

Product Texts

Glass Fiber Reinforced and Flame Retardant Polybutylene Terephthalate Compound

VESTODUR® GF30-FR3 NC is a glass fiber-reinforced (30% glass fiber), semi-crystalline thermoplastic compound for injection molding, based on polybutylene terephthalate (PBT), with a creamy-white color.

Test bars made of this compound are rated V-0, according UL94 by Underwriters Laboratories Inc., self-extinguishing and non-dripping.

This compound is especially suitable for parts which are subjected to high mechanical and thermal loads and must have a very good flame-resistance.

The incorporated flame retardant is non-migrating and does not contain polybrominated diphenyl ethers. The additive has no corrosive effects on metal inserts or neighboring metal parts.

Therefore, the compound is suitable for components of the electrical and electronical industry. Laser marking with high contrasts is possible.

The compounds are supplied as cylindrical pellets in polyethylene packaging.

Inside the original and undamaged packaging, the product has a shelf life of at least 2 years when stored in dry rooms at temperatures not exceeding 30°C.

The values presented are typical or average values, they do not constitute a specification.

FOR FURTHER INFORMATION PLEASE CONTACT US AT EVONIK-HP@EVONIK.COM OR VISIT OUR PRODUCT AT WWW.VESTODUR.COM

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Melt volume-flow rate, MVR	12	cm ³ /10min	ISO 1133
Temperature	250	°C	-
Load	2.16	kg	-
^[C] Molding shrinkage, parallel	0.2	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	1.5	%	ISO 294-4, 2577
^[C] Density of melt	1460	kg/m ³	-
^[C] Thermal conductivity of melt	0.29	W/(m K)	-
^[C] Spec. heat capacity of melt	1540	J/(kg K)	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	11400	MPa	ISO 527
^[C] Stress at break	130	MPa	ISO 527
^[C] Strain at break	2.2	%	ISO 527
^[C] Tensile creep modulus, 1h	11000	MPa	ISO 899-1
^[C] Tensile creep modulus, 1000h	8000	MPa	ISO 899-1
^[C] Charpy impact strength, +23°C	55	kJ/m ²	ISO 179/1eU
^[C] Type of failure	C	-	-
^[C] Charpy notched impact strength, +23°C	9	kJ/m ²	ISO 179/1eA
^[C] Type of failure	C	-	-
^[C] Shore D hardness	84	-	ISO 7619-1

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	223	°C	ISO 11357-1/-3
^[C] Glass transition temperature, 10°C/min	45	°C	ISO 11357-1/-2
^[C] Temp. of deflection under load, 1.80 MPa	216	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	223	°C	ISO 75-1/-2
^[C] Vicat softening temperature, B	213	°C	ISO 306
^[C] Coeff. of linear therm. expansion, parallel	50	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn. Thickness tested	V-0	class mm	IEC 60695-11-10 -
^[C] Burning Behav. at thickness h Thickness tested	V-0	class mm	IEC 60695-11-10 -
^[C] Oxygen index	34	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	4.1	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	4.4	-	IEC 62631-2-1
^[C] Dissipation factor, 100Hz	30	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	150	E-4	IEC 62631-2-1
^[C] Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	1E13	Ohm	IEC 62631-3-2
^[C] Comparative tracking index	250	-	IEC 60112

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
^[C] Water absorption	0.4	%	Sim. to ISO 62
^[C] Density	1720	kg/m³	ISO 1183

[C]: CAMPUS

Test specimen production	Value	Unit	Test Standard
ISO Data			
^[C] Processing conditions acc. ISO	7792	-	ISO-2
^[C] Injection Molding, melt temperature	260	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294
Injection Molding, pressure at hold	70	MPa	ISO 294

[C]: CAMPUS

Characteristics

Processing

Injection Molding

Delivery form

Pellets, Natural Color, White

Additives

Release agent, Flame retarding agent

Special Characteristics

Flame retardant, Light stabilized or stable to light, U.V. stabilized or stable to weather, Heat stabilized or stable to heat

Features

Laser Markable

Applications

Electrical and Electronical

Regional Availability

North America, Europe, Asia Pacific, South and Central America, Near East/Africa