Technical Datasheet

B0053D Polysure HDPE — Large Blow Molding

Product Characteristics:
Polysure B0053D is a 1-Hexene co-monomer based high molecular weight High Density Polyethylene, produced by Advanced Dual Loop Slurry MarTECH™ technology, suitable for Blow Molding process. B0053D offers a unique combination of excellent processability, high melt strength, good die swell and low parison sagging. Containers made from B0053D has high ESCR properties along with superior stackability, impact and chemical resistance.

Recommended Applications:
Large Blow Molded products including 240 liters L-Ring drums, Open top drums, Industrial tanks

Typical Properties:

Sr. No.	Property	Test Method	Unit	Value*
1	Melt Flow Index (190°C & 5 kg)	ASTM D1238	g/10 min	0.08
2	Melt Flow Index (190°C & 21.6 kg)		g/10 min	2.5
3	Density (23°C)	ASTM D1505	g/cc	0.953
4	Tensile Strength at Yield, Type IV Specimen	ASTM D638 (50 mm / min)	MPa	27
5	Tensile Elongation at Break, Type IV Specimen		%	1000
6	Flexural Modulus (2% Secant)	ASTM D790B	MPa	1050
7	Notched Izod Impact Strength (23°C)	ASTM D256A	J/m	750
8	Vicat Softening Point (10N)	ASTM D1525	°C	127
9	Heat Deflection Temperature (0.455 MPa)	ASTM D648	°C	70
10	Hardness	ASTM D2240	Shore D	64
11	ESCR (F50), 10% Igepal	ASTM D1693B	Hour	250

** All the mechanical properties are determined on Compression Molded Test Specimen, prepared in accordance with ASTM D4703*

Processing Guidelines:
- Barrel Temperature : 180 - 210°C
- Die Temperature : 160 - 200°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:
B0053D 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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