IfBB
Institute for Bioplastics and Biocomposites

HOCHSCHULE HANNOVER
UNIVERSITY OF APPLIED SCIENCES AND ARTS
Fakultät II
Maschinenbau und Bioverfahrenstechnik

Technical datasheet

IfBB Blend HD115-IS38x

Product description

The IfBB Blend HD115-IS38x, consisting of 83 % renewable raw materials in accordance with ASTM D6866 and thereby a bio-based carbon, is a specially developed semi-crystalline PLA modification which is processed via injection moulding at an exact mould temperature of 100 °C. The high mould temperature, in combination with the material composition, offers the advantage of optimised cycle times and thermomechanical properties. Through the application of special additives, thin-walled components can be prepared and produced in addition to thick-walled components.

BIOBASIERT 50 – 85 % DIN Geprüft 8C109

Physical properties

Mechanical properties	**Value**	**Unit**	**Test method / Norm**
Tensile modulus of elasticity	~ 3700	MPa	DIN EN ISO 527-2
Tensile strength	~ 35	MPa	DIN EN ISO 527-2
Charpy impact strength	> 35	kJ/m²	DIN EN ISO 179 / 1 e U (23°C)
Thermal properties	**Value**	**Unit**	**Test method / Norm**
Heat deflection temperature (HDT-B)	> 115	°C	DIN EN ISO 75-2
Melting point	~ 170	°C	DIN EN ISO 11357-1
Rheological properties	**Value**	**Unit**	**Test method / Norm**
Melt flow rate (190°C / 2.16kg)	> 2	g/10min	DIN EN ISO 1133
Melt volume rate (190°C / 2.16kg)	> 2.5	cm³/10min	DIN EN ISO 1133
Other properties	**Value**	**Unit**	**Test method / Norm**
Density	~ 1.27	g/cm³	DIN 1183-1, A

This technical datasheet is intended to provide information and advice. All values are guidelines. No liability may be derived therefrom.

Processing via injection moulding

Material conditioning	Value	Unit
Processing humidity	< 250	ppm
Drying temperature	60 - 100	°C
Drying duration	6 - 12	h
Injection moulding settings	**Value**	**Unit**
Mould temperature*	100	°C
Melt temperature	190	°C
Temperature zones		
Feed zone (flange)	60-80	°C
Zone 1	175	°C
Zone 2	200	°C
Zone 3	205	°C
Zone 4	210	°C
Nozzle temperature	250	°C

*The thermomechanical properties are dependent on the mould temperature; the specified temperature should therefore be used. Furthermore, at this temperature, the shortest residual cooling time/cycle time is to be expected.

Contact

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