



45GP004 HIGH DENSITY POLYETHYLENE FOR PIPE EXTRUSION

45GP004 is a natural coloured PE 80 (MRS 8 MPa*) material 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: 4984:1995 on “High Density Polyethylene pipe for water supply-specification”. The designation of the natural resin of 45GP004 is PE-ENA-C45-T006 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-T006 mentioned in the clause 5.2 of IS: 4984:1995.

The grade also conforms to ISO 4427 specifications as shown below: & has been certified for MRS > 8 MPa as per ISO 9080.

Property	Test Method	Unit	Remarks
Hydrostatic Pressure Test 9 Mpa @20°C 4.6 Mpa@80°C 4.0 Mpa@80°C	ISO 1167	Hrs	>100 >165 >1000
MRS	ISO TR9080	MPa	>8.0
SCG	ISO 13479	Hrs	>165
RCP (S4)	ISO 13477	Bar	>12

Typical Characteristics*			
Property	Test Method	Unit	Typical Value**
Melt Flow Index (190°C/5.0 Kg)	ASTM D1238	gm/10 min	0.45
Density (23°C)	ASTM D1505	gm/cm ³	0.945
Thermal Stability (O.I.T.) 200°C	ASTM D3895	Min	>30
Tensile Strength at Yield	ASTM D638	MPa	27
Elongation at Break	ASTM D638	%	>600
Flexural Modulus	ASTM D790	MPa	800
Notched Izod Impact Strength	ASTM D256	J/m	No Break
ESCR, F ₅₀	ASTM D1693	Hrs	>1000

* Typical values not to be taken as specification

**Mechanical Properties are on Compression moulding



Applications

PE 80 pressure pipes

Regulatory Information

- Meets the requirements stipulated in standard IS : 10146-1982 on "Specification for Polyethylene for safe use in contact with foodstuffs, pharmaceuticals, and drinking water". It also conforms to the positive list of constituents as prescribed in IS : 10141-1982. The grade and the additives incorporated in it also comply with the FDA:CFR Title 21, 177.1520, Olefin polymers.

Storage Recommendations

- Bags should be stored in dry / closed conditions at temperatures below 50°C and protected from UV / direct sunlight.