

NOVADURAN™ SEF-500T

Mitsubishi Engineering-Plastics Corp - Polybutylene Terephthalate

General Information

Product Description

Un-reinforced / Flame Retardant (Bromine-free), Tracking resistant

General

Features	• Bromine Free	• Flame Retardant	• Tracking Resistant
Uses	• Automotive Applications • Automotive Electronics	• Electrical/Electronic Applications • General Purpose	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.31	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	5.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow : 2.00 mm	1.8	%	
Flow : 2.00 mm	2.2	%	
Water Absorption (Saturation, 23°C)	0.080	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2700	MPa	ISO 527-1/1
Tensile Stress (Yield)	35.0	MPa	ISO 527-2/50
Tensile Strain (Break)	40	%	ISO 527-2/50
Flexural Modulus ²	2200	MPa	ISO 178
Flexural Stress ²	62.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	6.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	62	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Annealed	180	°C	ISO 75-2/B
1.8 MPa, Annealed	86.0	°C	ISO 75-2/A
Melting Temperature	224	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : -30 to 35°C	1.1E-4	cm/cm/°C	
Flow : -30 to 120°C	1.4E-4	cm/cm/°C	
Flow : 35 to 120°C	1.7E-4	cm/cm/°C	
Transverse : -30 to 35°C	1.1E-4	cm/cm/°C	
Transverse : -30 to 120°C	1.4E-4	cm/cm/°C	
Transverse : 35 to 120°C	1.6E-4	cm/cm/°C	
RTI Elec (0.75 mm)	75.0	°C	UL 746B
RTI Imp (0.75 mm)	75.0	°C	UL 746B
RTI Str (0.75 mm)	75.0	°C	UL 746B



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Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Electric Strength (2.00 mm)	22	kV/mm	IEC 60243-1
Dielectric Constant (1 MHz)	3.50		IEC 60250
Dissipation Factor (1 MHz)	0.019		IEC 60250
Comparative Tracking Index (CTI)	PLC 0		UL 746A
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.75 mm		V-0	
1.6 mm		V-0	
3.2 mm		V-0	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature - Hot Air Dryer	120	°C
Drying Time - Hot Air Dryer	5.0 to 8.0	hr
Rear Temperature	240 to 260	°C
Middle Temperature	240 to 260	°C
Front Temperature	240 to 260	°C
Nozzle Temperature	260	°C
Mold Temperature	60 to 100	°C
Injection Pressure	20.0 to 150	MPa
Injection Rate	Moderate-Fast	
Screw Speed	80 to 120	rpm

