

Product Information

VESTODUR® 3030

HIGH VISCOSITY POLYBUTYLENE TEREPHTHALATE RESIN WITH IMPROVED HYDROLYSIS AND HEAT RESISTANCE



VESTODUR® 3030 is a high viscosity polybutylene terephthalate (PBT) resin for the extrusion that is optimized in respect to hydrolysis and heat resistance.

The compound is best suited for manufacturing stiff, small-diameter tubing, e. g. for loose fiber optic buffer tubes.

VESTODUR® 3030 is supplied as cylindrical pellets in polyethylene packaging, ready for processing.

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, Industry and Engineering

Electrical

Insulating

Processing

Injection molding, Extrusion

Conformity

Automotive

Delivery form

Pellets, Granules

Additives

Unfilled

Resistance to

Hydrolysis / hot water

Mechanical properties ISO

Tensile modulus

dry

2500

Unit

MPa

Test Standard

ISO 527

Tensile strength

56

MPa

ISO 527

Yield stress	56	MPa	ISO 527
Yield strain	4	%	ISO 527
Stress at 50% strain	33	MPa	ISO 527
Stress at break	34	MPa	ISO 527
Nominal strain at break, tB	>50	%	ISO 527
Tensile creep modulus, 0,5% Strain, 1h	2600	MPa	ISO 899-1
Tensile creep modulus, 0,5% Strain, 1000h	1500	MPa	ISO 899-1
Charpy impact strength, +23°C	N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	5	kJ/m ²	ISO 179/1eA
Type of failure	C	-	-
Charpy notched impact strength, -30°C	4	kJ/m ²	ISO 179/1eA
Type of failure	C	-	-

Thermal properties	dry	Unit	Test Standard
Melting temperature	223	°C	ISO 11357-1/-3
Glass transition temperature, DSC	45	°C	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	55	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	135	°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	180	°C	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	110	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, 23°C to 55 °C, normal	110	E-6/K	ISO 11359-1/-2
Melting Temperature	223	°C	ASTM D 3418

Physical properties	dry	Unit	Test Standard
Density	1310	kg/m ³	ISO 1183
Water absorption	0.45	%	Sim. to ISO 62
Humidity absorption	0.15	%	Sim. to ISO 62

Shore D hardness	77^[b]	-	ISO 7619-1
Density	1310	kg/m ³	ASTM D 792

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	1.6	mm	-
Burning behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	0.8	mm	-
Oxygen index	23	%	ISO 4589-1/-2
Limiting Oxygen Index	23	%	ASTM D 2863

Electrical properties	dry	Unit	Test Standard
Surface resistivity, E	1E13	Ohm	IEC 62631-3-2
Surface resistance, RSD	1E13	Ohm	IEC 62631-3-2
Relative permittivity, 100Hz	3.3	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.5	-	IEC 62631-2-1
Dissipation factor, 100Hz	20	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	230	E-4	IEC 62631-2-1
Dielectric strength, AC, S20/S20, t. 1 mm	27	kV/mm	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	9	cm ³ /10min	ISO 1133
Temperature	250	°C	-
Load	2.16	kg	-
Molding shrinkage, parallel	1.7	%	ISO 294-4, 2577
Molding shrinkage, normal	1.7	%	ISO 294-4, 2577

Mold temperature **80** °C -

Test specimen production **dry** **Unit** **Test Standard**

Processing conditions acc. ISO **7792** - ISO-2

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

Characteristics

Applications

Electrical and Electronical, IT and telecommunication

Color

Natural color

Processing

Film extrusion

Additives

Heat stabilizer

Special Characteristics

Light-stabilized, U.V. stabilized, High viscosity

Chemical Resistance

Hydrolytically stable

Chemical Media Resistance

Acids

- ✓ Acetic Acid (5% by mass) (23°C)
- ✓ Citric Acid solution (10% by mass) (23°C)
- ✗ Hydrochloric Acid (36% by mass) (23°C)
- ✗ Nitric Acid (40% by mass) (23°C)
- ✓ Sulfuric Acid (38% by mass) (23°C)
- ✓ Sulfuric Acid (5% by mass) (23°C)

Bases

- ✗ Sodium Hydroxide solution (35% by mass) (23°C)
- ✗ Ammonium Hydroxide solution (10% by mass) (23°C)

Alcohols

- ✓ Isopropyl alcohol (23°C)
- ✓ Methanol (23°C)

✓ Ethanol (23°C)

Hydrocarbons

✓ iso-Octane (23°C)

Ketones

✓ Acetone (23°C)

Ethers

✓ Diethyl ether (23°C)

Mineral oils

✓ SAE 10W40 multigrade motor oil (23°C)

✓ Insulating Oil (23°C)

Standard Fuels

✓ Standard fuel without alcohol (pref. ISO 1817 Liquid C) (23°C)

✓ Diesel fuel (pref. ISO 1817 Liquid F) (23°C)

✓ Diesel fuel (pref. ISO 1817 Liquid F) (90°C)

Salt solutions

✓ Sodium Chloride solution (10% by mass) (23°C)

✓ Sodium Hypochlorite solution (10% by mass) (23°C)

✓ Sodium Carbonate solution (20% by mass) (23°C)

Other

✓ Ethyl Acetate (23°C)

✓ Hydrogen peroxide (23°C)

✗ Ethylene Glycol (50% by mass) in water (108°C)

✓ Water (23°C)

✗ Deionized water (90°C)