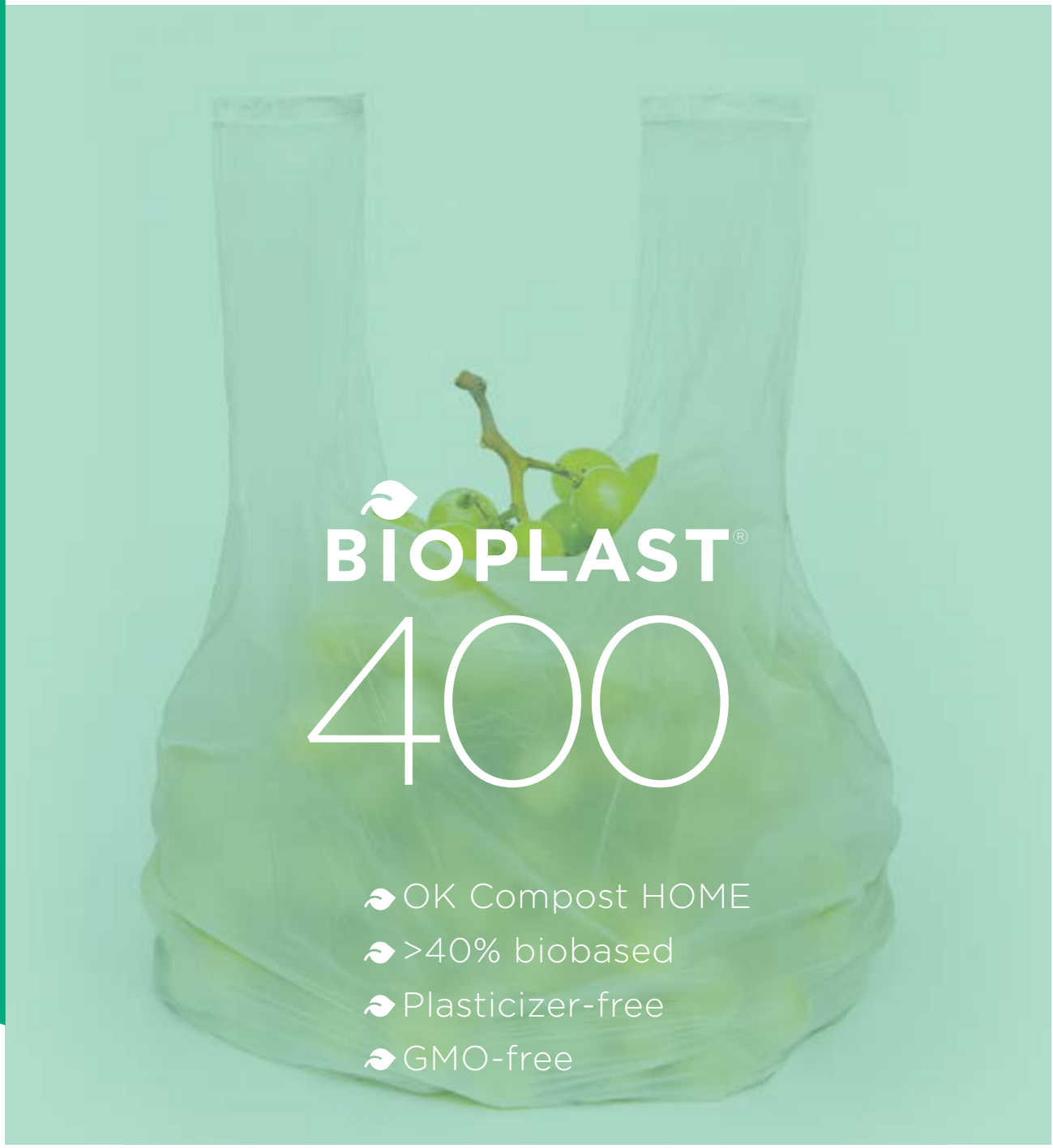
WE MAKE BIOPLAST



BIOTEC®

BIOPLASTICS FOR A BETTER LIFE

BIOPLAST® 400

BIOPLAST 400 is a plasticizer-free, thermoplastic material that contains natural potato-starch and other biologically sourced polymers. The biobased carbon-share of the entire formulation exceeds 40%. BIOPLAST 400 is suitable for blown-film extrusion applications, specially ultra-light weight films with a thickness of approx. 10 µm. Bags, fruit and vegetable bags, films and mailing films made from BIOPLAST 400 are fully biodegradable and compostable according to EN 13432, and have achieved the "OK Compost HOME" certification awarded by Vinçotte. The absence of plasticizer allows the material to be easily processed to manufacture products of consistent quality.

