VESTAMID® L-GB30

PA12-GB30 Evonik Operations GmbH

Product Texts

Microglass bead-filled (30%) PA12 resin for the injection moulding of rigid, low-warpage and dimensionally accurate mouldings

VESTAMID® L-GB30 NC is a glass bead –reinforced heat stabilized Polyamide 12 for injection molding. The material contains about 30% microglass beads, an ageing protective agent and a processing aid for a fast and even form filling. Due to the reinforcement moldings from this compound exhibit a higher strength, an isotropic shrinkage and good heat resistance, excellent for gear housings for mechanical counting mechanisms (e.g.speedometers or water gauges).

Further advantages of VESTAMID® L-GB30 NC are the characterizing properties of PA12, e.g., low water absorption, good dimensional stability and nearly constant mechanical properties at changing ambient humidity.

VESTAMID® L-GB30 NC is supplied as cylindrical granules, ready for processing, in moisture-proof bags.

Pigmentation may affect 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 results shown have been generated from a low number of production lots. Therefore, they are preliminary and not yet the result of a statistical evaluation. Therefore they must not be used to establish specifications.

For information about processing of VESTAMID®, please follow the general commendations about "Processing of VESTAMID® compounds".

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.VESTAMID.COM

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**100 / ***	cm³/10min	ISO 1133
Temperature	**275 / ***	°C	-
Load	**5 / ***	kg	-
[C] Molding shrinkage, parallel	**0.6 / ***	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**0.7 / ***	%	ISO 294-4, 2577
[C] Density of melt	**1090**	kg/m³	-
[C] Thermal conductivity of melt	**0.28**	W/(m K)	-
[C] Spec. heat capacity of melt	**2400**	J/(kg K)	-
[C] Ejection temperature	**180**	°C	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**2100 / 1800**	MPa	ISO 527
[C] Yield stress	**47 / 37**	MPa	ISO 527
[C] Yield strain	**5 / 5**	%	ISO 527
[C] Nominal strain at break	**20 / >50**	%	ISO 527
[C] Tensile creep modulus, 1h	*** / 1600**	MPa	ISO 899-1
[C] Tensile creep modulus, 1000h	*** / 1100**	MPa	ISO 899-1
[C] Charpy impact strength, +23°C	**160 / N**	kJ/m²	ISO 179/1eU
[C] Type of failure	**C / -**	-	-
[C] Charpy impact strength, -30°C	**160 / N**	kJ/m²	ISO 179/1eU
[C] Type of failure	**C / -**	-	-
[C] Charpy notched impact strength, +23°C	**4.4 / 6**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C / C**	-	-
[C] Charpy notched impact strength, -30°C	**6 / 6**	kJ/m²	ISO 179/1eA

[C] Type of failure	**C / C**	-	-

[C]: CAMPUS

Thermal properties	**dry / cond**	**Unit**	**Test Standard**
ISO Data			
[C] Melting temperature, 10°C/min	**178 / ***	°C	ISO 11357-1/-3
[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	**155 / ***	°C	ISO 306
[C] Coeff. of linear therm. expansion, parallel	**130 / ***	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**130 / ***	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**HB / ***	class	IEC 60695-11-10
Thickness tested	**1.5 / ***	mm	-
Yellow Card available	**yes / ***	-	-
[C] Burning Behav. at thickness h	**HB / ***	class	IEC 60695-11-10
Thickness tested	**0.8 / ***	mm	-
Yellow Card available	**yes / ***	-	-

[C]: CAMPUS

Electrical properties	**dry / cond**	**Unit**	**Test Standard**
ISO Data			
[C] Relative permittivity, 100Hz	**4.1 / 5**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**3.5 / 4**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**310 / 600**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**230 / 370**	E-4	IEC 62631-2-1
[C] Volume resistivity	**>1E13 / 2E12**	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	*** / 1E15**	Ohm	IEC 62631-3-2
[C] Electric strength	**- / 36**	kV/mm	IEC 60243-1
[C] Comparative tracking index	**600 / 600**	-	IEC 60112

[C]: CAMPUS

Other properties	**dry / cond**	**Unit**	**Test Standard**
[C] Water absorption	**1.1 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**0.5 / ***	%	Sim. to ISO 62
[C] Density	**1250 / 1260**	kg/m³	ISO 1183

[C]: CAMPUS

Test specimen production	**Value**	**Unit**	**Test Standard**
ISO Data			
[C] Injection Molding, melt temperature	**250**	°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

Delivery form
Pellets, Natural Color

Additives
Lubricants

Special Characteristics
Heat stabilized or stable to heat

Features
Low Warpage

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