

NOVAREX™ M7027U

Mitsubishi Engineering-Plastics Corp - Polycarbonate

Friday, April 26, 2019

General Information

Product Description

Profile extrusion, Basic grade

General

Material Status	• Commercial: Restricted		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America

[Regarding available country, please inquire via our website.](#)

Features	• High Viscosity
Uses	• General Purpose
Processing Method	• Profile Extrusion

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	3.2	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	2.90	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow	0.50 to 0.70	%	
Flow	0.50 to 0.70	%	
Water Absorption (Saturation, 23°C)	0.24	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2300	MPa	ISO 527-2/1
Tensile Stress (Yield)	62.0	MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/50
Yield	6.0	%	
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)	70	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	142	°C	ISO 75-2/B
1.8 MPa, Unannealed	128	°C	ISO 75-2/A
CLTE			ISO 11359-2
Flow	6.5E-5	cm/cm/°C	
Transverse	6.6E-5	cm/cm/°C	

¹ The values described are typical values only.

² The usage examples indicated here do not guarantee results applicable to relevant uses of the products.

³ It is the users' responsibility to investigate industrial property rights and the terms of use related to the uses and applications indicated here.

⁴ For the handling (transport, storage, forming, disposal, etc.) of the products, it is advisable to refer to technical documents and the Safety Data Sheet (SDS) of the proper materials and grades. Please contact us for consultations when the products are used for the purpose of food containers and packaging, medical parts, safety equipment, and toys for children.

⁵ In Japan, the colored products of each grade may contain chemicals subject to reporting requirements under the applicable law provided in Appendix 9 of Article 18-2 of the Enforcement Order, under Article 57-2 of the Industrial Safety and Health Act. For details, please contact us.

⁶ For the export of our products and products incorporated with our products, please comply with the relevant laws and regulations, such as the Foreign Exchange and Foreign Trade Law.

⁷ Please note that because of the chemical substance management systems in each country, the chemicals used in our products are subject to control, and separate applications might be required or are banned from imports and exports. It is advisable to inquire about the status of regulations in the relevant countries if you are exporting or importing our products.

NOVAREX™ M7027U

Mitsubishi Engineering-Plastics Corp - Polycarbonate

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
1 MHz	3.10		
100 MHz	3.10		
Dissipation Factor			IEC 60250
1 MHz	9.0E-3		
100 MHz	6.0E-4		
Comparative Tracking Index (CTI)	PLC 2		UL 746

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	260 to 300	°C
Middle Temperature	260 to 300	°C
Front Temperature	260 to 300	°C
Nozzle Temperature	260 to 300	°C
Mold Temperature	40 to 100	°C

Notes

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

² 2.0 mm/min