

Product Information

VESTAMID® LX9012 T9

HEAT STABILIZED AND LIGHT RESISTANT POLYAMIDE 12 COMPOUND

VESTAMID® LX9012 T9 has been especially developed for the extrusion and co-extrusion of ski upper and decorative films. Decoration on the bottom side of injection molded sports shoe soles is a further application field.

Films made of VESTAMID® LX9012 T9 feature high transparency, good screen and sublimation printing, outstanding scratch resistance, and excellent impact strength at low temperatures. The semi-crystalline compounds based on PA 12 absorb only low quantities of water.

Therefore, molded parts show excellent dimensional stability, constantly high impact strength, low coefficient of friction and good chemical resistance at changing ambient humidity.

VESTAMID® LX9012 T9 is supplied as cylindrical granules, ready for processing in moisture-proof packaging.

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, Sports and Lifestyle

Sustainability

Sustainable electricity

Processing

Injection molding, Extrusion

Delivery form

Pellets, Granules

Optics

Transparent, Translucent

Resistance to

Heat (thermal stability), Hydrolysis / hot water, UV / light / weathering, Wear / abrasion, Fatigue resistance

Additives

Unfilled

LCA-values

LCA name of certificate

dry

[VESTAMID® LX modified low](#)

Unit

-

Test Standard

ISO 14040, 14044

LCA certifier	TÜV Rheinland	-	ISO 14040, 14044
Blue water consumption	190.7	kg	ISO 14040, 14044
Global Warming Potential incl. bio. C incl. LUC	5.5	kg CO ₂ eq./kg	ISO 14040, 14044
Global Warming Potential excl. bio. C incl. LUC	5.7	kg CO ₂ eq./kg	ISO 14040, 14044
Land use (ReCiPe 2016)	2.4	Annual crop eq. y	ISO 14040, 14044
GWP savings as compared to 2023 reference	-3.1	kg CO ₂ eq./kg	ISO 14040, 14044

Mechanical properties ISO	dry / cond	Unit	Test Standard
Tensile modulus	160000 / -	psi	ISO 527
Tensile strength	4930 / -	psi	ISO 527
Yield stress	4930 / -	psi	ISO 527
Yield strain	5 / -	%	ISO 527
Stress at 50% strain	4350 / -	psi	ISO 527
Stress at break	6670 / -	psi	ISO 527
Nominal strain at break, tB	>50 / -	%	ISO 527
Charpy impact strength, +23°C	N / -	ftlb/in ²	ISO 179/1eU
Charpy impact strength, -30°C	N / -	ftlb/in ²	ISO 179/1eU
Charpy notched impact strength, +23°C	6.18 / -	ftlb/in ²	ISO 179/1eA
Type of failure	C / -	-	-
Charpy notched impact strength, -30°C	7.14 / -	ftlb/in ²	ISO 179/1eA
Type of failure	C / -	-	-
Flexural modulus, 23°C	131000 / -	psi	ISO 178

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature	349 / *	°F	ISO 11357-1/-3
Glass transition temperature, DSC	102 / *	°F	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	113 / *	°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	338 / *	°F	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	266 / *	°F	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	7.22E-5 / *	in/in/°F	ISO 11359-1/-2
Melting Temperature	349	°F	ASTM D 3418

Physical properties	dry / cond	Unit	Test Standard
Density	1.01 / -	g/cm ³	ISO 1183
Water absorption	1.5 / *	%	Sim. to ISO 62
Humidity absorption	0.8 / *	%	Sim. to ISO 62
Shore D hardness	71^[b] / -	-	ISO 7619-1
Density	1.01	g/cm ³	ASTM D 792
Shore D hardness, 1s, annealed	72 / *	-	ASTM D 2240

b: 3 seconds

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	1E12 / -	Ohm*m	IEC 62631-3-1
Relative permittivity, 100Hz	3.8 / -	-	IEC 62631-2-1
Relative permittivity, 1MHz	3 / -	-	IEC 62631-2-1
Dissipation factor, 100Hz	530 / -	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	280 / -	E-4	IEC 62631-2-1
Dielectric strength, AC, S20/P50	914 / -	V/mil	Sim. to IEC 60243-1

Rheological properties	dry / cond	Unit	Test Standard
Molding shrinkage, parallel	1.3 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	1.3 / *	%	ISO 294-4, 2577
Mold temperature	176 / *	°F	-
Melt temperature	464 / *	°F	-

Characteristics

Processing

Film extrusion

Special Characteristics

Semi-crystalline, Light-stabilized, High heat resistant

Features

Low coefficient of friction

Color

Natural color

Additives

Light stabilizer, Heat stabilizer

Chemical Resistance

General chemical resistance