

Product Information

VESTAMID® CW1688 Bio30

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

VESTAMID CW1688 Bio30 is a glass fiber reinforced, heat- and light-stabilized semi-crystalline compound based on PA12. The material was developed for the use in injection molding and is especially suitable for sport and lifestyle applications.

VESTAMID CW1688 Bio30 only absorbs small amounts of water. Therefore, components made of this material have excellent dimensional accuracy under changing ambient humidity. Additionally, the VESTAMID CW1688 Bio30 has an outstanding mechanical and thermal capacity.

VESTAMID CW1688 Bio30 is delivered as cylindrical pellets in ready-to-process condition in moisture-tight bags.

The use of colorants may affect property values.

The results presented were generated from a small number of production lots. They are therefore provisional and not yet the result of a statistical analysis.

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

Key Features

Industrial Sector

Sustainable, Sports and Lifestyle

Optics

Translucent

Sustainability

Sustainable electricity

Resistance to

Heat (thermal stability), UV / light / weathering

Processing

Injection molding

Electrical

Insulating

Delivery form

Pellets, Granules

Additives

Glass fibers

LCA-values

LCA name of certificate

dry

Unit

Test Standard

[VESTAMID® CW modified GF Bio](#)

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ISO 14040, 14044

LCA certifier

[TÜV Rheinland](#)

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ISO 14040, 14044

Blue water consumption

563.4

kg

ISO 14040, 14044

Global Warming Potential incl. bio. C incl. LUC	6.5	kg CO ₂ eq./kg	ISO 14040, 14044
Global Warming Potential excl. bio. C incl. LUC	7.2	kg CO ₂ eq./kg	ISO 14040, 14044
Land use (ReCiPe 2016)	7.1	Annual crop eq. y	ISO 14040, 14044
GWP savings as compared to 2023 reference	-1.3	kg CO ₂ eq./kg	ISO 14040, 14044

Mechanical properties ISO **dry / cond** **Unit** **Test Standard**

Tensile modulus	345000 / -	psi	ISO 527
Tensile strength	8990 / -	psi	ISO 527
Yield stress	8990 / -	psi	ISO 527
Yield strain	5.2 / -	%	ISO 527
Stress at break	7980 / -	psi	ISO 527
Strain at break, B	19 / -	%	ISO 527
Nominal strain at break, tB	14 / -	%	ISO 527
Charpy impact strength, +23°C	43.8 / -	ftlb/in ²	ISO 179/1eU
Type of failure	C / -	-	-
Charpy impact strength, -30°C	45.7 / -	ftlb/in ²	ISO 179/1eU
Type of failure	C / -	-	-
Charpy notched impact strength, +23°C	5.71 / -	ftlb/in ²	ISO 179/1eA
Type of failure	C / -	-	-
Charpy notched impact strength, -30°C	3.33 / -	ftlb/in ²	ISO 179/1eA
Type of failure	C / -	-	-
Flexural modulus, 23°C	278000 / -	psi	ISO 178
Flexural stress at conv. deflection, 23°C	9140 / -	psi	ISO 178
Flexural strength, 23°C	11900 / -	psi	ISO 178
Flexural strain at flexural strength, 23°C	7 / -	%	ISO 178

Thermal properties **dry / cond** **Unit** **Test Standard**

Melting temperature	372 / *	°F	ISO 11357-1/-3
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Physical properties	dry / cond	Unit	Test Standard
Density	1.07 / -	g/cm ³	ISO 1183
Water absorption	0.28 / *	%	Sim. to ISO 62
Humidity absorption	0.11 / *	%	Sim. to ISO 62
Moisture content	0.03 / -	wt.-%	ISO 15512
Shore D hardness	73 / -	-	ISO 7619-1

Rheological properties	dry / cond	Unit	Test Standard
Molding shrinkage, parallel	0.5 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.4 / *	%	ISO 294-4, 2577
Mold temperature	140 / *	°F	-
Melt temperature	464 / *	°F	-

Characteristics

Applications

General purpose

Processing

Thermoforming

Special Characteristics

Semi-crystalline, U.V. stabilized

Color

Natural color

Additives

Heat stabilizer

Delivery form

Cylindrical pellets

Chemical Resistance

General chemical resistance