VESTODUR® 3000

PBT — Evonik Operations GmbH

Product Texts

High-viscosity, Polybutylen terephthalat resin

VESTODUR® 3000 ist eine high-viscosity, unreinforced, semi-crystalline Polybutylen terephthalat resin for injection molding and extrusion.

The resin features superior thermal and mechanical resistance.

VESTODUR® 3000 is supplied as granules in polyethylene containers.

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] Density of melt	**1110**	kg/m³	-
[C] Thermal conductivity of melt	**0.19**	W/(m K)	-
[C] Spec. heat capacity of melt	**1700**	J/(kg K)	-
[C] Ejection temperature	**220**	°C	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**2400 / -**	MPa	ISO 527
[C] Yield stress	**54 / -**	MPa	ISO 527
[C] Yield strain	**3 / -**	%	ISO 527
[C] Nominal strain at break	**>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 / -**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**7 / -**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C / -**	-	-
[C] Charpy notched impact strength, -30°C	**6 / -**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C / -**	-	-
[C] Tensile notched impact strength, +23°C	**110 / -**	kJ/m²	ISO 8256/1
[C] Shore D hardness	**77 / ***	-	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	**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	**>1E13 / -**	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	*** / 1E14**	Ohm	IEC 62631-3-2
[C] Electric strength	**27 / -**	kV/mm	IEC 60243-1
[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
Injection Molding, Film Extrusion, Profile Extrusion, Sheet Extrusion, Other Extrusion

Delivery form
Pellets

Special Characteristics
Light stabilized or stable to light

Features
Thermal Stability

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