VESTAMID®

Product Information

VESTAMID® LX9012 Bio30

HEAT- AND UV-STABILIZED, 30% BIO-BASED POLYAMIDE 12-COMPOUND

VESTAMID LX9012 Bio30 is a semi-crystalline, heat- and UV-stabilized compound based on PA12. The material was developed for the use in injection molding and is especially suitable for sport and lifestyle applications.

The semi-crystalline compound only absorbs small amounts of water. Therefore, components made of this material have excellent dimensional accuracy under changing ambient humidity and are durably scratch-resistant.

VESTAMID LX9012 Bio30 is delivered as cylindrical pellets in ready-to-process condition in moisture-tight bags.

The compound properties have been generated from a low number of production lots. Therefore, they are preliminary and not yet the result of a statistical evaluation

The use of colorants may affect property values.

The values presented are typical or average values, they do not constitute a specification.

Key Features

Industrial Sector
Sustainable, Sports and Lifestyle

Sustainability
Sustainable electricity

Processing
Injection molding

Delivery form
Pellets, Granules

Optics
Translucent

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

Electrical
Insulating

Additives
Unfilled

LCA-values	dry	Unit	Test Standard
LCA name of certificate	VESTAMID® LX modified Bio	-	ISO 14040, 14044
LCA certifier	TÜV Rheinland	-	ISO 14040, 14044
Blue water consumption	**572.2**	kg	ISO 14040, 14044

EVONIK
Leading Beyond Chemistry

Global Warming Potential incl. bio. C incl. LUC	**7.0**	kg CO_2 eq./kg	ISO 14040, 14044
Global Warming Potential excl. bio. C incl. LUC	**7.8**	kg CO_2 eq./kg	ISO 14040, 14044
Land use (ReCiPe 2016)	**7.2**	Annual crop eq. y	ISO 14040, 14044
GWP savings as compared to 2023 reference	**-1.5**	kg CO_2 eq./kg	ISO 14040, 14044

Mechanical properties ISO	**dry / cond**	**Unit**	**Test Standard**
Tensile modulus	**170000 / -**	psi	ISO 527
Tensile strength	**6530 / -**	psi	ISO 527
Yield stress	**5510 / -**	psi	ISO 527
Yield strain	**5 / -**	%	ISO 527
Stress at 50% strain	**4500 / -**	psi	ISO 527
Stress at break	**6380 / -**	psi	ISO 527
Strain at break, B	**239 / -**	%	ISO 527
Nominal strain at break, tB	**233 / -**	%	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	**4.76 / -**	ftlb/in^2	ISO 179/1eA
Type of failure	**C / -**	-	-
Charpy notched impact strength, -30°C	**6.18 / -**	ftlb/in^2	ISO 179/1eA
Type of failure	**C / -**	-	-
Flexural modulus, 23°C	**138000 / -**	psi	ISO 178
Flexural stress at conv. deflection, 23°C	**4790 / -**	psi	ISO 178
Flexural strength, 23°C	**6380 / -**	psi	ISO 178
Flexural strain at flexural strength, 23°C	**8 / -**	%	ISO 178

Thermal properties	**dry / cond**	**Unit**	**Test Standard**
Melting temperature	**349 / ***	°F	ISO 11357-1/-3

Physical properties	dry / cond	Unit	Test Standard
Density	**1.01 / -**	g/cm³	ISO 1183
Water absorption, 24h	**0.29 / ***	%	ISO 62, ASTM D 570
Shore D hardness	**73 / -**	-	ISO 7619-1

Rheological properties	dry / cond	Unit	Test Standard
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	-

Characteristics

Applications
General purpose

Additives
Heat stabilizer

Processing
Thermoforming

Delivery form
Cylindrical pellets

Special Characteristics
Semi-crystalline, U.V. stabilized

Chemical Resistance
General chemical resistance

Color
Natural color