

Product Information

VESTODUR® GF30-FR3 BK V307168

**GLASS FIBER-REINFORCED AND FLAME RETARDANT
POLYBUTYLENE TEREPHTHALATE COMPOUND**



VESTODUR® GF30-FR3 BK V307168 is a glass fiber reinforced (with 30% glass fiber), semicrystalline thermoplastic compounds for injection molding, based on polybutylene terephthalate (PBT).

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

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 compounds are distinguished for moldings in the electrical and electronical industry. Laser marking with high contrasts is possible.

The compounds are supplied as cylindrical pellets in polyethylene packaging.

Pigmentation may affect values.

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.

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

Mechanical properties ISO	dry / cond	Unit	Test Standard
Tensile Modulus	11000 / 10800	MPa	ISO 527
Tensile Strength	140 / 125	MPa	ISO 527
Stress at break	140 / 125	MPa	ISO 527
Strain at break, εB	2 / 2	%	ISO 527
Charpy impact strength, +23°C	55 / 46	kJ/m ²	ISO 179/1eU
Type of failure	C / C	-	-
Charpy impact strength, -30°C	60 / 50	kJ/m ²	ISO 179/1eU

Type of failure	C / C	-	-
Charpy notched impact strength, +23°C	10 / 8	kJ/m ²	ISO 179/1eA
Type of failure	C / C	-	-
Charpy notched impact strength, -30°C	9 / 9	kJ/m ²	ISO 179/1eA
Type of failure	C / C	-	-
Flexural modulus, 23°C	10900 / 10600	MPa	ISO 178
Flexural strain at flexural strength, 23°C	2 / 2	%	ISO 178
Flexural stress at break, 23°C	213 / 195	MPa	ISO 178
Flexural strain at break, 23°C	2 / 2	%	ISO 178

Thermal properties	dry / cond	Unit	Test Standard
Temp. of deflection under load A, 1.80 MPa	216 / *	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	223 / *	°C	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	220 / *	°C	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	213 / *	°C	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	50 / *	E-6/K	ISO 11359-1/-2

Physical properties	dry / cond	Unit	Test Standard
Water absorption	0.4 / *	%	Sim. to ISO 62
Humidity absorption	0.2 / *	%	Sim. to ISO 62
Density	1720 / -	kg/m ³	ISO 1183
Shore D hardness	84^[b] / -	-	ISO 7619-1

b: 3 seconds

Burning Behav.	dry / cond	Unit	Test Standard
Burning behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.8 / *	mm	-
Burning behav. at 1.5 mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	-

Burnin behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.4 / *	mm	-
Oxygen index	34 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (GWIT)	800	°C	IEC 60695-2-13
Limiting Oxygen Index	34	%	ASTM D 2863

Electrical properties	dry / cond	Unit	Test Standard
Relative permittivity, 100Hz	4.1 / -	-	IEC 62631-2-1
Relative permittivity, 1MHz	4.4 / -	-	IEC 62631-2-1
Dissipation factor, 100Hz	30 / -	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	150 / -	E-4	IEC 62631-2-1
Volume resistivity, ρ_V	1E12 / -	Ohm*m	IEC 62631-3-1
Surface resistance, RSD	1E13 / -	Ohm	IEC 62631-3-2
Electric strength, AC, S20/P50	31 / -	kV/mm	Sim. to IEC 60243-1

Rheological properties	dry / cond	Unit	Test Standard
Melt volume-flow rate, MVR	12 / *	cm ³ /10min	ISO 1133
Temperature	250 / *	°C	-
Load	2.16 / *	kg	-
Molding shrinkage, parallel	0.3 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	1.2 / *	%	ISO 294-4, 2577
Mold temperature	80 / *	°C	-
Melt temperature	260 / *	°C	-

Characteristics

Key Feature, Industrial Sector

Automotive, Electrical and Electronical

Key Feature, Processing

Injection Molding

Key Feature, Optics

Laser Markable

Key Feature, Resistance to

Fire / Burn, U.V. / Light / Weathering

Key Feature, Certificate / Licence

Automotive

Key Feature, Additives

Glass fibre, Flame retarding agent

Applications

Encapsulation

Special Characteristics

Color Stability, Self-extinguishing

Features

Non-corrosive, Non-migrating Ingredients

Color

Black

Additives

Flame retarding agent, Heat stabilizer

Delivery form

Pellets, Granules

This information and all technical and other advice are based on Evonik's present knowledge and experience. However, Evonik assumes no liability for such information or advice, including the extent to which such information or advice may relate to third party intellectual property rights. Evonik reserves the right to make any changes to information or advice at any time, without prior or subsequent notice. Evonik disclaims all representations and warranties, whether express or implied, and shall have no liability for, merchantability of the product or its fitness for a particular purpose (even if Evonik is aware of such purpose), or otherwise. EVONIK SHALL NOT BE RESPONSIBLE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES (INCLUDING LOSS OF PROFITS) OF ANY KIND. It is the customer's sole responsibility to arrange for inspection and testing of all products by qualified experts. Reference to trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used.

® is a registered trademark of Evonik Industries AG or one of its subsidiaries

Evonik Operations GmbH
Smart Materials
High Performance Polymers
 45772 Marl / Germany
 Tel: +49 2365 49-9878
evonik-hp@evonik.com
www.plastics-database.com