



IfBB

Institute for Bioplastics
and Biocomposites



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.

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/m ²	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	cm ³ /10min	DIN EN ISO 1133
Other properties	Value	Unit	Test method / Norm
Density	~ 1.27	g/cm ³	DIN 1183-1, A

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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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