

# WE MAKE BIOPLAST



  
**BIOPLAST**<sup>®</sup>  
GF106/02

-  Plasticizer-free
-  GMO-free
-  Film applications

  
**BIOTEC**<sup>®</sup>  
BIOPLASTICS FOR A BETTER LIFE

# BIOPLAST®

# GF 106/02

BIOPLAST GF 106/02 is a plasticizer-free and GMO-free thermoplastic material that contains natural potato starch. It is suitable for processing by blown film extrusion to produce items that are completely biodegradable. The absence of plasticizer allows BIOPLAST GF 106/02 to be easily processed to manufacture stable products of consistent quality. The material has an excellent shelf life but will biodegrade readily in an industrial composting environment.

## PROPERTIES

Parameter	Target value	Unit Test	Method
Pellet size	3.0	mm	Caliper gauge
Density	1.25	g/cm <sup>3</sup>	EN ISO 1183-1/A
Bulk density	770	kg/m <sup>3</sup>	EN ISO 60
MFR (190°C, 5 kg)	3.7	g/10 min	EN ISO 1133
Moisture content	< 0.3	weight-%	BIOTEC test directive

## PROCESSING

BIOPLAST GF 106/02 was designed for use in blown film extrusion, but also can be processed in conventional equipment for sheet film extrusion and injection moulding.

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

## MECHANICAL PROPERTIES OF BLOWN FILM\* MADE OF BIOPLAST GF 106/02

Parameter	Typical value	Unit	Test Method
Tensile strength MD	25	MPa	EN ISO 527-3
Tensile strength TD	24	MPa	EN ISO 527-3
Elongation at break MD	470	%	EN ISO 527-3
Elongation at break TD	550	%	EN ISO 527-3
Specific impact resistance	9.5	g/μm	ASTM D 1709

(\*blow-up ratio: 3.5; die gap: 1.05 mm; die diameter: 60 mm; thickness: 25 μm)

## PROPERTIES

Parameter	Target value	Unit	Test Method
Oxygen permeability (80 μm)	750	cm <sup>3</sup> /(m <sup>2</sup> d bar)	DIN 53 380-3
Water vapour permeability (80 μm)	120	g/(m <sup>2</sup> d)	DIN 53 122-1

## Films made of BIOPLAST GF 106/02

- are biodegradable according to EN 13432
- are recyclable
- are printable by flexographic and offset printing without pretreatment
- have a soft touch
- can be coloured with masterbatches
- are sealable (hot, RF, ultra sonic)
- can be drawn down to below 10 μm

## General Applications

- short life packaging
- multi-use bags (e.g. carrier bags, loop-handle bags)
- single-use bags (e.g. refuse bags, bin liners)
- food packaging
- agricultural films
- thermoformed products
- injection moulded products
- tubes

## Sustainability

BIOPLAST GF 106/02 contains 30% of renewable raw material and has a biobased carbon share of 23% according to ASTM D6866.

## End of life options

BIOPLAST GF 106/02 is compostable, recyclable and can be incinerated.

## Compostability

Products made of BIOPLAST GF 106/02 are completely biodegradable and, depending on their thickness, compostable. The material is certified and registered by Vincotte according to EN 13432 awarding the "OK compost" and "seedling" logo.

For further information regarding biodegradability and compostability of BIOPLAST materials please refer to our product information "Biodegradability and Compostability".

Although it is biodegradable, the material should only be disposed of in a controlled waste management environment.



- Plasticizer-free
- GMO-free
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#### Food Packaging

BIOPLAST GF 106/02 is mainly designed for packaging dry and/or fatty food. All raw materials used for BIOPLAST GF 106/02 are listed in directive EU 10/2011. For additional food packaging options and further information, please refer to our product information "Suitability of BIOPLAST Products for Food Contact".

#### Delivery Format

BIOPLAST GF 106/02 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 GF 106/02 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 GF 106/02 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

This information and our technical advice - whether verbal, in writing or by way of trials - are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to check its validity and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with our General Conditions of Sale and Delivery.

## QUALITY AND ENVIRONMENTAL MANAGEMENT

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

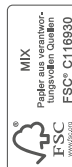
BIOTEC has successfully implemented a Quality and Environmental Management System and is certified by TÜV Rheinland according to DIN EN ISO 9001:2008 and DIN EN ISO 14001:2004. The certifications include all services which BIOTEC provides in connection with the development, production and marketing of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



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