VESTAMID®

Product Information

VESTAMID® LX9041 BK 9.7504

MEDIUM-VISCOSITY, HEAT AND LIGHT STABILIZED POLYAMIDE 12 COMPOUND

VESTAMID® LX9041 BK 9.7504 s a heat stabilized and light resistant polyamide 12 compound especially developed for extrusion coating of steel tubes.

Due to the exceptional impact strength, abrasion resistance and good chemical resistance of PA 12 as well as the excellent adhesion between the steel and the properly applied VESTAMID® LX9041 BK 9.7504 , the corrosion resistance of steel tubes coated with VESTAMID® LX9041 black is significantly increased.

VESTAMID® LX9041 BK 9.7504 is supplied as cylindrical granules, ready for processing, in moisture-proof bags.

The use of colorants may affect 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
Sustainable, Industry and Engineering

Delivery form
Pellets, Granules

Sustainability
Sustainable electricity

Resistance to
Heat (thermal stability), UV / light / weathering

Processing
Coating

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	**251000 / 199000**	psi	ISO 527
Tensile strength	**7400 / 6380**	psi	ISO 527
Yield stress	**7400 / 6380**	psi	ISO 527
Yield strain	**4 / 12**	%	ISO 527
Stress at 50% strain	**5080 / 4790**	psi	ISO 527
Stress at break	**7250 / 7400**	psi	ISO 527
Nominal strain at break, tB	**270 / 260**	%	ISO 527
Charpy impact strength, +23°C	**N / N**	ftlb/in²	ISO 179/1eU
Charpy impact strength, -30°C	**N / N**	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, +23°C	**1.9 / 1.66**	ftlb/in²	ISO 179/1eA
Type of failure	**C / C**	-	-
Charpy notched impact strength, -30°C	**2.05 / 1.9**	ftlb/in²	ISO 179/1eA
Type of failure	**C / C**	-	-
Charpy notched impact strength, -40°C	**2.19 / -**	ftlb/in²	ISO 179/1eA
Type of failure	**C / -**	-	-
Flexural modulus, 23°C	**223000 / 196000**	psi	ISO 178
Flexural stress at conv. deflection, 23°C	**7540 / 6530**	psi	ISO 178
Flexural strength, 23°C	**9430 / 8410**	psi	ISO 178
Flexural strain at flexural strength, 23°C	**7 / 7**	%	ISO 178

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature	**351 / ***	°F	ISO 11357-1/-3
Glass transition temperature, DSC	**111 / ***	°F	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	**118 / ***	°F	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	**248 / ***	°F	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	**349 / ***	°F	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	**286 / ***	°F	ISO 306
Melting Temperature	**351**	°F	ASTM D 3418

Physical properties	dry / cond	Unit	Test Standard
Density	**1.02 / -**	g/cm³	ISO 1183
Water absorption	**1.3 / ***	%	Sim. to ISO 62
Humidity absorption	**0.7 / ***	%	Sim. to ISO 62
Density	**1.02**	g/cm³	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	**0.1260 / ***	in	-

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity, V	**9.3E12 / 4.9E12**	Ohm*m	IEC 62631-3-1
Surface resistivity, C, circular electrodes	**>1E15 / >1E15**	Ohm/sq	IEC 62631-3-2
Surface resistivity, D	**2E16 / -**	Ohm/sq	IEC 62631-3-2
Test specimen	**Platte 130x130x1 mm/**	-	-
Relative permittivity, 50Hz	**3.8 / 4.6**	-	IEC 62631-2-1
Relative permittivity, 100Hz	**3.7 / 4.4**	-	IEC 62631-2-1

Relative permittivity, 1MHz	**3.1 / 3.2**	-	IEC 62631-2-1
Dissipation factor, 50Hz	**320 / 560**	E-4	IEC 62631-2-1
Dissipation factor, 100Hz	**330 / 610**	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	**195 / 363**	E-4	IEC 62631-2-1

Rheological properties	dry / cond	Unit	Test Standard
Melt volume-flow rate, MVR	**17 / ***	cm^3/10min	ISO 1133
Temperature	**240 / ***	°C	-
Load	**2.16 / ***	kg	-
Molding shrinkage, parallel	**1.1 / ***	%	ISO 294-4, 2577
Molding shrinkage, normal	**1.1 / ***	%	ISO 294-4, 2577
Mold temperature	**140 / ***	°F	-
Melt temperature	**464 / ***	°F	-

Test specimen production	dry	Unit	Test Standard
Injection Molding, melt temperature	**464**	°F	ISO 294
Injection Molding, mold temperature	**140**	°F	ISO 294
Injection Molding, injection velocity	**7.87**	in/s	ISO 294

Characteristics

Applications
Corrosion protection

Color
Black

Special Characteristics
Light-stabilized, High heat resistant, Medium viscosity

Additives
Light stabilizer, Heat stabilizer