

GCBM0102 (PBAT/PLA/ Modified starch Resin For Film)

Component: PBAT, PLA, Modified starch Appearance: yellowish or white resin Features:

1. 100% biodegradable and compostable.
2. Compared to the traditional plastic ,save over 25% petrochemical resource,
3. Compared to the traditional plastic, reducing over 40% CO₂ emissions.
4. No phthalate, no bisphenol A, non-toxic and pollution-free.
5. Have excellent mechanical properties ,could be applied to general plastic processing facilities for various molding processing.

Application: 100% biodegradable packing bags, including shopping bag, rubbish bag, pet excrement bag, package for electronic product, food package.

GCBM0102 (PLA/PBAT/ Modified starch Resin For Film):

Biodegradable Plastic

| Properties | ASTM | Test Condition | S.I. Units | Typical Values |
|---------------------------------------|-------------------------|----------------|-------------------|----------------|
| Mechanical | | | | |
| Tensile Strength(Longitudinal) | ASTMD 4321-2004 | 50mm/min | Mpa | ≥17 |
| Tensile Strength(transverse) | ASTMD 4321-2004 | 50mm/min | Mpa | ≥17 |
| Elongation(Longitudinal) | ASTMD 4321-2004 | 50mm/min | % | ≥350 |
| Elongation(transverse) | ASTMD 4321-2004 | 50mm/min | % | ≥450 |
| Tensile Modulus | ASTMD 4321-2004 | 50mm/min | Mpa | ≥150 |
| Heat sealing strength | ASTM F88-06 | 300mm/min | N/15 mm | ≥8 |
| Right angle tear strength | ASTM D1004-2009 | 500mm/min | N/mm | ≥90 |
| Thermal | | | | |
| Heat Distortion Temp. | ASTM D648-2007 | 1.8Mpa | °C | <100 |
| Others | | | | |
| Melt Flow Rate | ASTM D1238-2010 | 190°C, 2.19K | g/10min | 2-5 |
| Density | ASTM D792-2007 | 23°C | g/cm ³ | 1.20±0.05 |
| Biodegradation | | | | |
| biogradation rate in 12 weeks | EN 13432 /ASTMD 6400 | | % | >98 |
| Processing Conditions Blowing mold | | | | |

| | | Start Point | Range |
|----------------------------|---------|-------------|-----------|
| Melt Temp. | | 140°C | 130-150°C |
| Barrel Zone Temp. | Rear | 135°C | 130-150°C |
| | Center1 | 140°C | 130-150°C |
| | Center2 | 140°C | 130-150°C |
| | Front | 145°C | 130-150°C |
| <u>Pre-Dry Requirement</u> | | 80°C, 4hr | |

Note:

1.Do not need to pre dry, open the package can be used directly. If the product moisture exceeds the standard, it should be used after drying treatment, drying time 4 h, temperature 80°C.

3.The data for tensile strength and breaking elongation refer to the finished film product.