

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

Thermal properties

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

Flammability

Burning Behav. at 1.5mm nom. thickn.	V-2 class	IEC 60695-11-10
Thickness tested	1.5 mm	IEC 60695-11-10
Burning Behav. at thickness h	V-2 class	IEC 60695-11-10
Thickness tested	0.75 mm	IEC 60695-11-10
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)

Electrical properties

Comparative tracking index	200	IEC 60112
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Physical/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
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

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

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

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Additives	Release agent, Flame retardant
Special characteristics	Flame retardant

The above data are preliminary and are subject to change as additional data are developed on subsequent lots.

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