

## TECHNICAL DATA SHEET

### Biogeo PBS001-SP-R

Biogeo Granule made from 100% recycled biopolymer byproducts in conformity with art.5 - Directive 2018/851 – Amendment of Directive 2008/98/EC.

**Original grade: BioPBS™ FD92PM / FD92PB**

**Test Report n. 25/167 of 15/12/2025**

Recycled **BioPBS (rPBS)** is a **bio-based, biodegradable and compostable aliphatic polyester**, obtained through the recovery and reprocessing of selected industrial scraps of **bio-based PBS (polybutylene succinate)**.

PBS is well known for its **softness, flexibility, and LDPE-like behavior**, combined with good mechanical properties and stable processability.

The recycled grade retains good melt flow and processing stability, making it suitable for injection molding and potentially extrusion processes, subject to application validation.

According to laboratory analysis carried out on the recycled pellets, the material shows the following typical values:

MVR Melt Volume Rate = 9,2 cc/10'

MFR Melt Flow Rate = 9,5 g/10'.

Density at 23 °C 1,1990 g/cm<sup>3</sup>

These values indicate a material with **good flowability**, suitable for industrial processing cycles and consistent with the typical behavior of virgin PBS, with a higher melt flow index compared to standard film grades.

The melting point of virgin PBS is typically around 84 °C, which can be used as a reference for defining the processing window of the recycled material.

### MAIN APPLICATIONS

Recycled BioPBS pellets are suitable for applications where **biodegradability, flexibility, and environmental sustainability** are required, in particular:

#### Injection Molding

- ✓ Technical parts with low to medium wall thickness
- ✓ Non-food packaging components
- ✓ Compostable disposable items

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- ✓ Agricultural products (clips, accessories, supports)

#### **Packaging and Flexible Products (subject to validation)**

- ✓ Rigid or semi-flexible components for sustainable packaging
- ✓ Functional parts combined with biodegradable films or multilayer structures

#### **Environmental and Green Products**

- ✓ Products designed for controlled end-of-life management
- ✓ Applications where recycled and bio-based content represents added value
- ✓ Sustainable alternatives to conventional polyolefins in non-structural applications

#### **IMPORTANT TECHNICAL NOTES**

**Drying prior to processing is recommended** (80 °C for at least 5 hours) to ensure process stability

The recycled material is suitable for **technical and industrial applications**; use in **food contact applications** requires specific regulatory evaluation

**Industrial trials are always recommended**, depending on the final application requirements

#### Disclaimer

The product(s) mentioned herein are not intended to be used for medical, pharmaceutical or healthcare applications and we do not support their use for such applications.

The value above is the representative value of the NP standard and may have deviation. It can only be used for selecting materials and shall not be regarded as a material specification and cannot be used for molding designs. Information inserted in this document such as data, statements, representative values, etc. are provided solely for customer convenience. It does not expressly or impliedly guarantee anything regarding the safety or practicability of the (1) materials, (2) products, and/or (3) design that utilizes recommendations or proposals.

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