

Bluepha® PHA BP330-05 Technical Data Sheet

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PRODUCT DESCRIPTION

Bluepha® PHA is a 100% biobased, semi-crystalline natural polymer produced through microbial fermentation. It has outstanding biodegradability. BP330-05 is a low-flow, high-strength PHA suitable for processes such as extrusion, injection molding, casting, and blister molding.

PRODUCT FEATURES

- ✧ Superior heat resistance compared to other bioplastics (Heat deflection temperature: 105 °C)
- ✧ Outstanding barrier properties (against water vapor, oxygen, and carbon dioxide)
- ✧ TÜV Austria 100% biobased certificate
- ✧ 100% Biobased Product certificate by USDA
- ✧ European Commission food contact certificate (EU) No 10/2011
- ✧ Food contact certificate (JP) No 233/1947 by Japanese Ministry of Health, Labor and Welfare
- ✧ Compostable certificate by BPI in North America
- ✧ JBPA certificate for biodegradable and marine biodegradable bioplastics
- ✧ TÜV Austria certificate for biodegradability in marine, soil, home composting, and industrial composting environments

TYPICAL PHYSICAL PROPERTIES

Property	Method	Unit	BP330-05
Melt Flow Index (165 °C/2.16 kg)	ISO 1133	g/10 min	3
Density	ISO 1183	g/cm ³	1.21
Moisture and Volatile Content	ISO 15512	%	≤ 0.5
Ash Content	ISO 3451	%	≤ 0.5
Melting Temperature (T _m)	ISO 11357	°C	148
Thermal Degradation Temperature	TGA, GPC	°C	180
Glass Transition Temperature (T _g)	ISO 11357	°C	1
Heat Deflection Temperature (0.45 MPa)	ISO 75	°C	105

Note: The above values are typical characteristic values of material, not specific product specifications.

Property	Method	Unit	BP330-05
Tensile Strength	ISO 527	MPa	36
Break Elongation	ISO 527	%	≤ 5
Tensile Modulus	ISO 527	MPa	1940
Flexural Strength	ISO 178	MPa	42
Flexural Modulus	ISO 178	MPa	1760
Charpy Notched Impact Strength	ISO 179	kJ/m ²	≤ 3
Charpy Unnotched Impact Strength	ISO 179	kJ/m ²	≤ 30

Note: The above values are typical characteristic values of material, not specific product specifications.

PACKAGING AND STORAGE

Packaging Specifications: 25 kg/bag (sealed aluminum foil bag); 750 kg/bag (aluminum/plastic composite bulk bag).

Storage Conditions: To ensure the optimal use of the material, it is recommended to store it in its original packaging in a cool and dry environment. Avoid direct sunlight, high temperatures, and sources of ignition.

Shelf Life: 18 months.

PROCESSING CONDITIONS

To prevent the degradation of PHA during processing, it is recommended to use a screw combination with low shear force and to carry out any necessary drying before starting.

Section	Temperature	Precaution
Drying	60-80 °C	Dry for 4-6 hours to ensure moisture content is below 500 ppm. Maintain drying temperature below 80 °C to prevent material from sticking together.
Feed	100-120 °C	Adjustments can be made according to actual processing conditions; temperatures exceeding 180 °C will result in thermal degradation of the material, leading to decrease in molecular weight.
Melting & Mixing	140-165 °C	
Melt Conveying	80-140 °C	
Die	80-140 °C	
Molding/Cooling	40-50 °C	The material's crystallization rate is significantly influenced by the molding/cooling temperature. If it exceeds this temperature range, the material's crystallization will slow down, leading to processing failure.

CERTIFICATES



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