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Technical Data Sheet

PBAT - TH801T

Description

PBAT - TH801T, is a bio-degradable aliphatic co-polyester, characterized by high elasticity and a low melting point. The resin is home compostable according EN 13432, prevents microplastic issues and well recycled in a regular PET-waste flow. In non-composting environments products made with PBAT have durable properties. PBAT is in many ways comparible to LDPE and it can be applied in most common production processes like foil, filament or fiber extrusion, film blowing, blow moulding and injection moulding.

Characteristics

Typical property	Unit	Method	Value
Density	g/cm^3	ISO 1183	1,21
MFR 190°C, 2,16 kg	g/10 min	ISO 1133	2,5 ~ 4,5
Melting point	°C	ISO 11357	116 ~ 122
Vicat A/50	°C	ISO 306	≤ 80
Tensile Strength	MPa	ISO 527	≤ 25
Elongation	%	ISO 527	≤ 450
Flexural Modulus	MPa		~100
Moisture	%		≥ 0,06
Color			Natural white

Bio-degradability

Home compostability according EN13432, certified by TÜV Austria, for films <33 µm
Industrial compostability according EN13432, certified by TÜV Austria, for films <61 µm

Food approval

Approved for food contact applications, according EC Regulation No 10/2011

Packaging

25 kg aluminum bag, a 20 ft container can load 17 MT
800 kg aluminum big bag, a 20 ft container can load 16 MT

Storage

Temperatures during transportation and storage should not exceed 70 °C. Keep resin in dry and ventilated warehouse to prevent moisture. Avoid contacting with soil, water and sludge, and exposing to direct sunlight and extreme temperature. The maximum shelf life is 2 years in ambient temperature of 23 °C if the package has been tightly sealed.

Processing recommendations

It is recommended to pre-dry the material prior to getting the best processing performance. If the moisture of the resin is less than 0,3% pre-drying may not be needed. Typical drying condition is 2 hours at 80 °C.
The material can be extruded on common extruders. The extruder should be cleaned properly, noting that optimal extrusion temperatures are relatively low, preferably 140 - 160 °C. To obtain lower melt viscosities, temperatures can be increased to a maximum of 210 °C.
For film blowing it is recommended to add slip additives like SiO2 or CaCO3. It is important to start the process from the lowest temperature and increase the temperatures by 5 °C to further optimization of the blowing performance.
TH801T can also be blended with starch, PLA, PBS, PHA, cellulous materials, natural powders, fibers, etc.

Suggested applications

Compostable films, foils, foams, filaments, fibers or yarns for:
- Products to stimulate separation and increase quality of compost and organic waste
- Horti- or agricultural applications
- Textiles and textile lamination
- Packaging

Matrix or plasticizer in bio-compounds or masterbatches

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