

DESCRIPTION

ErcrosBio[®] PH 110 is a PHA (polyhydroxyalkanoates)-based thermoplastic obtained from renewable natural materials. The content of material of biological origin is over 99%. The product is aerobically and anaerobically biodegradable and domestically and industrially compostable, in accordance with the criteria of standard EN 13432¹.

CHARACTERISTICS

ErcrosBio[®] PH 110 has mechanical properties that are similar to those of LDPE (low-density polyethylene), barrier properties similar to those of PET (polyethylene terephthalate) and a soft feel, similar to PP (polypropylene) and LDPE. It is highly transparent (depending on the thickness), easily printable and resistant to water-based products, fats and solvents.

RECOMMENDED APPLICATIONS

ErcrosBio[®] PH 110 is recommended for moulding rigid parts by injection. It can be mixed with other polymeric matrices in order to have additional properties (PLA, PBAT, etc.).

PROCESSING CONDITIONS

Prior to processing, the material must be dried in a dehumidifier (see Drying). It can be processed in injection moulding machines equipped with conventional spindles such as those used in polyolefin injection. It is recommended to use a constant temperature profile of 120°C-130°C, keeping the hopper inlet at 20°C. It is recommended to work at low revolutions to avoid degradation caused by shearing. It is recommended that the temperature of the molten mass never exceeds 165°C, as this could promote thermal degradation, which will lead to defects in the moulded parts. It is recommended to use mould temperatures of 60°C. The processability and surface finish quality of the parts improve considerably with mirror polished moulds.

PROPERTIES

	Value	Units	Method
Melt flow index (MFI)	1	g/10 min	ISO 1133-2 (160°C and 2,16 kg)
Density	1,20	g/cm ³	ISO 1183-1
Melting temperature	124	°C	ISO 11357
Glass transition temperature	1	°C	ISO 11357
Young's modulus	0,9	GPa	EN ISO 527
Elongation at break	21	%	EN ISO 527
Vicat	62	°C	ISO 1133- 5 kg

¹ In accordance with Regulations (EU) 10/2011 and EN 13432, overall migration and/or compostability tests must be performed in the final packaging.

CONTACT TELEPHONE NUMBERS

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DRYING

ErcrosBio[®] PH grades should be dried prior to use, for 4 to 6 hours at a temperature of 80°C using dehumidified air with a dew point of -40°C and with sufficient air flow (over 1,5 m³/h per kg of resin). It is recommended to use the product with a water content under 0,02% (200 ppm).

The original packaging should remain sealed until the time of use, given the product's hydrophilic nature. After use, reseal the packaging of the material that has not been used.

Drying times should be increased by 4 hours (up to a total of 8 to 10 hours) when the packaging has been opened for several hours prior to use and the material has been exposed to moisture.

RECYCLABILITY

Products obtained with **ErcrosBio[®] PH** should be identified for recycling with code 7, corresponding to "Others", according to the SPI (Society of the Plastics Industry).

The main outlets at the end of the product's useful life are:

- Composting/Biodegradability: decomposition to CO₂ and/or biogas, water and compost.
- Incineration: allows for energy recovery.



PACKAGING, CONTAINERS

ErcrosBio[®] PH grades are supplied as pellets 20 kg sacks, with antihumidity inner bag.

Waste from packaging (pallets, sacks, octabins, straps, etc.) are considered as Non-Dangerous according to current legislation, and should be managed by an Authorised Waste Manager. The client is responsible for waste management and compliance with the regulations applicable in the country of use.

STORAGE AND HANDLING

During storage, **ErcrosBio[®] PH** grades may become moist if they are exposed to air. The quantity of water that can be absorbed will depend on the temperature, atmospheric humidity and exposure time. The product should therefore be stored hermetically sealed in the inner bag in a cool, dry place.



In general, two pallets/octabins can be stacked on firm ground, unless specified otherwise on the upper part of the packaging, indicated by the symbol shown.

EXPIRY – USEFUL LIFE

If stored properly with the packaging remaining sealed, the product can be processed for up to 12 months after it is supplied.

Product stored in packages that have lost their seal and have been exposed to humidity for extended periods of time (more than two months, as a guideline) could have become degraded and lost their mechanical properties, even after being dried again.

SAFETY

ErcrosBio[®] PH are not classified as dangerous products according to Regulation (EC) no. 1272/2008 and are therefore not subject to special regulations regarding transportation. These products do not decompose at ambient temperature.

REACH

Being a polymer, and in accordance with Article 2.9 of the Regulation, it is exempt from the registry obligations.

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