VESTAMID®

Product Information

VESTAMID® CW1407 BK

MEDIUM-VISCOSITY, CARBON FIBER-REINFORCED AND HEAT-STABILIZED PA12 COMPOUND

VESTAMID® CW1407 BK is a low-filled, carbon fiber-reinforced and heat-stabilized compound based on PA12. It is generally used for components manufactured in the injection molding process and is especially suitable for Sports and Lifestyle applications, such as shoe soles that require a very good fatigue performance.

The PA12 compound absorbs only small amounts of water. Therefore, components made from this material have an excellent dimensional accuracy with changing ambient humidity**.**

Due to the low melting point of **VESTAMID® CW1407 BK**, the material provides a wide processing window for the injection molding process. The compound is suitable for applications requiring a high ratio of flow length to wall thickness.
VESTAMID® CW1407 BK is supplied as cylindrical granules ready for processing, in moisture barrier bags.

The use of colorants can change property values.

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

Key Features

Industrial Sector
Sports and Lifestyle

Processing
Injection molding

Delivery form
Pellets, Granules

Resistance to
Heat (thermal stability)

Electrical
Insulating

Additives
Carbon fibers

Mechanical properties ISO	dry / cond	Unit	Test Standard
Tensile modulus	**8560 / -**	MPa	ISO 527
Tensile strength	**111 / -**	MPa	ISO 527
Stress at break	**110 / -**	MPa	ISO 527
Strain at break, B	**4.6 / -**	%	ISO 527
Nominal strain at break, tB	**4.7 / -**	%	ISO 527

Charpy impact strength, +23°C	**56 / -**	kJ/m²	ISO 179/1eU
Type of failure	**C / -**	-	-
Charpy impact strength, -30°C	**57 / -**	kJ/m²	ISO 179/1eU
Type of failure	**C / -**	-	-
Charpy notched impact strength, +23°C	**14 / -**	kJ/m²	ISO 179/1eA
Type of failure	**P / -**	-	-
Charpy notched impact strength, -30°C	**7 / -**	kJ/m²	ISO 179/1eA
Type of failure	**C / -**	-	-
Flexural modulus, 23°C	**7820 / -**	MPa	ISO 178
Flexural stress at conv. deflection, 23°C	**156 / -**	MPa	ISO 178
Flexural strength, 23°C	**168 / -**	MPa	ISO 178
Flexural strain at flexural strength, 23°C	**5 / -**	%	ISO 178
Flexural stress at break, 23°C	**93 / -**	MPa	ISO 178
Flexural strain at break, 23°C	**5.4 / -**	%	ISO 178

Thermal properties	**dry / cond**	**Unit**	**Test Standard**
Melting temperature	**179 / ***	°C	ISO 11357-1/-3

Physical properties	**dry / cond**	**Unit**	**Test Standard**
Density	**1080 / -**	kg/m³	ISO 1183
Water absorption	**0.25 / ***	%	Sim. to ISO 62
Humidity absorption	**0.08 / ***	%	Sim. to ISO 62
Moisture content	**0.057 / -**	Gew.-%	ISO 15512
Shore D hardness	**77 / -**	-	ISO 7619-1

Rheological properties	**dry / cond**	**Unit**	**Test Standard**
Molding shrinkage, parallel	**0.1 / ***	%	ISO 294-4, 2577
Molding shrinkage, normal	**0.4 / ***	%	ISO 294-4, 2577
Mold temperature	**70 / ***	°C	-

Melt temperature	**260 / ***	°C	-

Characteristics

Applications
General purpose

Processing
Thermoforming

Color
Black

Additives
Heat stabilizer

Delivery form
Cylindrical pellets

Chemical Resistance
General chemical resistance