

Polybutylene terephthalate (PBT)



Specification

DH-III PBT is special grades of Polybutylene terephthalate for optic loose tube. PBT resin is one of the most suitable products for optic loose tube offering good physical properties, dimensional stability, chemical resistance, and fast crystallization speed. DH-III has a high molecular weight and high melt strength for extrusion processing and meet strict requirements of optic loose tube, such as good hydrolysis resistance, easy high speed processing, crystallization properties.

Characteristic of DH-III PBT resin:

- Good hydrolysis resistance;
- High melt strength;
- High flexural modulus with good kink resistance;
- Excellent processing Property:
- Stability in processing;
- Low coefficient of thermal expansion;
- Low moisture absorption;
- Good abrasion resistance etc.

Process

DH-III is mixed together with two kinds of PBT resin in specifically ratio, one is the pure high molecular weight resin which is kept good Characteristic of PBT, the other is improved resin lead to high flexural modulus and fast crystallization, it's prepared and design for optical fiber tube.

The improved resin has been combined with some special additive, it has buff appearance different from ordinary PBT resin, the melted liquid shows semitransparent and white, and it will not affect the extruding of PBT resin.

Product Datasheet

| Property | | Test Method | Unit | Typical Value |
|---|------------------|-----------------|----------------------------------|---------------|
| Appearance | | Eyeballing | Ivory, cylinder grain | |
| Specific Gravity | | | g/cm ³ | 1.30±0.05 |
| Water Content | | GB/T | % | ≤0.1 |
| Melt Index (250°C, 2.16kg) | | GB/T 3682-2000 | g/10min | 11.0±4.0 |
| Saturation water-absorbing | | GB/T1034-1998 | % | ≤0.5 |
| Yield Strength | | GB/T1040-1992 | MPa | ≥50 |
| Yield Elongation | | GB/T1040-1992 | % | 5~10 |
| Tensile Elongation | | GB/T1040-1992 | % | ≥100 |
| Tensile Modulus | | GB/T1040-1992 | MPa | ≥2100 |
| Flexural Modulus | | GB/T9341-2000 | MPa | ≥2200 |
| Flexural Strength at 3.5% strain | | GB/T9341-2000 | MPa | ≥60 |
| Shore A Hardness degrees H _D | | GB/T2411-80(89) | | ≥70 |
| Melting Point | | DSC | °C | 220±10 |
| Coefficient of Linear Thermal Expansion (23°C~80°C) | | GB/T1036-1989 | 10 ⁻⁴ K ⁻¹ | ≤2 |
| Compatible with Gel | Yield Strength | GB/T1040-1992 | MPa | ≥50 |
| | Yield Elongation | GB/T1040-1992 | % | ≥100 |
| Volume Resistivity | | GB/T1410-1989 | Ω·cm | ≤2 |