VESTAMID®

Product Information

VESTAMID® L1833 BK 9.7623

GLASS FIBER-REINFORCED, EASILY DEMOLDABLE AND HEAT-STABILIZED POLYAMIDE 12 COMPOUND

VESTAMID® L1833 BK 9.7623 is a 23% glass fiber-reinforced, easily demoldable and heat-stabilized polyamide 12 compound.

Due to its mold release properties, VESTAMID® L1833 BK 9.7623 is suitable for the efficient production of injection molded parts with short cycle times.

VESTAMID® L1833 BK 9.7623 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

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 medium	-	ISO 14040, 14044
LCA certifier	TÜV Rheinland	-	ISO 14040, 14044

Blue water consumption	**23.6**	kg	ISO 14040, 14044
Global Warming Potential incl. bio. C incl. LUC	**5.1**	kg CO_2 eq./kg	ISO 14040, 14044
Global Warming Potential excl. bio. C incl. LUC	**5.1**	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	**-2.3**	kg CO_2 eq./kg	ISO 14040, 14044

Mechanical properties ISO	dry / cond	Unit	Test Standard
Tensile modulus	**798000 / 674000**	psi	ISO 527
Tensile strength	**15400 / 14500**	psi	ISO 527
Yield stress	**15400 / 14500**	psi	ISO 527
Yield strain	**4 / 5**	%	ISO 527
Stress at break	**15200 / 14100**	psi	ISO 527
Nominal strain at break, tB	**7 / 7**	%	ISO 527
Charpy impact strength, +23°C	**42.8 / 38.5**	ftlb/in²	ISO 179/1eU
Type of failure	**C / C**	-	-
Charpy impact strength, -30°C	**45.2 / 39.5**	ftlb/in²	ISO 179/1eU
Type of failure	**C / C**	-	-
Charpy notched impact strength, +23°C	**11.9 / 8.56**	ftlb/in²	ISO 179/1eA
Type of failure	**C / C**	-	-
Charpy notched impact strength, -30°C	**7.61 / 6.18**	ftlb/in²	ISO 179/1eA
Type of failure	**C / C**	-	-
Flexural modulus, 23°C	**725000 / 616000**	psi	ISO 178
Flexural stress at conv. deflection, 23°C	**- / 18000**	psi	ISO 178
Flexural strength, 23°C	**- / 21800**	psi	ISO 178
Flexural strain at flexural strength, 23°C	**- / 7**	%	ISO 178
Flexural stress at break, 23°C	**- / 19100**	psi	ISO 178
Flexural strain at break, 23°C	**- / 9**	%	ISO 178

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature	**352 / ***	°F	ISO 11357-1/-3
Glass transition temperature, DSC	**104 / ***	°F	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	**320 / ***	°F	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	**347 / ***	°F	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	**347 / ***	°F	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	**347 / ***	°F	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	**3.89E-5 / ***	in/in/°F	ISO 11359-1/-2
Melting Temperature	**352**	°F	ASTM D 3418

Physical properties	dry / cond	Unit	Test Standard
Density	**1.17 / -**	g/cm^3	ISO 1183
Water absorption	**1.2 / ***	%	Sim. to ISO 62
Humidity absorption	**0.6 / ***	%	Sim. to ISO 62
Density	**1.17**	g/cm^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	**0.0630 / ***	in	-
Burnin behav. at thickness h	**HB / ***	class	IEC 60695-11-10
Thickness tested	**0.1181 / ***	in	-

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity, V	**1E13 / 2.3E12**	Ohm*m	IEC 62631-3-1
Surface resistivity, C, circular electrodes	**- / >1E15**	Ohm/sq	IEC 62631-3-2
Relative permittivity, 50Hz	**2.7 / -**	-	IEC 62631-2-1
Relative permittivity, 100Hz	**2.6 / -**	-	IEC 62631-2-1
Relative permittivity, 1MHz	**2.3 / -**	-	IEC 62631-2-1
Dissipation factor, 1MHz	**158 / -**	E-4	IEC 62631-2-1

Dielectric strength, AC, S20/S20, t. 1 mm	**- / 1240**	kV/in	IEC 60243-1
Dielectric strength, AC, S20/P50	**1040 / -**	V/mil	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	**41 / ***	cm^3/10min	ISO 1133
Temperature	**275 / ***	°C	-
Load	**5 / ***	kg	-
Molding shrinkage, parallel	**0.3 / ***	%	ISO 294-4, 2577
Molding shrinkage, normal	**0.6 / ***	%	ISO 294-4, 2577
Mold temperature	**176 / ***	°F	-
Melt temperature	**482 / ***	°F	-

Test specimen production	**dry**	**Unit**	**Test Standard**
Injection Molding, melt temperature	**464**	°F	ISO 294
Injection Molding, mold temperature	**176**	°F	ISO 294
Injection Molding, injection velocity	**7.87**	in/s	ISO 294

Characteristics

Special Characteristics
Medium viscosity

Color
Black