

## High Density Polyethylene

## Pressure Pipe

### Product Description:

**HDPE 002DP48** is a high molecular weight high density bimodal Polyethylene grade produced by Lyondell Basell's Hostalen Slurry Process with Excellent Processability & Mechanical Properties. This Grade meets the MFI, Density & hydrostatic pressure test requirement of PE 100 grade as per IS: 4984:2016

### Recommended Applications:

**HDPE 002DP48** is recommended for PE100 pressure pipe applications such as

- Pipes for Water transportation,
- Sewerage, Industrial Pipes etc

**002DP48** 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	Remark
MRS	ISO 9080	MPa	>10.0
RCP – S4 test (Critical pressure for Crack propagation at 0 °C)	ISO 13477	Bar	≥10
SCG (Notch Pipe testing) (@ 80 °C, 9.2 Bar)	ISO 13479	Hrs	>1000

### Typical Properties:

Tested Properties	Test Method	UOM	Values*
<b>Resin Properties</b>			
Melt Flow Index (190°C & 5 Kg)	ASTM D1238	gm/10 min	0.25
Density @ 23°C	ASTM D1505	gm/cm <sup>3</sup>	0.950
<b>Mechanical Properties</b>			
Tensile Strength @ Yield (Type-IV)	ASTM D638	MPa	28
Elongation @ Break (Type-IV)	ASTM D638	%	>600
Notched Izod Impact Strength @ 23 °C	ASTM D256	J/m	No Break
Flexural Modulus	ASTM D790	MPa	1000
Hardness	ASTM D2240	Shore D	64
<b>Thermal Properties</b>			
Vicat Softening Point (10N)	ASTM D1525	°C	125
Oxidative Induction Time	ASTM D3895	Min	>30
<b>Environmental Properties</b>			
ESCR (10% Igepal), F <sub>50</sub>	ASTM D1693	Hrs	>1000

\* Typical values not to be construed as specification limits. Values may change without any prior notice.

\* Mechanical Properties tested on compression Molded test specimens.

**Recommended Processing Temperature: 180 – 220 °C**

### Packaging Information:

This material is packed and available in raffia bags with net content of 25.0 Kg only. The raffia bags used conforms to the minimum strength requirements of BIS, however, customer shall take due care while handling the bag. Prolonged exposure of these bags to sunlight may deteriorate the bag's performance and cause spillage and wastage. IOCL does not warranty loss of material due to poor material handling practices.

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**Registered Office Address →**  
G-9, Aliyavar Jung Marg,  
Bandra (East), Mumbai – 400051  
Maharashtra, India.

**Contact Address →**  
Product Application and Development Center (PADC),  
Near Panipat Naphtha Cracker Complex,  
Village – Bajjattan, Panipat – 132140, Haryana, India

**Contact Details →**  
**Tel** : +91-180-2526702, 2526708  
**Fax** : +91-180-2528651  
**Web** : <https://propel.indianoil.in>

**Regulatory Information:**

HDPE 002DP48 meets "Specification for Polyethylene for safe use in contact with Foodstuff, Pharmaceuticals and Drinking water" as per IS: 10146-1982. It also confirms to the positive list of constituents as per IS: 10141-1982. The grade and Additives incorporated shall meet with FDA: CFR Title21, 177.1520, Olefin Polymers.

**Storage & Handling:**

Prevent HDPE 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 and inadequate product performance. It is advised to process HDPE material within 06 months of delivery.

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