VESTODUR®

Product Information

VESTODUR® X7396

LOW-SHRINKAGE, POLYMER-MODIFIED POLYBUTYLENE TEREPHTHALATE COMPOUND

VESTODUR® X7396 is an unreinforced, heat-stabilized and polymer-modified polybutylene terephthalate (PBT) compound with low shrinkage for extrusion.

The compound is especially suitable for the manufacture of stiff, small-diameter tubing, e.g. loose buffering for fiber optics.

Compared with standard PBT compounds VESTODUR® X7396 has a higher hardness. This permits cable jacketing as a protective cover against rodent attacks.

VESTODUR® X7396 is supplied as cylindrical pellets in polyethylene packaging.

In the brochure "Engineering thermoplastics for high performance secondary fiber optic jacketing" instructions are given on the extrusion of loose or tight buffering for fiber optics.

For information 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 templeratures not exceeding 30°C.

Key Features

Processing
Extrusion

Delivery form
Pellets, Granules

Resistance to
Heat (thermal stability), Hydrolysis / hot water

Mechanical properties ISO	dry	Unit	Test Standard
Tensile modulus	**377000**	psi	ISO 527
Tensile strength	**9430**	psi	ISO 527
Yield stress	**9430**	psi	ISO 527
Yield strain	**4**	%	ISO 527
Stress at break	**4930**	psi	ISO 527
Nominal strain at break, tB	**>50**	%	ISO 527
Charpy impact strength, +23°C	**N**	ftlb/in^2	ISO 179/1eU
Charpy impact strength, -30°C	**105**	ftlb/in^2	ISO 179/1eU
Type of failure	**P**	-	-
Charpy notched impact strength, +23°C	**2.62**	ftlb/in^2	ISO 179/1eA
Type of failure	**C**	-	-
Charpy notched impact strength, -30°C	**2.14**	ftlb/in^2	ISO 179/1eA
Type of failure	**C**	-	-
Flexural modulus, 23°C	**354000**	psi	ISO 178
Flexural stress at conv. deflection, 23°C	**12300**	psi	ISO 178
Flexural strength, 23°C	**14600**	psi	ISO 178
Flexural strain at flexural strength, 23°C	**5.5**	%	ISO 178
Flexural stress at break, 23°C	**N**	psi	ISO 178
Flexural strain at break, 23°C	**N**	%	ISO 178

Thermal properties	dry	Unit	Test Standard
Melting temperature	**428**	°F	ISO 11357-1/-3
Glass transition temperature, DSC	**133**	°F	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	**149**	°F	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	**185**	°F	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	**410**	°F	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	**239**	°F	ISO 306

Physical properties	dry	Unit	Test Standard
Density	**1.25**	g/cm³	ISO 1183
Water absorption	**0.48**	%	Sim. to ISO 62
Humidity absorption	**0.35**	%	Sim. to ISO 62
Density	**1.25**	g/cm³	ASTM D 792

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	-

Rheological properties	dry	Unit	Test Standard
Melt volume-flow rate, MVR	**43**	cm³/10min	ISO 1133
Temperature	**250**	°C	-
Load	**10**	kg	-
Molding shrinkage, parallel	**1.3**	%	ISO 294-4, 2577
Molding shrinkage, normal	**1.3**	%	ISO 294-4, 2577
Mold temperature	**176**	°F	-
Melt temperature	**500**	°F	-

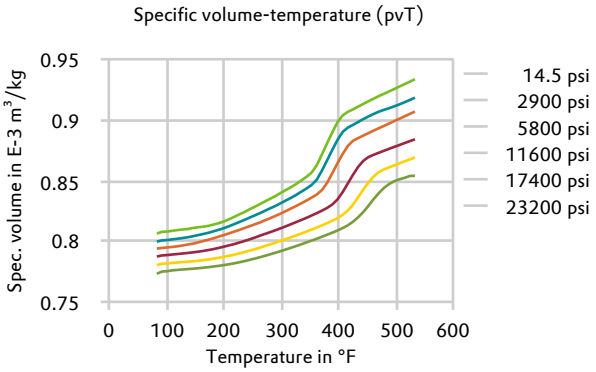
Polymer analytics	dry	Unit	Test Standard
Viscosity number	**3320**	in³/lb	ISO 307, 1157, 1628

Test specimen production	dry	Unit	Test Standard
Processing conditions acc. ISO	**7792**	-	ISO ....-2
Injection Molding, melt temperature	**500**	°F	ISO 294
Injection Molding, mold temperature	**176**	°F	ISO 294
Injection Molding, injection velocity	**7.87**	in/s	ISO 294

Injection Molding, pressure at hold	**10200**	psi	ISO 294

Diagrams

Specific volume-temperature (pvT)



Characteristics

Applications
Electrical and Electronical, Fiber optic cable

Color
Natural color

Processing
Film extrusion

Additives
Heat stabilizer

Special Characteristics
U.V. stabilized, High heat resistant, Low warpage / Low shrinkage

Chemical Resistance
Hydrolytically stable

Features
Termite and rodent resistance