



**IfBB**

Institute for Bioplastics  
and Biocomposites



## Technical datasheet

# IfBB Blend HD130x

## Product description

The IfBB Blend HD130x, consisting of 96 % renewable raw materials in accordance with ASTM D6866, is a specially developed PLA modification which is processed via injection moulding at a mould temperature of 100 °C. This 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

<b>Mechanical properties</b>	<b>Value</b>	<b>Unit</b>	<b>Test method / Norm</b>
Tensile modulus of elasticity	~ 4000	MPa	DIN EN ISO 527-2
Tensile strength	~ 40	MPa	DIN EN ISO 527-2
Charpy impact strength	~18	kJ/m <sup>2</sup>	DIN EN ISO 179 / 1 e U (23°C)
Charpy notched impact strength	-	kJ/m <sup>2</sup>	DIN EN ISO 179 / 1 e A (23°C)
<b>Thermal properties</b>	<b>Value</b>	<b>Unit</b>	<b>Test method / Norm</b>
Heat deflection temperature (HDT-A)	~ 58	°C	DIN EN ISO 75-2
Heat deflection temperature (HDT-B)	~ 130	°C	DIN EN ISO 75-2
Melting point	~ 170	°C	DIN EN ISO 11357-1
Glass transition temperature	-	°C	DIN EN ISO 11357-1
<b>Rheological properties</b>	<b>Value</b>	<b>Unit</b>	<b>Test method / Norm</b>
Melt flow rate (190°C / 2.16kg)	~ 5	g/10min	DIN EN ISO 1133
Melt volume rate (190°C / 2.16kg)	~ 4	cm <sup>3</sup> /10min	DIN EN ISO 1133
<b>Other properties</b>	<b>Value</b>	<b>Unit</b>	<b>Test method / Norm</b>
Density	~ 1.3	g/cm <sup>3</sup>	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	°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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