Provisional Technical Datasheet

M2050S Polysure HDPE — Injection Molding

Product Characteristics:
Polysure M2050S is 1-butene comonomer based High Density Polyethylene, produced by Gas Phase – UNIPOL™ PE technology, suitable for Injection Molding process. M2050S resin offers smooth processing with low cycle time, low warpage, superior aesthetics and excellent stiffness with excellent dimensional stability.

Recommended Applications:
Houseware items, Food Containers, TWIM

Typical Properties:

Sr. No.	Property	Test Method	Unit	Value*
1	Melt Flow Index (190°C & 2.16 kg)	ASTM D1238	g/10 min	20
2	Density (23°C)	ASTM D1505	g/cc	0.950
3	Tensile Strength at Yield, Type IV Specimen	ASTM D638 (50 mm / min)	MPa	22
4	Tensile Elongation at Break, Type IV Specimen		%	300
5	Flexural Modulus (1% Secant)	ASTM D790A	MPa	900
6	Notched Izod Impact Strength (23°C)	ASTM D256A	J/m	30
7	Vicat Softening Point (10N)	ASTM D1525	°C	126
8	Heat Deflection Temperature (0.455 MPa)	ASTM D648	°C	78

**All the mechanical properties are tested on injection molded Test Specimen, prepared in accordance with ASTM D4101*

Processing Guidelines:

- Barrel Temperature : 190 - 220°C
- Mold Temperature : 20 - 30°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.

Regulatory Requirements:
M2050S 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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