

Product Information

VESTODUR® X4877 BK V303909

EASY-FLOW, GLASS FIBER-REINFORCED POLYBUTYLENE TEREPHTHALATE COMPOUND WITH INCREASED IMPACT STRENGTH



VESTODUR® X4877 BK V303909 is an easy-flow, glass fiber-reinforced (30%) polybutylene terephthalate compound (PBT) with increased impact strength for injection molding.

This compound is especially suitable for the manufacture of parts which are subjected to high mechanical and thermal loads. Compared with commonly used glass fiber-reinforced PBT compounds with a similar stiffness VESTODUR® X4877 has an increased impact strength and also a higher strain at break.

VESTODUR® X4877 BK V303909 is supplied as cylindrical pellets in polyethylene packaging.

For information about VESTODUR® X4877 BK V303909, please follow the general recommendations in our flyer "VESTODUR® polybutylene terephthalate - compounds".

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 temperatures not exceeding 30°C.

Key Features

Industrial Sector

Automotive and Mobility

Processing

Injection molding

Delivery form

Pellets, Granules

Resistance to

Heat (thermal stability)

Conformity

Automotive

Additives

Glass fibers, Lubricant, Release agent

Mechanical properties ISO	dry	Unit	Test Standard
Tensile modulus	812000	psi	ISO 527
Tensile strength	15200	psi	ISO 527
Yield stress	15200	psi	ISO 527
Yield strain	5	%	ISO 527
Stress at break	13800	psi	ISO 527
Nominal strain at break, tB	5.5	%	ISO 527
Charpy impact strength, +23°C	39.5	ftlb/in ²	ISO 179/1eU
Type of failure	C	-	-
Charpy notched impact strength, +23°C	7.61	ftlb/in ²	ISO 179/1eA
Type of failure	C(P)	-	-
Charpy notched impact strength, -30°C	5.71	ftlb/in ²	ISO 179/1eA
Type of failure	C	-	-

Thermal properties	dry	Unit	Test Standard
Melting temperature	392	°F	ISO 11357-1/-3
Temp. of deflection under load A, 1.80 MPa	347	°F	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	383	°F	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	374	°F	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	329	°F	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	2.78E-5	in/in/°F	ISO 11359-1/-2
Melting Temperature	392	°F	ASTM D 3418

Physical properties	dry	Unit	Test Standard
Density	1.49	g/cm ³	ISO 1183
Water absorption	0.25	%	Sim. to ISO 62
Shore D hardness	79^[b]	-	ISO 7619-1
Ball indentation hardness	15200	psi	ISO 2039-1

Density	1.49	g/cm ³	ASTM D 792
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b: 3 seconds

Burning Behav.	dry	Unit	Test Standard
Burning behav. at 1.5 mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	0.0630	in	-
Burning behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	0.0315	in	-

Electrical properties	dry	Unit	Test Standard
Volume resistivity, V	1E12	Ohm*m	IEC 62631-3-1
Surface resistance, RSD	1E13	Ohm	IEC 62631-3-2
Relative permittivity, 100Hz	4.7	-	IEC 62631-2-1
Dissipation factor, 100Hz	200	E-4	IEC 62631-2-1
Dielectric strength, AC, S20/P50	762	V/mil	Sim. to IEC 60243-1
CTI, test solution A, 50 drops value	600	-	IEC 60112
Assessment of the insulation group	I	-	DIN EN 60664-1

Rheological properties	dry	Unit	Test Standard
Melt volume-flow rate, MVR	20	cm ³ /10min	ISO 1133
Temperature	250	°C	-
Load	2.16	kg	-
Molding shrinkage, parallel	0.3	%	ISO 294-4, 2577
Molding shrinkage, normal	1.0	%	ISO 294-4, 2577
Mold temperature	176	°F	-

Test specimen production	dry	Unit	Test Standard
Injection Molding, melt temperature	500	°F	ISO 294
Injection Molding, mold temperature	176	°F	ISO 294

VESTODUR®

Injection Molding, injection velocity

7.87

in/s

ISO 294

Characteristics

Special Characteristics

High impact strength, High heat resistant

Additives

Release agent, Heat stabilizer

Color

Black