

TDS for BP TFG-DT HR COMPOUND

Description:

BP TFG-DT HR COMPOUND is a Biobased THERMOFORMING grade COMPOUND with PLA as a carrier resin. It is a new age material made from biodegradable & compostable materials. It is designed for sheet extrusion and for use in flexible heat resistant plastic applications. This compound has excellent flow properties, balanced elongation and impact properties. This grade is intended to be used for a wide range of thermoforming applications including general purpose household items like heat resistant glass, cups, lids, clamshells, etc.

This product ensures the absence of heavy metals and harmful substances and the ecotoxicity of humans are well preserved with the use of this compound.

BP TFG-DT HR COMPOUND is processable on all conventional sheet extrusion lines with standard screw settings. Preferred screw design is the same as it is for PE.

The major advantages of BP TFG-DT HR COMPOUND is:

- Excellent compatibility with regular sheet extrusion machines
- Very useful for disposables like glass, cups, lids, clamshells, etc.
- High content of natural (renewable) resource raw material
- Specific gravity close to PLA biopolymer
- Outstanding mechanical properties (similar to LDPE, PP & PS depending on the grade)
- Wide processing window
- Optimal Heat Resistance
- Reduces Cost

Dosage:

To be used directly without mixing anything.

How to use:

Put BP TFG-DT HR COMPOUND in Hopper dryer for Preheating at 80 degrees for 90 to 120 mins. Preheating will give an efficient processing behavior in Injection molding machines. Once preheated proceed with the moulding process.

Technical Characteristics:

| Physical Properties | Test Method | Unit | Typical Value |
|------------------------------|-----------------|-----------|---------------|
| Melt flow rate (190 °C/5 kg) | ASTM D-1238 | gm/10min. | 6 – 10 |
| Melting temperature | STD Test Method | °C | 180 - 200 |
| Density | ASTM D 792 | g/cc | 1.25 - 1.32 |
| Color | Visual | Spectro | OPAQUE |
| Tensile Strength (TD) | In house | MPa | 18 to 25 |
| Tensile strength (MD) | In house | MPa | 35 to 50 |
| Elongation (TD) | In house | % | >50 |
| Elongation (MD) | In house | % | >100 |

Processing information & recommendation:

To be processed on conventional thermoforming equipment. Pre-drying of the compound is highly recommended.

As a general guideline the following temperature profile is recommended for Sheet Extrusion process: -

| ZONES | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Screw Speed |
|--------------------|-------|-------|------------------|------------------|-------|-------|-------|-------|-------------|
| Process parameters | 180°C | 185°C | 190 ⁰ | 190 ⁰ | 195°C | 195°C | 200°C | 200°C | Normal |

Note: Typical settings, may require optimization depending on machinery, process & product.

Start-up and shutdown

1. The equipment needs to be well cleaned and purged to prevent cross contamination.
2. At the start of the run it is recommended to purge the system with polyolefin or a purging compound (e.g. Dyna-Purge, Clean LDPE) followed by purging with this compound at its processing conditions.
3. At the completion of the run it is recommended to purge the system using a purging compound or polyolefin again.

Storage: The material shall be kept in a cool dry place for best results.

Packing: Laminated Moisture proof Bags of 25 kg.