

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
----------------------------	-----	-----------

Physical/Other properties

Density	1610 kg/m ³	ISO 1183
---------	------------------------	----------

Rynite® GW520CS1 NC010 (PRELIMINARY)

THERMOPLASTIC POLYESTER RESIN

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

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

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colourants or other additives may cause significant variations in data values. Properties of moulded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Other than those products expressly identified as medical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products.

© 2025 Celanese or its affiliates. All rights reserved. Celanese®, registered C-ball design and all other trademarks identified herein with ®, TM, SM, unless otherwise noted, are trademarks of Celanese or its affiliates. Fortron is a registered trademark of Fortron Industries LLC.