

Product Information

# VESTAMID® L-GF30 BK 9.7506

## GLASS FIBER-REINFORCED HEAT STABILIZED POLYAMIDE 12

**VESTAMID® L-GF30 BK 9.7506** is a glass fiber-reinforced heat stabilized Polyamide 12 for injection molding. The material contains about 30% glass fibers, 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 and good heat resistance.

Further advantages of VESTAMID® L-GF30 BK 9.7506 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-GF30 BK 9.7506 is supplied as cylindrical granules, ready for processing, in moisture-proof bags.

The use of colorants may change 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, Sustainable, Industry and Engineering

#### Sustainability

Sustainable electricity

#### Processing

Injection molding

#### Delivery form

Pellets, Granules

#### Resistance to

Heat (thermal stability), UV / light / weathering, Oil / fuels

#### Electrical

Insulating

#### Conformity

Automotive

#### Additives

Glass fibers

LCA-values	dry	Unit	Test Standard
LCA name of certificate	<a href="#">VESTAMID® L GF medium</a>	-	ISO 14040, 14044
LCA certifier	<a href="#">TÜV Rheinland</a>	-	ISO 14040, 14044
Blue water consumption	<b>23.6</b>	kg	ISO 14040, 14044
Global Warming Potential incl. bio. C incl. LUC	<b>5.1</b>	kg CO <sub>2</sub> eq./kg	ISO 14040, 14044
Global Warming Potential excl. bio. C incl. LUC	<b>5.1</b>	kg CO <sub>2</sub> eq./kg	ISO 14040, 14044
Land use (ReCiPe 2016)	<b>0.1</b>	Annual crop eq. y	ISO 14040, 14044
GWP savings as compared to 2023 reference	<b>-2.3</b>	kg CO <sub>2</sub> eq./kg	ISO 14040, 14044

Mechanical properties ISO	dry / cond	Unit	Test Standard
Tensile modulus	<b>6800 / -</b>	MPa	ISO 527
Tensile strength	<b>114 / -</b>	MPa	ISO 527
Yield stress	<b>114 / -</b>	MPa	ISO 527
Yield strain	<b>4 / -</b>	%	ISO 527
Stress at break	<b>111 / -</b>	MPa	ISO 527
Nominal strain at break, tB	<b>5 / -</b>	%	ISO 527
Charpy impact strength, +23°C	<b>85 / -</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Type of failure	<b>C / -</b>	-	-
Charpy impact strength, -30°C	<b>100 / -</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Type of failure	<b>C / -</b>	-	-
Charpy notched impact strength, +23°C	<b>23 / -</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Type of failure	<b>C / -</b>	-	-
Charpy notched impact strength, -30°C	<b>21 / -</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Type of failure	<b>C / -</b>	-	-
Flexural modulus, 23°C	<b>6250 / -</b>	MPa	ISO 178
Flexural stress at conv. deflection, 23°C	<b>171 / -</b>	MPa	ISO 178
Flexural strength, 23°C	<b>188 / -</b>	MPa	ISO 178

Flexural strain at flexural strength, 23°C	5 / -	%	ISO 178
Flexural stress at break, 23°C	183 / -	MPa	ISO 178
Flexural strain at break, 23°C	6 / -	%	ISO 178

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature	178 / *	°C	ISO 11357-1/-3
Temp. of deflection under load A, 1.80 MPa	165 / *	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	175 / *	°C	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	175 / *	°C	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	175 / *	°C	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	60 / *	E-6/K	ISO 11359-1/-2
Melting Temperature	178	°C	ASTM D 3418

Physical properties	dry / cond	Unit	Test Standard
Density	1240 / -	kg/m <sup>3</sup>	ISO 1183
Water absorption	1.1 / *	%	Sim. to ISO 62
Humidity absorption	0.6 / *	%	Sim. to ISO 62
Density	1240	kg/m <sup>3</sup>	ASTM D 792

Burning Behav.	dry / cond	Unit	Test Standard
Burning behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.6 / *	mm	-
Burnin behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	3.2 / *	mm	-

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity, V	1E11 / -	Ohm*m	IEC 62631-3-1
Relative permittivity, 50Hz	4.2 / -	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.4 / -	-	IEC 62631-2-1

Dissipation factor, 50Hz	<b>330 / -</b>	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	<b>230 / -</b>	E-4	IEC 62631-2-1
Dielectric strength, AC, S20/S20, t. 1 mm	<b>37 / -</b>	kV/mm	IEC 60243-1
CTI, test solution A, 50 drops value	<b>600 / -</b>	-	IEC 60112
Assessment of the insulation group	<b>I</b>	-	DIN EN 60664-1

<b>Rheological properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
Melt volume-flow rate, MVR	<b>13 / *</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>275 / *</b>	°C	-
Load	<b>2.16 / *</b>	kg	-
Molding shrinkage, parallel	<b>0.1 / *</b>	%	ISO 294-4, 2577
Molding shrinkage, normal	<b>0.6 / *</b>	%	ISO 294-4, 2577
Mold temperature	<b>80 / *</b>	°C	-
Melt temperature	<b>250 / *</b>	°C	-

<b>Test specimen production</b>	<b>dry</b>	<b>Unit</b>	<b>Test Standard</b>
Injection Molding, melt temperature	<b>250</b>	°C	ISO 294
Injection Molding, mold temperature	<b>80</b>	°C	ISO 294
Injection Molding, injection velocity	<b>200</b>	mm/s	ISO 294

### Characteristics

#### Special Characteristics

High heat resistant

#### Color

Black

#### Additives

Antioxidant agent, Heat stabilizer, Processing aids