

Rynite® GW520CS1 NC010 (PRELIMINARY)

THERMOPLASTIC POLYESTER RESIN

Rynite® GW520CS1 NC010 is a 20% Glass Reinforced, Flame Retardant, Polyethylene Terephthalate with Improved Glow Wire Performance

Product information

Resin Identification	PET- GF20FR(16)	ISO 1043
Part Marking Code	>PET-GF20FR(16)<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0.3 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.9 %	ISO 294-4, 2577
Melt viscosity , @ 1000 sec-1, 280°C	180 Pa.s	ISO 11443

Typical mechanical properties

Tensile Modulus	9000 MPa	ISO 527-1/-2
Stress at break, 5mm/min	140 MPa	ISO 527-1/-2
Strain at break, 5mm/min	2.5 %	ISO 527-1/-2
Charpy impact strength, 23°C	40 kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	9 kJ/m²	ISO 179/1eA
Poisson's ratio	0.34	

Thermal properties

Melting temperature, 10°C/min	250 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	232 °C	ISO 75-1/-2

Flammability

Burning Behav. at 1.5mm nom. thickn.	V-2 class	UL 94
Thickness tested	1.5 mm	UL 94
Burning Behav. at thickness h	V-2 class	UL 94
Thickness tested	0.75 mm	UL 94
Glow Wire Flammability Index, 0.75mm	850 °C	IEC 60695-2-12
Glow Wire Flammability Index, 1.5mm	900 °C	IEC 60695-2-12
Glow Wire Ignition Temperature, 0.75mm	875 °C	IEC 60695-2-13
Glow Wire Ignition Temperature, 1.5mm	925 °C	IEC 60695-2-13
FMVSS Class	DNI	ISO 3795 (FMVSS 302)



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Electrical properties

Comparative tracking index	200	IEC 60112
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Other properties

Density	1610 kg/m ³	ISO 1183
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Injection

Drying Recommended	yes	
Drying Temperature	120 °C	
Drying Time, Dehumidified Dryer	4 - 6 h	
Processing Moisture Content	≤0.02 ^[1] %	
Melt Temperature Optimum	280 °C	Internal
Min. melt temperature	270 °C	
Max. melt temperature	290 °C	
Screw tangential speed	≤0.2 m/s	
Mold Temperature Optimum	140 °C	
Min. mould temperature	120 °C	
Max. mould temperature	140 ^[2] °C	
Hold pressure range	≥80 MPa	
Hold pressure time	4 s/mm	
Back pressure	As low as possible	
Ejection temperature	170 °C	Internal

[1]: At levels above 0.02%, strength and toughness will decrease, even though parts may not exhibit surface defects.

[2]: (6mm - 1mm thickness)

Characteristics

Additives	Release agent, Flame retardant
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