

Indothene HD 46GP003

High Density Polyethylene

Reliance Industries Limited

Message:

Indothene-HD 46GP003 (PE-100) is a natural coloured grade for pipe extrusion, produced by Basell's Stirred Tank Heavy Diluent (STHD) Slurry process. It possesses bimodal molecular weight distribution, which improves processability. This grade meets the MFI, Density & Hydrostatic strength requirements of material grade PE-100 as per IS:4984:1995 (Amendment-3) on "High Density Polyethylene pipe for water supply-specification". The designation of the natural resin of 46GP003 is PE-EAN-C45-T003 as per IS:7328-1992 and shall meet the same given in the amendment No. 2 of IS:4984:1995. When incorporated with adequate quantity of carbon black as specified in clause 5.2.3 of IS:4984:1995, will meet the requirements of the designation PE-EW-C45-T003 mentioned in the clause 5.2 of IS:4984:1995.

Pipe made from 46GP003 grade passes the Internal Pressure Creep Rupture Test when tested with 5.5 MPa induced stress at 80°C for 165 hrs and with 5.7 MPa induced stress at 80°C for 48 hrs as per clause 8.1 of IS 4984, thereby meeting the requirements of PE100 grade as per IS: 4984.

FOOD CONTACT APPLICATIONS :

This grade shall meet the requirements of Indian Standard IS-10146-1982 on "Polyethylene for its safe use in contact with food stuffs, pharmaceuticals and drinking water". It shall also conforms to the positive list of constituents as approved in IS:10141:1982. The grade shall comply with FDA regulation: CFR title 21, 177.1520, Olefin polymer. The level of antioxidant in 46GP003 is not more than 0.3% by mass of the resin.

General Information			
Features	Compliance of Food Exposure		
Uses	Piping system		
Agency Ratings	FDA 21 CFR 177.1520		
	PPI PE-100		
Appearance	Natural color		
Forms	Particle		
Processing Method	Pipeline extrusion molding		
	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density	0.946	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	0.10	g/10 min	ASTM D1238
190°C/5.0 kg	0.30	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (Compression Molded, F50)	> 1000	hr	ASTM D1693
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (Yield, Compression Molded)	27.5	MPa	ASTM D638
Tensile Elongation ² (Break, Compression Molded)	600	%	ASTM D638
Flexural Modulus ³ (Compression Molded)	850	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (Compression Molded)	No Break		ASTM D256
Additional Information			

Thermal Stability, ASTM D3895, 200°C: >30 minTensile Elongation at Break, ASTM D 638, Type IV: >600%Melt Mass - Flow Rate, ASTM D1238, 190°C/2.16 kg: < 0.1 g/10 min

NOTE

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| 1. | Type 4 |
| 2. | Type 4 |
| 3. | Type 4 |

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