

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.

MRS Classification: OPaLene HDPE P50H03 has a Minimum required strength (MRS) classification of 10 MPa according to ISO 9080 and is designated PE100 grade according to ISO 12162.

Properties	Test Method	UOM	Minimum Burst time
SCG (Notch pipe testing @ 80°C,9.2 bar)	ISO 13479	Hrs	>500
RCP- S4 test (Critical pressure to Rapid crack propagation)	ISO 13477	Bar	≥10 (Critical Pressure@ 0°C)

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	23
4	Elongation @ Yield	ASTM D638	%	19
5	Elongation @ Break	ASTM D638	%	>800
6	Notched Izod Impact Strength (at 23 °C)	ASTM D256A	J/m	>250
7	Charpy Impact Strength	ISO 179-1	KJ/m ²	NB
8	Flexural Modulus	ASTM D790A	MPa	880
9	Hardness	ASTM D2240	Shore D	60
10	ESCR (F ₅₀ , 10% Igepal Soln. v/v)	ASTM D1693B	Hours	>1000
Thermal Properties				
11	Vicat Softening Point (10N)	ASTM D1525	°C	125
12	Heat Deflection Temperature (0.455 Mpa)	ASTM D648	°C	65
13	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

Note: This product is not to be used in the manufacture of SUP (Single Use Plastic) items prohibited under

PWM (Plastics Waste Management) Rules, 2016.

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Regulatory Requirements:

HDPE Pipe grade P50H03 meets 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 meet the positive list of constituents as prescribed in IS 10141:1982. The Grade and the additives incorporated in it 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.



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