

PBAT生物降解薄膜材料

产品名称	PBAT生物降解薄膜材料
公司名称	东莞全球环保科技有限公司
价格	24000.00/吨
规格参数	品牌:PBAT 型号:TH-801T 物性:注塑级
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产品详情

PBAT详细介绍：

完全生物降解塑料主要是由天然高分子（如淀粉、纤维素、甲壳质）或农副产品经微生物发酵或合成具有生物降解性的高分子制得，如热塑性淀粉塑料、脂肪族聚酯、聚乳酸、淀粉/聚乙烯醇等均属这类塑料

完全生物降解塑料PBS由丁二醇和丁二酸及其它组分经缩合聚合而得。在使用过程中性能稳定，使用后能在堆肥、土壤、水和活化污泥等环境下被微生物或动植物体内的酶最终分解为二氧化碳和水，具有良好的生物相容性和生物可吸收性，对环境友好，是根治传统塑料产生的“白色污染”的良方。

PBAT优势：

第一，具有很好的机械性能和加工性能，力学性能介于PE、PP之间，能满足通用塑料的使用要求；可在通用聚酯加工设备上各类成型加工，是目前通用型完全生物降解塑料中加工性能最好的（这一点对降解塑料的应用至关重要）。

第二，具有非常好的降解性能，在堆肥条件下，90天生物降解率达到90%以上(#)。

第三，具有出色的耐热性能，热变形温度接近100 ，改性后可超过100 （在完全可生物降解聚酯中耐热性能最好），可用于制备冷热饮、餐盒等包装领域。

第四，具有价格优势，规模生产后，价格有望突破2万元/吨，原料可有生物发酵途径得到。

第五，用途极为广泛，可以用于包装领域、一次性器具领域、农用领域以及医用领域等等，从真正意义上解决环境污染问题。

PBAT biodegradable resin

1 Introduction

Dongguan City Ren poly plastic limited company, main products: biodegradable material, biodegradable resin, straw plant fiber based biodegradable starch resin, bio based biodegradable resin material, modified PBAT biodegradable material, raw material PLA modified biodegradable material, non starch based biodegradable material, film, sheet, injection molding grade full biodegradable materials, biodegradable shopping bags, degradable vest bag, biodegradable rolling bag, biodegradable garbage bags, can be completely biodegradable buckle bag bag bag, biodegradable lunch boxes, biodegradable tableware, biodegradable cutlery, biodegradable sporting goods, biodegradable toys, fully biodegradable material sheet. SURLYN APPEEL, sarin, TPE thermoplastic elastomer, TPV, PA and so on.

Fine chemical and other high technology fields are widely used.

Poly butylene terephthalate) (Ren (PBS) from succinic acid and butylene glycol by condensation polymerization and resin is milky white, odorless and tasteless, easy nature of a variety of microorganisms or plants of the enzyme decomposition, metabolism, the final decomposition into carbon dioxide and water, is typical to complete the full biodegradable polymer materials. With good biocompatible and biodegradable; density 1.26g/cm³, its melting point is 114 degrees, depending on the level of molecular weight and molecular weight distribution of and the crystallization degree between the 30~45%.

2 performance parameters

First of all, the PBS has a good comprehensive performance. The mechanical properties of PBS can meet the requirements of the use of general plastics, and it is only in the condition of the composting and other microbial degradation, the performance is very stable in the normal storage and use.

Second, the processing performance of PBS is very good, it can be used in general processing equipment for all kinds of molding processing, is the most common type of degradation of plastic processing performance is the best, which is essential for the application of degradable plastics.

Third, the PBS series polyester has excellent heat resistance. PBS is completely biodegradable polyester heat resistance the best varieties, thermal deformation temperature close to 100 DEG C, modified after more than 100 DEG C, to meet the needs of daily activities of heat can be used for preparation of hot and cold drinks packaging and containers. This than poly lactic acid has the advantage. Poly lactic acid process stability and product of heat resistance is not very ideal.

Fourth, PBS type polyester has a price advantage. It with aliphatic dicarboxylic acids, diols as the main raw material, production scale, the price can be reach the level of PET polyester. Materials can also be through the byproduct whey cheese manufacturing, natural polysaccharide, glucose, fructose, lactose, malt sugar, mannitol, mannose, sucrose, xylose and cellulose disaccharide, and natural products through bio fermentation pathway to produce succinic acid, butanediol, not only from the reality of natural, return to natural green recycling production, is also expected to further greatly to reduce the cost of raw materials.

Fifth, Ren poly PBS type polyester production equipment has made. PBS polyester by the pet, PBT polyester equipment slightly modifying production, at present China's polyester equipment production capacity of the serious oversupply, the transformation of the production of PBS for excess polyester equipment provides new opportunities.

Density / (g.cm-2) 1.26

The crystallinity of 30~45 /%

Melting point T_m / 114

Glass transition temperature T_x / -32

Crystallization temperature T_c / 75

Molecular weight M_n (10^4) 5~30

Melt index / (g/10min) 1~3

Yield strength / ($\text{kg}\cdot\text{cm}^{-2}$) 355

Breaking strength / ($\text{kg}\cdot\text{cm}^{-2}$) 580

Elongation: 600

Bending strength / ($\text{kg}\cdot\text{cm}^{-2}$) 177

Bending modulus / ($\text{kg}\cdot\text{cm}^{-2}$) 5300

Notched impact strength / ($\text{kg}\cdot\text{cm}^{-2}$) 30

3 application areas

PBS can be used as garbage bags, packaging bags, cosmetic bottles, all kinds of plastic cards, baby diapers, agricultural materials and drug delivery carrier matrix, etc., and other related to environmental protection, such as a variety of plastic products, such as civil green mesh, film, etc., can be used for packaging, tableware, cosmetic bottles and medicine bottles, disposable medical supplies, agricultural film, pesticides and fertilizers, bio medical polymer materials and other fields.

4 degradation conditions

Under the action of microorganisms or plants and plants in vivo, can be decomposed into carbon dioxide and water.

With the increase of the content of two formic acid, the degradation of the biological degradation of PBS, the molecular weight and the morphology of the pet, the higher the molecular weight, the more difficult to degrade.