Beobase 25 PP cellulose INJ112

Material Technical Data Sheet

Date of issue: 28/10/2022 Version: 3.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Granulate
Name	:	Beobase 25 PP cellulose INJ112
Product code	:	2575050112
Application	:	Injection moulding
Composition	:	25% cellulose + 75% PP and additives

1.2. Details of the supplier of the material specification sheet

Manufacturer

Beologic
Jolainstraat 44
8554 Sint-Denijs
info@beologic.com

SECTION 2: Physical, mechanical and thermal properties

2.1. Information on basic physical, mechanical and thermal properties

Properties[1]		Method	Typical Value	Unit
Physical				
Physical state			Solid	
Relative density		ISO 1183-1	0,96-1,06	g/cm³
MFI	(230°C, 2,16 kg)	ISO 1133-1	6,8	g/10min
Coloured in mass			NO	
Colour material			Yellow cream	
UV package			NO	
Carbon footprint [2]		PAS 2050	1,394*	kg CO_2 Eq/ kg
Shelf life [3]			6	Months
Mechanical				
Tensile modulus		ISO 527-1	2800	MPa
Tensile strength		ISO 527-1	37	MPa
Break stress		ISO 527-1	37	MPa
Elongation at break		ISO 527-1	8,9	%
Flexural modulus		ISO 178	2667	MPa
Charpy impact strength	(Notched 1eA , 23 °C)	ISO 179-1	3,7	kJ/m²
	(Unnotched 1eU, 23 °C)	ISO 179-1	37	kJ/m²
Vicat softening point	(B120)	ISO 306	115	°C
HDT	(B)	ISO 75-1	140	°C

(1) Typical properties; not to be construed as specifications.
(2) Carbon footprint calculated by Neutrologic
(3) Only if storage conditions (section 4) were followed
*Due to continuous variation of feedstock this figure reflects value of September 2022. Update latest carbon footprint available on request.

2.2. Product Carbon footprint

The product carbon footprint helps to define the amount of greenhouse gas emissions generated by a product along its life cycle, it quantifies the ghg-emissions related to the production of our products.

Neutrologic calculates the carbon footprint of all sales products and this from cradle to gate.

The calculation of the carbon footprint is in accordance with the internationally recognized Greenhouse Gas Protocol Product Standard which is based on the standard ISO-14067 norm and PAS2050.

The carbon footprint is mentioned in our datasheet - by offsetting or compensating the calculated emissions we can present our products as Carbon Neutral compounds. This compensation is according the Verified Carbon Standard – more info via (www.v-c-s.org).

2.3. Other information

No additional information available

SECTION 3: Processing conditions – guidelines

Hopper	40 – 60	°C
Feeding zone	165 – 175	°C
Compression zone	170 – 180	°C
Metering zone	180 – 190	°C
Nozzle	190 – 200	°C
Mold temperature	30 – 60	°C

3.1 Plasticizing
We recommend to keep the residence time as short as possible, use low screw RPM to fill up the screw carefully and have the material in motion as much as possible.

For optimal process ability, the shot size should be between 35% and 75% of the machine's maximum plasticizing capacity. Too small shot size can cause degradation because of the excessive residence time.

3.2 Backpressure
Use minimal backpressure when loading the barrel in order to avoid unwanted, uncontrolled friction heating.

3.3 Hold pressure
Beobase 25 PP cellulose INJ112 does not require much holding pressure.

3.4 3.4 Cooling
Increased mould temperature will normally result in better surface appearance.

Start with 30°C and then increase the mould temperature until the molded piece looks good. Better particle distribution in the mould can normally also be achieved by increased mould temperature.

3.5 Injection speed
High injection speed normally gives the best particle distribution and surface appearance.

3.6 General comments
Because this material cools quickly and the fibres keep the molded part together, many molders can reduce their cycle times up to 40% by using a natural filled-polymer material compared to unfilled materials.

Discoloured molded parts and/or a burnt smell is a symptom of a too high temperature, too long residence time or uncontrolled friction heat. To prevent burning or damaging of the screw, barrel or tool, it's obliged to stop the machine only after it has been cleaned with pure PP,PE or cleaning compound.

Beobase is not compatible with a wide variety of other resins, and special purging sequences should be followed:

1. Before production, ensure to clean the injection moulding machine and bring temperature to steady state with general purpose PP or PE.
2. Vacuum out hopper system to avoid contamination.
3. Introduce Beobase into the injection moulding machine at the operating conditions proposed in section 3.
4. At shutdown, purge machine with PP or PE or cleaning compound. It's obliged to stop the machine only after it has been cleaned with pure PP or cleaning compound.

SECTION 4: Drying and storage conditions
We recommend drying Beobase 25 PP cellulose INJ112 at maximum 80°C for a period of 2 hours to maximum 4 hours. Don't overheat or dry it longer than recommended. Residual moisture content (> 0.2%) can result in lower melt stability, surface mark or bubble formation during processing.

We recommend to store the material in dry conditions below 50°C and protected from UV-light. Opened (big)bags should be used immediately or adequately sealed back up after use to avoid moisture uptake and have negative effects on the physical properties of the product. It is recommended to use Beobase granules within a time period of maximum 6 months.

Finished product made from Beobase should be stored dry and cold. Storage time and lifetime of finished products depends on processing parameters and on storage conditions (moisture, UV radiation …).