

Indothene HD 46GP009

High Density Polyethylene

Reliance Industries Limited

Message:

Indothene-HD 46GP009 is a natural grade of HDPE, produced by Hostalen Stirred Tank Heavy Diluent (STHD) Slurry process at IPCL's Gandhar Complex. It possesses bimodal molecular weight distribution, which improves processability and mechanical properties. This grade meets the MFI and Density requirements of material as per IS:4984:1995 on "High Density Polyethylene pipe for water supply-specification". 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-A45-T012 mentioned in the clause 5.2 of IS:4984:1995. The pipe made from this grade meets the hydrostatic strength requirement of PE-63 class of pipe as per IS:4984:1995. The grade has excellent ESCR properties and is suitable for pesticide bottles upto 1 ltr. capacity.

FOOD CONTACT APPLICATIONS :

This grade meets the requirements of Indian Standard IS-10146 on "Polyethylene for its safe use in contact with food stuffs, pharmaceuticals and drinking water". It also conforms to the positive list of constituents as approved in IS:10141:1982. The grade complies with FDA regulation: CFR title 21, 177.1520, Olefin polymer. The level of antioxidant in 46GP009 is not more than 0.3% by mass of the resin. The antioxidant used in the grade are covered in IS:10141.

General Information			
Features	Compliance of Food Exposure		
Uses	Piping system		
	Bottle		
Agency Ratings	FDA 21 CFR 177.1520		
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/21.6 kg	23	g/10 min	ASTM D1238
190°C/5.0 kg	0.90	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (50°C, 10% Igepal, injection molding, F50)	> 1000	hr	ASTM D1693

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (Yield, 3.20 mm, Injection Molded)	24.0	MPa	ASTM D638
Tensile Elongation ²			ASTM D638
Yield, 3.20mm, injection molding	11	%	ASTM D638
Fracture, 3.20mm, injection molding	350	%	ASTM D638

Additional Information			
OIT, ISO 4427/ISO 10837, Al pan, 200°C: >20 minTensile Elongation at Break, ASTM D 638, Type IV, 3.2 mm: >350%			

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	190	°C
Cylinder Zone 2 Temp.	200	°C

Cylinder Zone 3 Temp.	210	°C
Cylinder Zone 4 Temp.	220	°C
Die Temperature	218	°C

NOTE		
1.	Type 1	
2.	Type 1	

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