EarthBi®

Italian Innovative Biopolymers

TECHNICAL DATA SHEET

EarthBi EXT 403 (M)

DESCRIPTION

EarthBi is a bio-based polymer produced from renewable sources and belonging to the PLA family. Like other bio-based polymers, EarthBi offers a significant reduction in the carbon footprint compared to fossil-based plastics.
EarthBi EXT 403 (M) is a grade under development that can be used in blown film processes. It has been formulated to be compatible with other thermoplastic polymers with a low transformation temperature to produce compostable and biodegradable films and bags.

PROCESSING INFORMATIONS

EarthBi EXT 403 (M) is available in pellets. The polymer is amorphous and therefore is susceptible to forming blocks at temperatures above the glass transition temperature (Tg). The polymer in the molten state is stable provided that the guidelines for extrusion and drying are correctly applied. EarthBi polymers are processed in conventional extruders for compounds. Excessive friction during compounding degrades the polymer so a temperature between 170 and 190 °C is recommended. Since EarthBi EXT 403 (M) is amorphous and with a low Tg, the use of a twin-screw extruder is recommended as the use of a single-screw extruder could cause the pellets entering the screw to stick.

PHYSICAL PROPERTIES EXT 403 (M)

PHYSICAL PROPERTIES	METHOD	TYPICAL VALUE
Form		Round pellets
Yellowness index	ASTM E313-98	<60
Density (g/ml)	Internal method	1,24±3%
Glass Transition (°C)	DSC ASTM D3418-15	47±2
Residual Monomer (%,w/w)	Gas Chrom.	<0,3
Moisture (ppm)	ISO 15512-19	<250
MFI 2,16 Kg/190°C (g/10')	ISO 1133-11	<9
Relative Viscosity	Internal method	2,6±0,2

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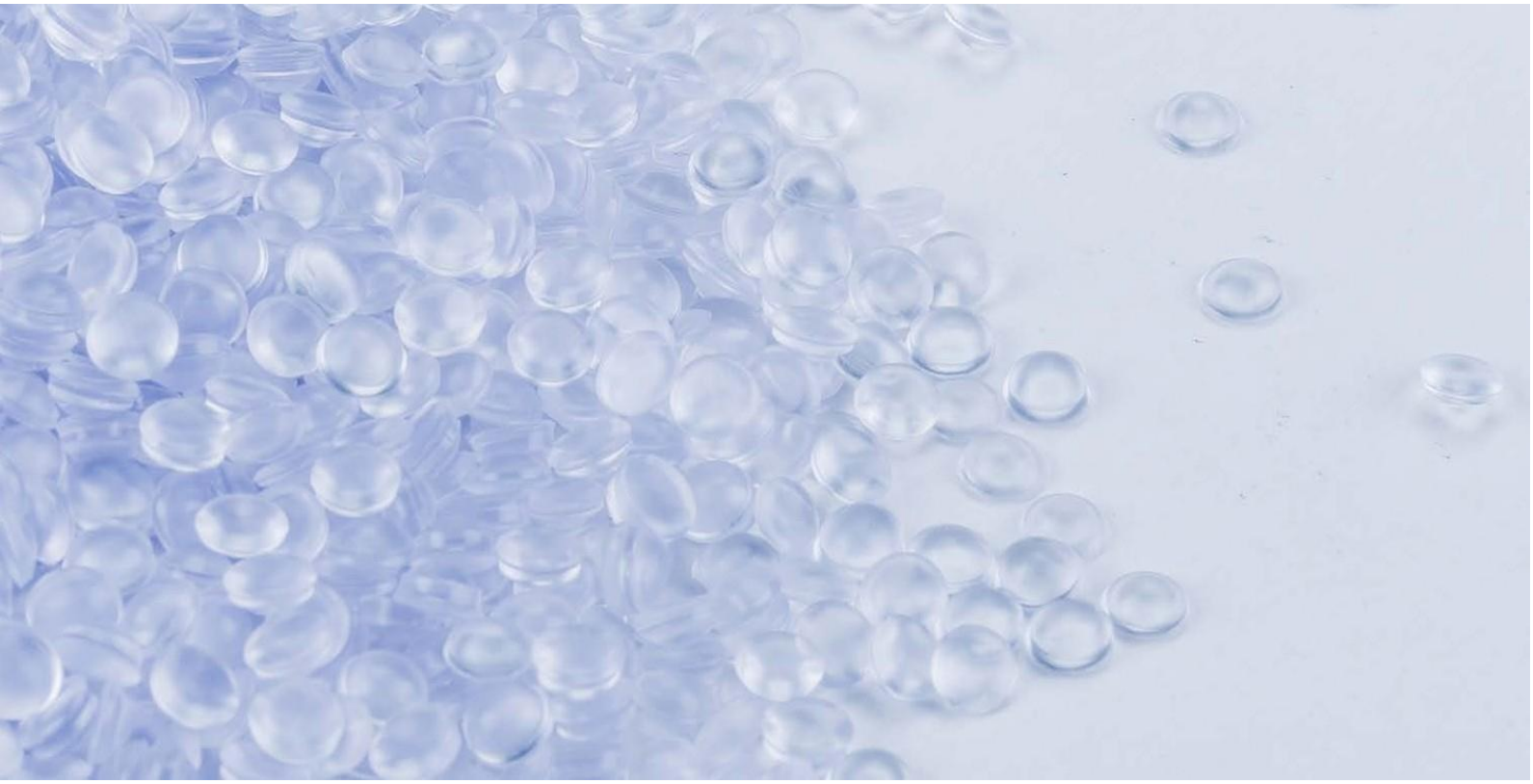
MOISTURE & PRE-DRYING

It is recommended to keep the polymer in its original sealed packaging until it is used and fed to the degassed twin-screw extruder. Residual moisture can be removed in the first degassing area at moderate vacuum values (50 mmHg). The polymer must always be stored in a cool and dry place at a temperature below 40 °C

PACKAGING & STORE CONDITIONS

EarthBi EXT 403 (M) is available in octabins with 750 kg aluminized internal liner bags and on request in 20 kg boxes. PLA polymers are recommended to be stored in their original closed moisture barrier packaging at temperatures below 40 °C. Storage in direct sunlight should be avoided.



BIO VALORE WORLD S.P.A.
SOCIETÀ BENEFIT

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