

Provisional Technical Datasheet

M50NR1 Polysure PP Homopolymer

Injection Molding

Product Characteristics:

Polysure M50NR1 is a Polypropylene Homopolymer, produced by latest Spheripol – II Technology & primarily suitable for Injection Molding & Compounding Processes. M50NR1 is a nucleated grade, and it offers superior flow properties, higher stiffness, lower warpage, excellent product aesthetics and lower cycle time for reduced specific energy consumption to enhance sustainability.

Recommended Applications:

Thin Wall Injection Molded Containers, Consumer Products, Masterbatches & Compounding Applications

Typical Properties:

Sr. No.	Property	Test Method	Unit	Value*
1	Melt Flow Index (230°C & 2.16 kg)	ASTM D1238	g/10 min	50
2	Tensile Strength at Yield, Type I Specimen	ASTM D638 (50 mm / min)	MPa	32
3	Tensile Elongation at Yield, Type I Specimen		%	10
4	Flexural Modulus (2% Secant)	ASTM D790A	MPa	1500
5	Notched Izod Impact Strength (23°C)	ASTM D256A	J/m	25
6	Vicat Softening Point (10 N)	ASTM D1525	°C	150
7	Heat Deflection Temperature (0.455 MPa)	ASTM D648	°C	105

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

Processing Guidelines:

- Barrel Temperature : 180 - 230°C
- Mold Temperature : 30 - 40°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 10951:2020 - Specification for Polypropylene Material for Moulding and Extrusion.

Regulatory Requirements:

M50NR1 to be manufactured complying the requirements specified in IS 10910 on "Specification for Polypropylene & its Copolymers for safe use 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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HPCL-Mittal Energy Limited (HMEL), The Rise, Plot No.17B & 17C, Block – FC, Sector-16A, Noida – 201301 (U.P), India. Tel: 0120-4634500. Corporate Site: www.hmel.in