PROPERTIES

Parameter	Target value	Unit Test	Method
Pellet size	3.0	mm	Caliper gauge
Density	1.28	g/cm³	EN ISO 1183-1/A
Bulk density	820	kg/m³	EN ISO 60
MFR (190°C, 5 kg)	7.5	g/10 min	EN ISO 1133
Moisture content	< 0.3	weight-%	BIOTEC test directive

PROCESSING

BIOPLAST 400 was designed for use in blown film extrusion.

For further processing information, please refer to our specific "Configuration and Operating Guidelines".

MECHANICAL PROPERTIES OF BLOWN FILM* MADE OF BIOPLAST 400

Parameter	Typical value	Unit	Test Method
Tensile strength MD	25	MPa	EN ISO 527-3
Tensile strength TD	25	MPa	EN ISO 527-3
Elongation at break MD	410	%	EN ISO 527-3
Elongation at break TD	590	%	EN ISO 527-3

(*blow-up ratio: 3.5; die gap: 1.05 mm; die diameter: 60 mm; thickness: 20 µm)

Films made of BIOPLAST 400

- contain a share of renewable raw materials >40%
- are biodegradable and compostable according to EN 13432
- are OK Compost HOME certified by Vinçotte
- are recyclable
- are printable by flexographic and offset printing, pretreatment is recommended
- have a soft touch
- can be coloured with masterbatches
- are sealable (hot, RF, ultra sonic)
- can be drawn down to 10 µm

General Applications

- Ultra-light single-use bags (e.g. fruit & vegetable bags, produce bags)
- Single-use bags (e.g. biowaste bags, bin-liners)
- Multi-use bags (e.g. carrier bags, loop-handle bags)
- Technical films (e.g. mailing bags, automatic packaging)

Sustainability

BIOPLAST 400 has a renewable share of 47% and a biobased carbon share of >40% according to ASTM D6866.

End of life options

BIOPLAST 400 is compostable and can be recycled. Although it is biodegradable, the material should only be disposed of in a controlled waste management environment.

Compostability

Products made of BIOPLAST 400 are completely biodegradable and, depending on their thickness, compostable. The material is certified and registered by Vinçotte according to EN 13432 awarding the "OK compost" and "seedling" logo.

- OK Compost HOME
- >40% biobased
- Plasticizer-free
- GMO-free

Home composting
BIOPLAST 400 is certified and registered by Vinçotte awarding the "OK compost HOME" logo. The material is home compostable according to the French norm NF T 51-800. Therefore products made of BIOPLAST 400, depending on their thickness can be disposed of in a well maintained domestic composting unit.

Organic waste collection
As a result of their compostability and renewable raw material content, fruit and vegetable bags and bin-liners produced from BIOPLAST 400 are suitable for the collection of organic waste in those markets, that require a high biobased carbon share in all materials entering the waste collection system.

Delivery Format
BIOPLAST 400 is available in Telescope-Octabins (with PE-inliner), bags or bulk on request. Pallet: CP3 or CP9 (114 cm x 114 cm).

Shelf life, storage and handling
The granule should be stored cool, shaded and dry in the closed PE-inliner bag. During storage BIOPLAST 400 can take up humidity. Therefore, once an Octabin or a bag is opened, the material should be processed without delay. Following these recommendations it is advisable to use the material within 6 months after delivery.

Safety data
BIOPLAST 400 is not a dangerous product as defined by directive 67/548/EEC and not subject to transport regulations. General safety, protection and hygiene rules for the handling of the molten granule, as for any other polymer, should be observed. For details please refer to the Material Safety Data Sheet (MSDS).

Disclaimer

QUALITY AND ENVIRONMENTAL MANAGEMENT

Quality and Environmental Management is a central component of BIOTEC's corporate strategy.

BIOTEC has successfully implemented a Quality and Environmental Management System and is certified by TÜV Rheinland according to DIN EN ISO 9001:2008 and DIN EN ISO 14001:2004. The certifications include all services which BIOTEC provides in connection with the development, production and marketing of BIOPLAST material.

Regular audits and training courses for the employees contribute to maintaining the high quality standard as well as the continuous improvement of the Quality and Environmental Management System.

This brochure is printed on FSC certified paper.

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