

Indothene HD 50GF003

High Density Polyethylene

Reliance Industries Limited

Message:

Indothene-HD grade 50GF003 is a blown film grade of High Molecular Weight High Density Polyethylene (HM-HDPE), produced by Hostalen Stirred Tank Heavy Diluent (STHD) Slurry process at Gandhar. It possesses bimodal molecular weight distribution, which improves processability. 50GF003 can readily be processed on HMHDPE blown film extrusion lines. The films will have homogeneous, finely textured, opaque appearance and exhibit very good mechanical properties.

FOOD CONTACT APPLICATIONS :

This grade meets the requirements of Indian Standard IS-10146-1982 on "Polyethylene for its safe use in contact with food stuffs, pharmaceuticals and drinking water". It also conforms to the positive list of constituents as approved in IS:10141:1982. The grade complies with FDA regulation : CFR title 21 , 177.1520, Olefin polymer

| General Information | | | |
|---|-----------------------------|-------------------|-------------|
| Features | High molecular weight | | |
| | Compliance of Food Exposure | | |
| Uses | Films | | |
| | Lining | | |
| | Bags | | |
| | Sheet | | |
| Agency Ratings | FDA 21 CFR 177.1520 | | |
| Appearance | Natural color | | |
| Forms | Particle | | |
| Processing Method | Blow film | | |
| Physical | Nominal Value | Unit | Test Method |
| Density | 0.950 | g/cm ³ | ASTM D1505 |
| Melt Mass-Flow Rate (MFR) | | | ASTM D1238 |
| 190°C/21.6 kg | 8.0 | g/10 min | ASTM D1238 |
| 190°C/5.0 kg | 0.30 | g/10 min | ASTM D1238 |
| Films | Nominal Value | Unit | Test Method |
| Tensile Strength | | | ASTM D882 |
| MD: Yield, 20 µm, blown film | 32.0 | MPa | ASTM D882 |
| TD: Yield, 20 µm, blown film | 30.0 | MPa | ASTM D882 |
| MD: Broken, 20 µm, blown film | 56.0 | MPa | ASTM D882 |
| TD: Broken, 20 µm, blown film | 50.0 | MPa | ASTM D882 |
| Tensile Elongation | | | ASTM D882 |
| MD: Broken, 20 µm, blown film | 550 | % | ASTM D882 |
| TD: Broken, 20 µm, blown film | 650 | % | ASTM D882 |
| Dart Drop Impact ¹ (20 µm, Blown Film) | 8.0 | g | ASTM D1709 |
| Elmendorf Tear Strength | | | ASTM D1922 |

| MD: 20 μm, blown film | 0.50 | g | ASTM D1922 |
|--|---------------|------|-------------|
| TD: 20 μm, blown film | 15 | g | ASTM D1922 |
| Thermal | Nominal Value | Unit | Test Method |
| Vicat Softening Temperature | 125 | °C | ASTM D1525 |
| Extrusion | Nominal Value | Unit | |
| Cylinder Zone 1 Temp. | 180 | °C | |
| Cylinder Zone 2 Temp. | 200 | °C | |
| Cylinder Zone 3 Temp. | 210 | °C | |
| Cylinder Zone 4 Temp. | 220 | °C | |
| Die Temperature | 215 | °C | |
| Extrusion instructions | | | |
| Blow up ratio: 3 to 5 Neck height: 60D to 8D (D-Die dia) | | | |
| NOTE | | | |
| 1. | F50 | | |

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

