Celanese
The chemistry inside innovation™

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/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
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

Physical/Other properties

Density	1610	kg/m³	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	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

Revised: 2025-04-19 Source: Celanese Materials Database