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002DP48

High Density Polyethylene — Pressure Pipe

Product Technical Datasheet

Product Description:

HDPE 002DP48 is a high molecular weight high density bimodal grade produced by Lyondell Basell 's Hostalen slurry process with excellent Processability & Mechanical properties. This Grade meets the MFI, Density & hydrostatic Strength requirements of material grade PE100 as per IS: 4984:1995

Recommended Applications:

HDPE 002DP48 is recommended for PE100 pressure pipe applications such as water transportation, Sewage, industrial Piping 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	Remarks
MRS	ISO 9080	MPa	>10.0
RCP – S4 test, (Critical pressure for Crack propagation at 0 ^{o}C)	ISO 13477	Bar	≥10
SCG (Notch Pipe testing) (@ 80 ^{o}C, 9.2 bar)	ISO13479	Hrs	>1000

Typical Properties:

Tested Properties	Test Method	UOM	Values*
Resin Properties			
Melt Flow Index (190^{0}C & 5 Kg)	ASTM D 1238	gm/10 min	0.22
Density @ 23^{o}C	ASTM D 1505	gm/cm^{3}	0.948
Mechanical Properties			
Tensile Strength @ Yield (Type-IV)	ASTM D 638	MPa	28
Elongation @ Break (Type-IV)	ASTM D 638	%	>600
Flexural Modulus	ASTM D 790	MPa	850
Notched Izod Impact Strength @ 23^{o}C	ASTM D 256	J/m	No Break
Hardness	ASTM D2240	Shore D	61
Thermal Properties			
Vicat Softening Point	ASTM D 1525	^{o}C	125
Oxidative Induction Time	ASTM D3895	Min	> 30
Thermo Chemical Properties			
ESCR, F50 (10% Igepol)	ASTM D1693	Hrs	>1000

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

** Mechanical properties were determined on compression moulded specimens.

Recommended Processing Temperature: 180 – 220 ^{o}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.

Regulatory Information:

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

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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 ^{o}C. Non - compliance to these precautionary measures can lead to degradation of the product causing Color changes, Odor & inadequate product performance. It is advised to process HDPE material within 06 months after delivery.

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