

## High Density Polyethylene

## Telecom Ducts

### Product Description:

**HDPE 010DP45U** is a natural high density bimodal UV-stabilized Polyethylene grade produced by LyondellBasell's Hostalen Slurry Process. The grade conforms to latest TEC Generic Requirement No.TEC/GR/FA/CDS-008/04/AUG-19; & TEC/GR/FA/DWC-034/02/AUG-19; of CACT, BSNL.

**BIS Designation Code** for HDPE 010DP45U as per IS

7328:2020 is: **IS 7328-3B-PDQ-EXTA.**

### Typical Properties:

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### Recommended Applications:

**HDPE 010DP45U** is recommended for:

- Ducts for Optical Fibre Cables
- General Purpose PE-63 Non-Pressure Pipe Applications

Tested Properties	Test Method	UOM	Values*
<b>Resin Properties</b>			
Melt Flow Index (190°C & 5.0Kg)	ASTM D1238	g/10min	0.90
Density @ 23°C	ASTM D1505	g/cm <sup>3</sup>	0.9500
Density @ 27°C	IS 4984:2016	g/cm <sup>3</sup>	0.9480
<b>Mechanical Properties</b>			
Tensile Strength @ Yield (Type-IV)	ASTM D638	MPa	28
Elongation @ Yield (Type-IV)	ASTM D638	%	8.5
Elongation @ Break (Type-IV)	ASTM D638	%	>800
Notched Izod Impact Strength @ 23°C	ASTM D256	J/m	200
Flexural Modulus	ASTM D790	MPa	1050
Hardness	ASTM D2240	ShoreD	64
<b>Thermal Properties</b>			
Vicat Softening Point (@ 10N)	ASTM D1525	°C	126
Heat Deflection Temperature (@ 0.455MPa)	ASTM D648	°C	68
Oxidation Induction Time @ 200°C	ASTM D3895	min	>30
<b>Environmental Properties</b>			
ESCR (10% Igepal), F <sub>50</sub>	ASTM D1693B	Hrs	>1000

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

Mechanical Properties tested on Compression Moulded test specimens.

**Recommended Processing Temperature: 160 – 210°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.

### 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 colour changes, odor and inadequate product performance. It is advised to process HDPE material within 06 months of delivery.

### Regulatory Information:

HDPE 010DP45U meets the "Specification for Polyethylene for safe use in contact with Foodstuff, Pharmaceuticals and Drinking water" as per IS: 10146-1982. It also conforms to the positive list of constituents as per IS: 16738-2018. The grade and Additives incorporated shall meet with FDA: CFR Title21, 177.1520, Olefin Polymers.

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