

RELENE® 45GP004

High Density Polyethylene

Reliance Industries Limited

Message:

Relene 45GP004 (PE:80) is a natural coloured grade for pipe extrusion.

It possesses bimodal molecular weight distribution, which improves processability. This grade meets the MFI, Density & Hydrostatic strength requirements of material grade PE:80 as per IS 4984. When incorporated with adequate quantity of carbon black as specified in clause 5.2.3 of IS: 4984, Pipes will meet PE:80 requirements .

Pipe made from Relene 45GP004 grade passes the Internal Pressure Creep Rupture Test when tested with 4.6 MPa induced stress at 80°C for 165 hrs and with 4.9 MPa induced stress at 80°C for 48 hrs as per clause 8.1 of IS 4984, thereby meeting the requirement of PE:80 grade.

This grade conforms to ISO 4427 specification shown below and has been certified for MRS > 8 MPa as per ISO 9080.

General Information			
Features	Bimodal Molecular Weight Distribution		
	Food Contact Acceptable		
	Good Processability		
Uses	Piping		
Agency Ratings	FDA 21 CFR 177.1520		
	IS 10141-1982		
	IS 10146-1982		
Appearance	Natural Color		
Processing Method	Pipe Extrusion		
Physical	Nominal Value	Unit	Test Method
Density	0.945	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/5.0 kg)	0.45	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (Compression Molded, F50)	> 1000	hr	ASTM D1693
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield, Compression Molded)	27.0	MPa	ASTM D638
Tensile Elongation (Break, Compression Molded)	> 600	%	ASTM D638
Flexural Modulus (Compression Molded)	800	MPa	ASTM D790
Hydrostatic Pressure Test			ISO 1167
20°C ¹	> 4.2	day	
80°C ²	> 41.7	day	
80°C ³	> 6.9	day	
Oxidation Induction Time (200°C)	> 30	min	ASTM D3985
MRS	> 8.00	MPa	ISO 9080
SCG	> 20.8	day	ISO 13479
Impact	Nominal Value	Unit	Test Method


Notched Izod Impact (Compression Molded)	No Break	ASTM D256
NOTE		
1.	9 MPa	
2.	4.0 MPa	
3.	4.6 MPa	

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Recommended distributors for this material

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