

Product Information

VESTAMID® L-GF50 BK 9.7506

MEDIUM-VISCOSITY, HEAT-STABILIZED GLASS FIBER-REINFORCED POLYAMIDE 12 COMPOUND



VESTAMID® L-GF50 BK 9.7506 is a 50% glass fiber-reinforced, easily demoldable and heat-stabilized polyamide 12 compound.

Due to its mold release properties, VESTAMID® L-GF50 BK 9.7506 is suitable for the efficient production of injection molded parts with short cycle times.

Further advantages of VESTAMID® L-GF50 BK 9.7506 are the characteristic properties of polyamide 12 as low water absorption, good dimensional stability and almost the same properties at changing ambient humidity.

VESTAMID® L-GF50 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	VESTAMID® L GF high	-	ISO 14040, 14044
LCA certifier	TÜV Rheinland	-	ISO 14040, 14044
Blue water consumption	21.5	kg	ISO 14040, 14044
Global Warming Potential incl. bio. C incl. LUC	4.0	kg CO ₂ eq./kg	ISO 14040, 14044
Global Warming Potential excl. bio. C incl. LUC	4.0	kg CO ₂ eq./kg	ISO 14040, 14044
Land use (ReCiPe 2016)	0.1	Annual crop eq. y	ISO 14040, 14044
GWP savings as compared to 2023 reference	-2.0	kg CO ₂ eq./kg	ISO 14040, 14044

Mechanical properties ISO	dry / cond	Unit	Test Standard
Tensile modulus	12000 / -	MPa	ISO 527
Tensile strength	150 / -	MPa	ISO 527
Stress at break	150 / -	MPa	ISO 527
Nominal strain at break, tB	4.5 / -	%	ISO 527
Charpy impact strength, +23°C	90 / -	kJ/m ²	ISO 179/1eU
Type of failure	C / -	-	-
Charpy impact strength, -30°C	90 / -	kJ/m ²	ISO 179/1eU
Type of failure	C / -	-	-
Charpy notched impact strength, +23°C	25 / -	kJ/m ²	ISO 179/1eA
Type of failure	C / -	-	-
Charpy notched impact strength, -30°C	17 / -	kJ/m ²	ISO 179/1eA
Type of failure	C / -	-	-
Flexural modulus, 23°C	11500 / -	MPa	ISO 178
Flexural stress at break, 23°C	240 / -	MPa	ISO 178
Flexural strain at break, 23°C	4 / -	%	ISO 178

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature	177 / *	°C	ISO 11357-1/-3

Glass transition temperature, DSC	41 / *	°C	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	172 / *	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	179 / *	°C	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	177 / *	°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	14 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, 23°C to 55 °C, normal	131 / *	E-6/K	ISO 11359-1/-2
Melting Temperature	177	°C	ASTM D 3418

Physical properties	dry / cond	Unit	Test Standard
Density	1450 / -	kg/m ³	ISO 1183
Water absorption	0.83 / *	%	Sim. to ISO 62
Humidity absorption	0.44 / *	%	Sim. to ISO 62
Density	1450	kg/m ³	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	-
Burning behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.8 / *	mm	-

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity, V	1E12 / -	Ohm*m	IEC 62631-3-1
Relative permittivity, 100Hz	4.9 / -	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.8 / -	-	IEC 62631-2-1
Dissipation factor, 100Hz	510 / -	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	320 / -	E-4	IEC 62631-2-1

Dielectric strength, AC, S20/S20, t. 1 mm	33 / -	kV/mm	IEC 60243-1
Dielectric strength, AC, S20/P50	31 / -	kV/mm	Sim. to 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 / cond	Unit	Test Standard
Melt volume-flow rate, MVR	9 / *	cm ³ /10min	ISO 1133
Temperature	275 / *	°C	-
Load	2.16 / *	kg	-
Melt mass-flow index, MFI	11	g/10min	ISO 1133
Temperature	275	°C	-
Load	21.6	kg	-
Molding shrinkage, parallel	0.2 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.7 / *	%	ISO 294-4, 2577
Mold temperature	60 / *	°C	-
Melt temperature	280 / *	°C	-

Test specimen production	dry	Unit	Test Standard
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

Characteristics

Special Characteristics

High heat resistant, Medium viscosity

Color

Black

Additives

Heat stabilizer