

Technical Datasheet

D0120L Polysure LLDPE

Drip Lateral Pipe

Product Characteristics:

Polysure D0120L is a 1-butene comonomer based Linear Low-Density Polyethylene, produced by Gas Phase – UNIPOL™ PE technology and primarily suitable for Pipe Extrusion & Injection Molding Processes. This grade offers smooth processability, good flexibility, smooth surface. D0120L meets the requirements of material as per IS 12786: 2024 on 'Irrigation Equipment-Polyethylene pipes for irrigation laterals specification'. Pipes when produced with D0120L and optimum dosage of carbon black as specified in clause 4.1 of IS 12786, will meet the hydrostatic strength requirement of PE 25 class of pipe.

Recommended Applications:

Drip Lateral Pipes, Drip Irrigation Emitting Pipes and Plain Laterals, Lapeta Pipes, Blending for Injection Molding components.

Typical Properties:

Sr. No.	Property	Test Method	Unit	Value*
1	Melt Flow Index (190°C & 2.16 kg)	ASTM D1238	g/10 min	1.0
2	Density (23°C)	ASTM D1505	g/cc	0.920
3	Tensile Strength at Yield, Type IV Specimen	ASTM D638 (50 mm / min)	MPa	12
4	Tensile Strength at Break, Type IV Specimen		MPa	25
5	Tensile Elongation at Break, Type IV Specimen		%	1100
6	Notched Izod Impact Strength (23°C)	ASTM D256A	J/m	500
7	ESCR (F50), 10% Igepal	ASTM D1693B	Hour	>1000
8	Oxidative Induction Time (OIT)	ASTM D3895	Min	>30

*All the mechanical properties are tested on compression molded Test Specimen, prepared in accordance with ASTM D4703

Processing Guidelines:

- Processing Temperature : 180 - 240°C

Storage & Handling:

Bags should be stored in dry & dust free environment at temperature below 50°C and Prevent from direct exposure to sunlight & heat to avoid quality deterioration.

This grade meets the requirements of IS 7328:2020 - Specification for Polyethylene Material for Moulding and Extrusion.

Regulatory Requirements:

D0120L to be manufactured complying the requirements specified in IS 10146 on "Specification for Polyethylene for its safe in contact with Foodstuff, Pharmaceutical & Drinking water". Furthermore, the Additives added in this grade formulation compiles to the "Positive list of constituents for Polypropylene, Polyethylene and their Copolymers for its safe use in contact with Foodstuffs & Pharmaceuticals' as laid down under IS 16738:2018. In general, the additives & constituents used in the grade are in line with requirement laid down under FDA: CFR Title 21,177.1520, Olefin Polymers.

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