	kV/mm	
3.00 mm	17	kV/mm	
Dielectric Constant			IEC 60250
100 Hz	3.10		
1 MHz	3.10		
Dissipation Factor			IEC 60250
100 Hz	6.0E-4		
1 MHz	9.0E-3		
Comparative Tracking Index (CTI)	PLC 2		UL 746A

Processing Information

Injection	Nominal Value	Unit
Drying Temperature - Hot Air Dryer	120	°C
Drying Time - Hot Air Dryer	4.0 to 8.0	hr
Rear Temperature	280 to 310	°C
Middle Temperature	280 to 310	°C
Front Temperature	280 to 310	°C
Nozzle Temperature	280 to 310	°C
Mold Temperature	80 to 110	°C

