

P50H03



High Density Polyethylene

Pipe Extrusion

Product Description:

HDPE P50H03 is a natural colored grade produced with the latest Mitsui CX slurry polymerization Technology exhibiting following features:

- ✓ Very Good Processing Properties
- ✓ High Creep Resistance
- ✓ Excellent Stress Crack Resistance
- ✓ Excellent mechanical properties

HDPE P50H03 is recommended for following applications:

- ✓ High pressure Pipe applications (PE-100)
- ✓ Potable water transportation pipes.
- ✓ Higher Diameter pipes for drainage/ Sewerage applications.

Typical Properties:

| Sr. No. | Properties | Test Method | Units | Values* |
|---|---|-------------|--------------------|---------|
| Physical Properties | | | | |
| 1 | Melt Flow Index (190°C & 5.0 kg) | ASTM D1238 | g / 10 min | 0.27 |
| 2 | Density (at 23 °C) | ASTM D1505 | gm/cm ³ | 0.950 |
| Mechanical Properties | | | | |
| 3 | Tensile Strength @ Yield | ASTM D638 | MPa | 25 |
| 4 | Tensile Strength @ Break | ASTM D638 | MPa | 35 |
| 5 | Elongation @ Yield | ASTM D638 | % | 11 |
| 6 | Elongation @ Break | ASTM D638 | % | >800 |
| 7 | Charpy Impact Strength | ISO 179-1 | KJ/m ² | NB |
| 8 | Notched Izod Impact Strength (at 23 °C) | ASTM D256A | J/m | >250 |
| 9 | Flexural Modulus | ASTM D790A | Mpa | 900 |
| 10 | Hardness | ASTM D2240 | Shore D | 60 |
| 11 | ESCR (F ₅₀ , 10% Igepal Soln. v/v) | ASTM D1693B | Hours | 1000 |
| Thermal Properties | | | | |
| 12 | Vicat Softening Point (10N) | ASTM D1525 | °C | 125 |
| 13 | Heat Deflection Temperature (0.455 Mpa) | ASTM D648 | °C | 65 |
| 14 | Oxidative Induction Time (OIT) | ASTM D3895 | Minutes | >30 |
| ** Mechanical Properties tested on Compression Molded type IV Specimen. | | | | |
| * Typical Values and not to be taken as specification limits, values may change without any prior notice. | | | | |

Recommended Processing Temperature: 180 – 220 °C

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Regulatory Requirements:

HDPE Pipe grade P50H03 shall meet the requirements stipulated in IS 10146:1982 on 'Specification of Polyethylene for safe use in contact with Foodstuff, Pharmaceutical & Drinking water'. The grade and Additives incorporated in this grade shall meet the positive list of constituents as prescribed in IS 10141:1982. The Grade and the additives incorporated in it shall also comply with the FDA: CFR Title 21,177.1520, Olefin Polymers.

Storage & Handling:

Prevent Polyethylene Material from direct exposure to sunlight & heat to avoid quality deterioration. The storage location should be dry, dust free and the Storage temperature should not exceed 50 °C. Non - compliance to these precautionary measures can lead to degradation of the product causing Color changes, Odor & inadequate product performance.

Health and Safety Information:

The product described herein may require precautions in handling and use because of toxicity, flammability, or other consideration. The Material Safety Data Sheet (MSDS) contains the available product health and safety information for this material and can be found at www.opalindia.in. Before using any material, a customer is advised to consult the MSDS for the product under consideration for use.



ONGC Petro additions Ltd

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