VESTODUR® 3013

PBT — Evonik Operations GmbH

Product Texts

High viscosity polybutylene terephthalate with improved hydrolysis resistance

VESTODUR® 3013 is a high viscosity polybutylene terephthalate (PBT) resin for the extrusion, with an improved resistance to hydrolysis.

The resin is especially suitable for the manufacture of stiff, small-diameter tubing, e. g. for loose fiber optic buffer tubes.

VESTODUR® 3013 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.
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	**9 / ***	cm³/10min	ISO 1133
Temperature	**250 / ***	°C	-
Load	**2.16 / ***	kg	-
[C] Molding shrinkage, parallel	**1.7 / ***	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**1.7 / ***	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**2500 / 2450**	MPa	ISO 527
[C] Yield stress	**57 / 57**	MPa	ISO 527
[C] Yield strain	**11 / 12**	%	ISO 527
[C] Nominal strain at break	**>50 / >50**	%	ISO 527
[C] Tensile creep modulus, 1h	*** / 2600**	MPa	ISO 899-1
[C] Tensile creep modulus, 1000h	*** / 1500**	MPa	ISO 899-1
[C] Charpy impact strength, +23°C	**N / N**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**250 / 250**	kJ/m²	ISO 179/1eU
[C] Type of failure	**C(P)[C(P)] / C**	-	-
[C] Charpy notched impact strength, +23°C	**5 / 5**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C / C**	-	-
[C] Charpy notched impact strength, -30°C	**4 / 4**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C / C**	-	-
[C] Tensile notched impact strength, +23°C	**110 / -**	kJ/m²	ISO 8256/1
[C] Shore D hardness	**77 / ***	-	ISO 7619-1

C(P): 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	**55 / ***	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**150 / ***	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**180 / ***	°C	ISO 306
[C] Coeff. of linear therm. expansion, parallel	**110 / ***	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**110 / ***	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**HB / ***	class	IEC 60695-11-10

Thickness tested	**1.6 / ***	mm	-
[C] Burning Behav. at thickness h	**HB / ***	class	IEC 60695-11-10
Thickness tested	**0.8 / ***	mm	-
[C] Oxygen index	**23 / ***	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	**dry / cond**	**Unit**	**Test Standard**
ISO Data			
[C] Relative permittivity, 100Hz	**3.3 / -**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**3.5 / -**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**20 / -**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**230 / -**	E-4	IEC 62631-2-1
[C] Volume resistivity	**1E11 / -**	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	*** / 1E14**	Ohm	IEC 62631-3-2
[C] Comparative tracking index	**600 / -**	-	IEC 60112

[C]: CAMPUS

Other properties	**dry / cond**	**Unit**	**Test Standard**
[C] Water absorption	**0.5 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**0.1 / ***	%	Sim. to ISO 62
[C] Density	**1310 / -**	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
Film Extrusion, Pipe/Tube Extrusion, Profile Extrusion, Sheet Extrusion, Other Extrusion

Delivery form
Pellets

Chemical Resistance
Hydrolytically Stable

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa