



46GP009

POLYETHYLENE RESIN FOR PIPE EXTRUSION & PESTICIDE BOTTLES

Relene 46GP009 is a natural coloured grade for pipe extrusion. 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 4984:2016 for 'Polyethylene pipes for Water Supply - Specification' when incorporated with adequate quantity of carbon black as specified in clause 5.3 of IS 4984:2016, will meet the requirements of the designation PE EL C45T012 mentioned in the clause 4.2 of IS 7328: 1992. The pipe made from this grade meets the hydrostatic strength requirement of PE-63 class of pipe as per IS 4984:2016. The grade has excellent ESCR properties and is suitable for pesticide bottles.

Typical Characteristics*			
Property	Test Method	Unit	Typical Value**
Melt Flow Index (190°C/5.0 Kg)	ASTM D1238	gm/10 min	0.9
Density (23°C)	ASTM D1505	gm/cm ³	0.948
Tensile Strength at Yield	ASTM D638	MPa	24.0
Elongation at Yield	ASTM D638	%	11
Elongation at Break	ASTM D638	%	>600
ESCR @ 10 % Igepal Soln (F ₅₀)	ASTM D1693	Hrs	>1000

* Typical values not to be taken as specification

**Mechanical Properties are on Compression Moulding

Applications

- Pipes for drinking water, drip irrigation and sprinkler systems
- Pipes for industrial effluent
- Pesticide bottles

Typical Process Conditions:

- Typical Process Temp (°C) - 180 – 220

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 IS 16738:2018 "Positive List of Constituents for Polypropylene, Polyethylene and their Copolymers for its Safe Use in Contact with Foodstuffs and Pharmaceuticals"
- The grade and the additives incorporated in it also comply with the FDA: CFR Title 21,177.1520, Olefin polymers.
- The level of antioxidant in 46GP009 is not more than 0.3% by mass of the resin.