

Product Information

VESTAMID® L1670 BK 9.7504

LOW VISCOSITY, HEAT AND LIGHT STABILIZED POLYAMIDE 12 COMPOUND



VESTAMID® L1670 BK 9.7504 has been developed especially for the extrusion of thin wire insulations and cable jacketings.

VESTAMID® L1670 BK 9.7504 coatings exhibit a low coefficient of friction which facilitates the laying of cable.

Switchboard wiring isolated with VESTAMID® L1670 BK 9.7504 can be soldered with no worry of interference by the plastic resin. The wiring can be soldered without the need to strip the isolating layer.

Jacketing of VESTAMID® L1670 BK 9.7504 protects buried cables from attack by termites.

This partially crystalline polyamide 12 bases compounds have a very low water absorption. Therefore products produced from VESTAMID® L1670 BK 9.7504 maintain their dimensions in environments with varying humidity levels, while maintaining a high tenacity, a low coefficient of friction and good chemical resistance.

VESTAMID® L1670 BK 9.7504 is supplied as cylindrical granules, ready for processing in moisture-proof packaging.

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.

Key Features

Industrial Sector

Sustainable, Industry and Engineering

Sustainability

Sustainable electricity

Delivery form

Pellets, Granules

Resistance to

Heat (thermal stability), UV / light / weathering

Additives

Unfilled

LCA-values	dry	Unit	Test Standard
LCA name of certificate	VESTAMID® L Compound low	-	ISO 14040, 14044
LCA certifier	TÜV Rheinland	-	ISO 14040, 14044
Blue water consumption	25.7	kg	ISO 14040, 14044
Global Warming Potential incl. bio. C incl. LUC	6.1	kg CO ₂ eq./kg	ISO 14040, 14044
Global Warming Potential excl. bio. C incl. LUC	6.1	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	-2.5	kg CO ₂ eq./kg	ISO 14040, 14044

Mechanical properties ISO	dry / cond	Unit	Test Standard
Tensile modulus	1600 / -	MPa	ISO 527
Tensile strength	47 / -	MPa	ISO 527
Yield stress	47 / -	MPa	ISO 527
Yield strain	8 / -	%	ISO 527
Stress at 50% strain	33 / -	MPa	ISO 527
Stress at break	37 / -	MPa	ISO 527
Nominal strain at break, tB	220 / -	%	ISO 527
Charpy impact strength, +23°C	N / -	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	N / -	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	3 / -	kJ/m ²	ISO 179/1eA
Type of failure	C / -	-	-
Charpy notched impact strength, -30°C	5 / -	kJ/m ²	ISO 179/1eA
Type of failure	C / -	-	-
Flexural modulus, 23°C	1520 / -	MPa	ISO 178
Flexural stress at conv. deflection, 23°C	52 / -	MPa	ISO 178
Flexural strength, 23°C	65 / -	MPa	ISO 178
Flexural strain at flexural strength, 23°C	7 / -	%	ISO 178

Flexural stress at break, 23°C	N / -	MPa	ISO 178
Flexural strain at break, 23°C	N / -	%	ISO 178

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature	178 / *	°C	ISO 11357-1/-3
Glass transition temperature, DSC	37 / *	°C	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	50 / *	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	120 / *	°C	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	170 / *	°C	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	140 / *	°C	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	150 / *	E-6/K	ISO 11359-1/-2
Melting Temperature	178	°C	ASTM D 3418

Physical properties	dry / cond	Unit	Test Standard
Density	1010 / -	kg/m ³	ISO 1183
Water absorption	1.4 / *	%	Sim. to ISO 62
Humidity absorption	0.7 / *	%	Sim. to ISO 62
Density	1010	kg/m ³	ASTM D 792

Burning Behav.	dry / cond	Unit	Test Standard
Burning beh. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.6 / *	mm	-
Burnin beh. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	3.2 / *	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested	1	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested	2	mm	-
Glow Wire Ignition Temperature (GWIT)	850	°C	IEC 60695-2-13

GWIT - thickness tested	1	mm	-
Glow Wire Ignition Temperature (GWIT)	850	°C	IEC 60695-2-13
GWIT - thickness tested	2	mm	-

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity, V	1E13 / -	Ohm*m	IEC 62631-3-1
Relative permittivity, 100Hz	3.8 / -	-	IEC 62631-2-1
Relative permittivity, 1MHz	2.2 / -	-	IEC 62631-2-1
Dissipation factor, 100Hz	450 / -	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	280 / -	E-4	IEC 62631-2-1
Dielectric strength, AC, S20/P50	27 / -	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	79 / *	cm ³ /10min	ISO 1133
Temperature	230 / *	°C	-
Load	2.16 / *	kg	-
Molding shrinkage, parallel	1.4 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.7 / *	%	ISO 294-4, 2577

Polymer analytics	dry / cond	Unit	Test Standard
Viscosity number	120 / *	cm ³ /g	ISO 307, 1157, 1628

Test specimen production	dry	Unit	Test Standard
Injection Molding, melt temperature	200	°C	ISO 294
Injection Molding, mold temperature	60	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294

VESTAMID®

Characteristics

Applications

Electrical and Electronical, Cable sheathing

Special Characteristics

Low viscosity

Features

Low coefficient of friction, Termite and rodent resistance

Color

Black

Chemical Resistance

General chemical resistance