

# 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 <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	9 kJ/m <sup>2</sup>	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 <sup>3</sup>	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 <sup>[1]</sup> %
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 <sup>[2]</sup> °C
Hold pressure range	≥80 MPa
Hold pressure time	4 s/mm
Back pressure	As low as possible MPa
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