
Biodegradable PBAT/PLA for Film

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HRS-3105 Series Resin is a kind of blending modification material that is based on fully biodegradable polymer. It does not contain any starch or modified starch components. It features outstanding physical and mechanical and processing properties which can meet different kinds of film packaging applications.

Product Features:

1. 100% biodegradable, can be degraded into water and CO₂ within 6 months under industrial compostable conditions. It complies with UN EN 13432 and USA ASTM D6400 standards.
2. It can effectively reduce the emission of Petro-based material and CO₂ for it composed of highly natural material components.
 1. It has similar outstanding physical and mechanical properties as conventional PE and PP.
 2. It can adjust its barrier property and moisture permeability in various applications.
 3. It broadens processing area with its better forming properties.
 4. It can be processed quickly in normal conventional extruding equipment.
 5. It has good dyeing property.
 6. It features excellent printability and without corona treatment.
 7. It has good stability of product performance and longer storage lifetime.
 1. Leftover materials are easy to be recycled.

Servicing and Support:

- 1、24 hrs technical support.
- 2、Can provide customized formula according to client's actual requirement.
- 3、Can assist for machine commissioning and provide technical guidance on site.

1、201 (HRS-3105-0201)

Main Components: PBAT、PLA、Talc

Applications: Fully biodegradable shopping bags, rolling bags, garbage bags, pet fecal bags, clothing package bags, electronic product package bags and food packages and etc.

Physicochemical Property: State: Solid

Color: Light yellow or milk white Odour: almost odourless

Specific Gravity (g/cm³):1.25-1.30 (ASTM D792-2007 , 23 °C)

MFR(melt flow rate) (g/10min) :2~8 (ASTM D1238-2010 , 190°C , 2.19K) Heat Deflection Temperature <100 (°C) (ASTM D648-2007 , 1.8 Mpa) Tensile Yield Strength (Mpa) ≥ 20 (ASTMD 4321-2004 , 50 mm/min)

Tensile Elongation (%) ≥ 500 (ASTMD 4321-2004 , 50 mm/min) Heat Sealing Strength: (N/15mm) ≥ 8 (ASTM F88-06 , 300 mm/min)

Right-angled Tearing Strength (N/mm) ≥ 130 (ASTM D1004-2009 , 500 mm/min)

Moisture Content (%) ≤ 0.5 (ASTMD7191-2010)

Degradable Period (D) ≤ 180 (EN13432 &ASTM D6400)

Product Features:

1. HRS-3105-0201 resin is 100% biodegradable and compostable, and have passed the attestation for Fully biodegradable Standards of EU EN 13432, USA ASTM 6400 and attestation for Food Contact of SGS.
2. Compared with conventional petrochemical plastic resins, HRS-3105-0201 resin can reduce emission of CO₂ up to 30% or more.
3. HRS-3105-0201 resin does not contain harmful elements such as Pb, Cd, Hg, Cr, PBB, PBDE etc. It is compliant with all requirements under 21CFR177.2600 of U.S. Food and Drug Administration (FDA).

2、 101 (HRS-3105-0101)

Main Components:PBAT、 PLA

Applications: Fully biodegradable shopping bags, rolling bags, clothing package bags, electronic product package bags and food packages and etc.

Physicochemical Property: State: Solid

Color: Light yellow or milk white Odour: almost odourless

Specific Gravity (g/cm³):1.22~1.25 (ASTM D792-2007 , 23 °C)

MFR(melt flow rate) (g/10min) :2~8 (ASTM D1238-2010 , 190°C , 2.19K) Heat Deflection Temperature <100 (°C) (ASTM D648-2007 , 1.8 Mpa) Tensile Yield Strength (Mpa) ≥ 25 ASTMD 4321-2004 , 50 mm/min) Tensile Elongation (%) ≥ 350 ASTMD 4321-2004 , 50 mm/min)

Heat Sealing Strength (N/15mm) ≥ 12 ASTM F88-06 , 300 mm/min)

Right-angled Tearing Strength: (N/mm) ≥ 100 ASTM D1004-2009 , 500 mm/min) Moisture Content (%) ≤ 0.5 (ASTMD7191-2010)

Degradable Period (D) ≤ 180 (EN13432 &ASTM D6400)

Product Features:

1. HRS-3105-0101 resin is 100% biodegradable and compostable, and have passed the attestation for Fully biodegradable Standards of EU EN 13432, USA ASTM 6400 and attestation for Food Contact of SGS.
2. Compared with conventional petrochemical plastic resins, HRS-3105-0201 resin can reduce emission of CO₂ up to 30% or more.
3. HRS-3105-0101 resin does not contain harmful elements such as Pb, Cd, Hg, Cr, PBB, PBDE etc. It is compliant with all requirements under 21CFR177.2600 of U.S. Food and Drug

Administration (FDA).

Comparison	HRS-3105 Series	PBAT+Starch
Predrying	No need	Drying for over 4hrs at 90 oC

Equipment Requirement	Common LDPE standard specification	Structure to be modified partially of PE blowing machine
Output	Fast extruding speed, high output	Low-speed production, more than 30% less output
Recoverability of leftover materials	Easy to be recovered, high blend ratio	Hard to recycle, easy to be pasted
Power Consumption	Energy-saving, low temperature and high speed, no drying	Need to dry, low speed, high energy consuming
Storage Lifetime	Less moisture absorption, long storage time	Easy to absorb moisture and hydrolyze, short storage time
Load Bearing Strength	High yield strength and load	Soft, Tensile
Soft Hand Feel	Free of Plasticizer, Hard	Contain Plasticizer, Soft

Product link : <https://www.fancyco.com/?p=26553>