Technical information

TEREZ® AB 301 H GL30

30% long glass fibre reinforced polyamide 66+6 Blend.

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TECHNICAL DATA SHEET

Product text

For moulded parts with high requirements to impact, stiffness and flexural strength. Granulate length 10 to 14 mm.

Properties	Value	Unit	Test method
Density	1,3600	g/cm³	ISO 1183
Impact strength Charpy (Notched 23°C), dry	19	kJ/m²	ISO 179
Impact strength Charpy (Notched 23°), conditioned	20	kJ/m²	ISO 179
Impact strength Charpy (Notched -30°C), dry	21	kJ/m²	ISO 179
Impact strength Charpy 23°C, dry	75	kJ/m²	ISO 179
Impact strength Charpy (23°), conditioned	80	kJ/m²	ISO 179
Impact strength Charpy -30°C, dry	-	kJ/m²	ISO 179
Tensile-modulus, dry	10000	MPa	ISO 527
Tensile-modulus, conditioned	8000	MPa	ISO 527
Tensile stress at break, dry	170	MPa	ISO 527
Tensile stress at break, conditioned	155	MPa	ISO 527
Elongation at break, dry	2,20	%	ISO 527
Elongation at break, conditioned	2,20	%	ISO 527
HDT 1,80 MPa	250	°C	ISO 75
Melting point	260	°C	ähnlich ISO 11357-3
Burning Behav. at thickness h	HB	class	UL 94
Thickness tested	1,6	mm	UL 94
UL recognition	-		UL 94
Water absorption	6,00	%	ähnlich ISO 62
Moisture absorption	2,70	%	ähnlich ISO 1110

PROCESSING DATA SHEET

Processing guidelines for injection molding of TEREZ AB 301 H GL30

The processing data sheet provides guidelines about processing as well as pre-drying.

MATERIAL PREPARATION

Storage

Store in a dry place protected from direct sunlight. Avoid all sources of ignition like extreme heat, sparks, or open flame.

Drying

For the manufacturing of mechanically and optically optimal injection molding parts, we recommend following pre-drying conditions according to the table below. If the container is open (wet granules), the drying time can be extended accordingly.

Dry air dryer

Temperature	80°C
Time	4 - 8 hours
Due point	-40°C

Residual moisture

<= 0.05% (recommended)
max. 0.1% (standard)

MACHINE REQUIREMENTS

PROCESSING

In the injection unit and the cavity there is a significant shortening of the glass fiber. In general, extreme shearing forces on the molding compounds are to be avoided. In comparison to the processing of short glass fiber reinforced molding compounds, a reduction of the screw speed, the injection pressure, the injection speed and the back pressure is recommended.

Recommended screw configuration

TEREZ LFT molding compounds can be processed on most conventional injection molding machines. It is possible to use the conventional 3-zone universal screws. The L / D ratio should be 18 - 22 D and the compression ratio should be 2.1 - 2.5: 1. The granulate feed should be cut as deep as possible for optimal granulate transport. Mixing elements on the screw are to be avoided. For the processing of the long glass fiber reinforced TEREZ LFT the use of wear protected screws and cylinders is recommended.

PROCESSING DATA SHEET

Recommended temperature setting

Depending on the selected TEREZ LFT-Type, at least three separate adjustable heating zones should be able to generate cylinder temperatures of up to 360 ° C. A separate nozzle heater is necessary. The cylinder flange must be tempered. Processing with an open nozzle is useful, as it is very aerodynamic and durable due to their structure. Needle valve nozzles on the cylinder are not recomemmeded. Melt temperatures should be set at the same level as comparable short fiber compounds.

Processing temperatures

Hopper	60 - 100°C
Center	260 - 290°C
Nozzle	270 - 300°C

Mold temperatures

Higher mold temperatures result in lower-stress injection-molded parts, better surfaces, better embedding of the glass fibers, higher degrees of crystallization and less shrinkage. The hoses and fittings used for tool temperature control must be designed for the required temperatures.

Mold temperature

Temp.	40 - 80°C

Residence times in the cylinder

max. 270 °C / 10 min.

Residence time

You should try to keep the residence time short, especially at high temperatures to avoid material degradation.

Instructions for cleaning

The aggregate can be cleaned by using low MFI polypropylene. You can also use standard cleaning granulate.