

Product Information

VESTAMID® eCO LX9012 T8 B80

HEAT STABILIZED AND LIGHT RESISTANT POLYAMIDE 12 COMPOUND

VESTAMID® eCO LX9012 T8 B80 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® eCO LX9012 T8 B80 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.

eCO stands for Evoniks aim to reduce CO₂ trough use of renewable or circular feedstocks via mass-balance approach.

VESTAMID® eCO LX9012 T8 B80 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

eCO

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

Mechanical properties ISO	dry / cond	Unit	Test Standard
Tensile modulus	1100 / -	MPa	ISO 527
Tensile strength	35 / -	MPa	ISO 527
Yield stress	35 / -	MPa	ISO 527
Yield strain	5 / -	%	ISO 527
Stress at 50% strain	30 / -	MPa	ISO 527
Stress at break	50 / -	MPa	ISO 527
Nominal strain at break, tB	>50 / -	%	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	13 / -	kJ/m ²	ISO 179/1eA
Type of failure	C / -	-	-
Charpy notched impact strength, -30°C	15 / -	kJ/m ²	ISO 179/1eA
Type of failure	C / -	-	-
Flexural modulus, 23°C	900 / -	MPa	ISO 178
Flexural stress at conv. deflection, 23°C	35 / -	MPa	ISO 178
Flexural strength, 23°C	45 / -	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	176 / *	°C	ISO 11357-1/-3
Glass transition temperature, DSC	39 / *	°C	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	45 / *	°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	130 / *	°C	ISO 306

Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	130 / *	E-6/K	ISO 11359-1/-2
Melting Temperature	176	°C	ASTM D 3418

Physical properties	dry / cond	Unit	Test Standard
Density	1010 / -	kg/m 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	1010	kg/m 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	1.6 / *	mm	-
Burnin behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	3.2 / *	mm	-

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	36 / -	kV/mm	Sim. to IEC 60243-1

Rheological properties	dry / cond	Unit	Test Standard
Melt volume-flow rate, MVR	22 / *	cm ³ /10min	ISO 1133
Temperature	220 / *	°C	-

VESTAMID®

Load	10 / *	kg	-
Molding shrinkage, parallel	1.3 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	1.3 / *	%	ISO 294-4, 2577
Mold temperature	80 / *	°C	-
Melt temperature	240 / *	°C	-

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