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 CO_2 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	**160000 / -**	psi	ISO 527
Tensile strength	**5080 / -**	psi	ISO 527
Yield stress	**5080 / -**	psi	ISO 527
Yield strain	**5 / -**	%	ISO 527
Stress at 50% strain	**4350 / -**	psi	ISO 527
Stress at break	**7250 / -**	psi	ISO 527
Nominal strain at break, tB	**>50 / -**	%	ISO 527
Charpy impact strength, +23°C	**N / -**	ftlb/in²	ISO 179/1eU
Charpy impact strength, -30°C	**N / -**	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, +23°C	**6.18 / -**	ftlb/in²	ISO 179/1eA
Type of failure	**C / -**	-	-
Charpy notched impact strength, -30°C	**7.14 / -**	ftlb/in²	ISO 179/1eA
Type of failure	**C / -**	-	-
Flexural modulus, 23°C	**131000 / -**	psi	ISO 178
Flexural stress at conv. deflection, 23°C	**5080 / -**	psi	ISO 178
Flexural strength, 23°C	**6530 / -**	psi	ISO 178
Flexural strain at flexural strength, 23°C	**7 / -**	%	ISO 178
Flexural stress at break, 23°C	**N / -**	psi	ISO 178
Flexural strain at break, 23°C	**N / -**	%	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/cm³	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/cm³	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
Melt volume-flow rate, MVR	**22 / ***	cm³/10min	ISO 1133
Temperature	**220 / ***	°C	-

Load	**10 / ***	kg	-
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