

HMRO40

Polypropylene homopolymer



Sasol Polymers Polyolefins Business

Sasol Polymers PP: HMRO40

MFR: 8.5g/10min

Features

- Medium flow
- High crystallinity
- Suitable as a replacement for mineral filled PP grades in injection moulding applications where high stiffness is a requirement
- Contains a nucleating agent which ensures rapid crystallisation, resulting in an improved impact to stiffness balance as well as shorter cooling times

Applications

Injection moulding

- Outdoor furniture
- Caps and closures
- Household and domestic articles
- Cosmetic and toiletry components

Additives

- General purpose
- Nucleation

Material properties (typical values not to be construed as specifications)

	Value	Unit	Test method
Rheological properties			
Melt mass-flow rate - MFR (230/2.16)	8.5	g/10min	ISO 1133
Moulding Shrinkage - S_{Mp} / S_{Mn}	1.4 / 1.4	%	ISO 294-4
Mechanical properties			
Flexural modulus	1950	MPa	ISO 178
Tensile modulus of elasticity	2000	MPa	ISO 527-2/1A/1
Tensile stress at yield	38	MPa	ISO 527-2/1A/50
Tensile strain at yield	6.5	%	ISO 527-2/1A/50
Tensile strain at break	>50	%	ISO 527-2/1A/50
Charpy notched impact strength (23°C)	3.0	kJ/m ²	ISO 179-1/1eA
Ball indentation hardness - HB	85	N/mm ²	ISO 2039-1
Thermal properties			
Melting temperature - DSC	165	°C	ISO 11357-3
Heat deflection temperature - HDT/A (1.8 MPa)	55	°C	ISO 75-2
Heat deflection temperature - HDT/B (0.45 MPa)	102	°C	ISO 75-2
Vicat softening temperature - VST/A 120 (10N)	158	°C	ISO 306
Vicat softening temperature - VST/B 120 (50N)	100	°C	ISO 306
Other properties			
Density	0.907	g/cm ³	ISO 1183-1



Product data sheet - HMR040

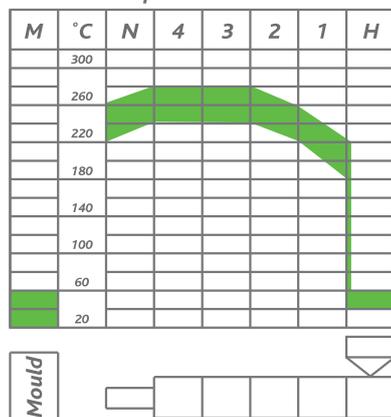
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Typical processing conditions

Injection moulding

Melt temperature 220 - 280°C



Packaging

Sasol Polymers polyolefin resins are supplied in pellet form packed in 25kg bags. Alternative packaging modes for polypropylene resins are available for selected grades.

Handling

Workers should be protected from the possibility of skin or eye contact with molten polymer. Safety glasses and heat resistant gloves are suggested as a minimal precaution to prevent possible mechanical or thermal injuries to the eyes and skin. Fabrication areas should be ventilated to carry away fumes or vapours.

Conveying equipment should be designed to prevent accumulation of fines or dust particles that are contained in all polyolefin resins. These fines and dust particles can, under certain conditions, pose an explosion hazard. Sasol Polymers recommend the conveying system used:

- be equipped with adequate filters
- is operated and maintained in such a manner to ensure no leaks develop
- that adequate grounding exists at all times

Sasol Polymers further recommend that good housekeeping be practised throughout the manufacturing facility. Polymer pellets may pose a slippage hazard if spilled.

Storage

As ultraviolet light may cause a change in the material properties, all polyolefin resins should be protected from direct sunlight during storage. Under cool, dry, dark conditions Sasol Polymers polyolefin resins are expected to maintain their original material and processing properties for at least 18 months.

