



BSB-001R biodegradable & compostable compound

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General Description

BSB-001R is recycled resin of innovative family of bioplastics made from biodegradable polymers obtained from both renewable materials and fossil fuel. It contains Poly Lactic Acid (PLA) and corn starch. Biodegradability and compostability of the resin is unchanged using plasticizers and the addition of organic and inorganic charges (such as plant fibres, cellulose, lignin, talc...).

The major advantages are:

- High content of natural (renewable) resource raw materials
- Outstanding mechanical properties (similar to LDPE and EVA depending on the grade)
- Wide processing window
- Processable on standard extrusion machinery with a high throughput
- Colourability guaranteed through the average bio-based masterbatches

The biodegradability of the virgin material of at least 90% is guaranteed within six months.

Packaging and Storage

BSB-001R resins are supplied in the form of granules in carton box with liner of 800 Kg. Temperatures during transportation and storage may not exceed 50 °C at any time. Changes in moisture content (either loss or gain depending on atmospheric conditions) should be avoided during longer term storage. BSB-001R should be stored in closed packaging in a cool, dry place out of direct sunlight. During production, once the octabin has been open, exposure to the weather condition must be avoided for more than 5-6 hours. We recommend drying the product for 4 h at 80 °C before you use it.

Processing

BSB-001R is designed primarily for film blowing. BSB-001R is processable on all conventional extrusion film blowing or casting lines with standard screw settings. Preferred screw design is a PE type. Fine tuning the film blowing process may be needed to obtain the optimum process parameters.

The following extrusion temperatures are recommended:

Feed zone temperature 140°C

Melt zone temperature 150°C

Die temperature 150°C

Maximum temperature 150 – 160 °C

Melt temperature 150 – 160 °C

Operating Advice

Overheating of products should be avoided (due to degradation of the polymer). Before production, make sure that all temperature zones work correctly. Do not allow material to remain hot inside the extruder for extended periods as the material can degrade. Therefore, do not heat products over 160°C for long times and do not over 150°C when machine is not running. In case the machine used to run with other materials,

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high melting synthetic polymers (HDPE, PET, PVC, PA), it is recommended to use a correct transition thermoplastic polymer (LDPE with MFI of 4 – 8 g/10 min) and then reduce the temperature gradually to the required setting. The extruder can be usually purged for 10-20 minutes with low melting thermoplastic polymers using the above temperature settings.

Application

BSB-001R is a recycled compound suitable for film blowing applications and is specially developed for carrier bags, can be mixed with virgin compound to improve physical and chemical characteristics of the final product.

Technical Information

| Classification | Test Items | Test Method | Unit | Results |
|------------------------------|------------|-------------|-------------------|-------------|
| Density | | ISO 1183 | g/cm ³ | 1,27 – 1,30 |
| MFI (190°C, 2,16 Kg, 10 min) | | ISO 1133 | 190°C/10min | 3-6 |
| Melting Point | | DSC | °C | 110 -130 |

Food Regulatory Status

BSB-001R recycled resin is not certified for food contact application. For any food contact certification the customers need to apply to the local institutions in accordance to local regulation.

Certification of Compostability and Biodegradability

The resin from which REGRANULATE BSB-001R comes, contains Poly Lactic Acid (PLA) and corn starch, and is in compliance with OK Compost (EN13432) and OK Compost Home (EN13432). The biodegradability of at least 90% is guaranteed within six months.



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