VESTODUR® X7212 NC

PBT-GF45 FR(17) Evonik Operations GmbH

Product Texts

Glass Fiber Reinforced and Flame Retardant Polybutylene Terephthalate Molding Compound

VESTODUR® X7212 NC is a glass fiber-reinforced (45%), semi-crystalline thermoplastic compound for injection molding, based on polybutylene terephthalate (PBT). The self-extinguishing compound has a creamy-white colour.

VESTODUR® X7212 NC is used for parts of high mechanical and thermal resistance.

Test bars made of the compound are rated V-0 self-extinguishing according to UL94 by Underwriters Laboratories Inc.

The incorporated flame retardant is non-migrating. The additive has no corrosive effects on metal inserts or neighboring metal parts. Therefore, the compound is distinguished for moldings in the electrical and electronical industry. Laser marking with high contrasts is possible.

VESTODUR® X7212 is supplied as cylindrical pellets in polyethylene packaging.

The use of colorants may affect property values.

Inside the original and undamaged packaging, the product has a shelf life of at least 2 years when stored in dry rooms at tempIeratures 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	dry / cond	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**8 / ***	cm³/10min	ISO 1133
Temperature	**250 / ***	°C	-
Load	**2.16 / ***	kg	-
[C] Molding shrinkage, parallel	**0.2 / ***	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**0.7 / ***	%	ISO 294-4, 2577
[C] Density of melt	**1560**	kg/m³	-
[C] Thermal conductivity of melt	**0.35**	W/(m K)	-
[C] Spec. heat capacity of melt	**1430**	J/(kg K)	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**15500 / 16100**	MPa	ISO 527
[C] Stress at break	**145 / 150**	MPa	ISO 527
[C] Strain at break	**1.3 / 1.3**	%	ISO 527
[C] Charpy impact strength, +23°C	**48 / 44**	kJ/m²	ISO 179/1eU
[C] Type of failure	**C / C**	-	-
[C] Charpy impact strength, -30°C	**45 / 50**	kJ/m²	ISO 179/1eU
[C] Type of failure	**C / C**	-	-
[C] Charpy notched impact strength, +23°C	**12 / 11**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C / C**	-	-
[C] Charpy notched impact strength, -30°C	**12 / 15**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C / C**	-	-
[C] Shore D hardness	**86 / ***	-	ISO 7619-1

[C]: CAMPUS

Thermal properties	dry / cond	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	**217 / ***	°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	**215 / ***	°C	ISO 306
[C] Coeff. of linear therm. expansion, parallel	**20 / ***	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**40 / ***	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**V-0 / ***	class	IEC 60695-11-10
Thickness tested	**1.5 / ***	mm	-
[C] Burning Behav. at thickness h	**V-0 / ***	class	IEC 60695-11-10
Thickness tested	**0.8 / ***	mm	-
[C] Oxygen index	**37 / ***	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 100Hz	**4.4 / -**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**4.6 / -**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**40 / -**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**130 / -**	E-4	IEC 62631-2-1
[C] Surface resistivity	*** / 1E13**	Ohm	IEC 62631-3-2
[C] Comparative tracking index	**275 / -**	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
[C] Water absorption	**0.3 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**0.1 / ***	%	Sim. to ISO 62
[C] Density	**1840 / -**	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

Additives
Release agent

Special Characteristics
Flame retardant, Light stabilized or stable to light, 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