Product data sheet

HM440

Linear Low Density Polyethylene for injection moulding and masterbatch

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reaching new frontiers

Sasol Polymers
Polyolefins Business

Sasol Polymers LLDPE: HM440 Density: 0.924 g/cm³ Melt index: 20g/10min

Features

- High gloss
- Excellent low temperature resistance
- Excellent melt flow
- Hexene copolymer

Applications

- Containers
- Lids
- Base polymer for masterbatch

Additives

- Antioxidant

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

	Value	Unit	Test method	Based on
MFI (190°C/2.16kg)	20	g/10min	PTM058	ASTM D1238
Nominal density	0.924	g/cm^3	PTM002	ASTM D1505
Tensile strength at yield	15	MPa	PTM006	ASTM D638 [1]
Tensile strength at break	18	MPa	PTM006	ASTM D638 [1]
Elongation at break	890	%	PTM006	ASTM D638 [1]
Flexural modulus	434	MPa	PTM008	ASTM D790
Impact energy at -40°C	20	J/mm	PTM044	ASTM D3029
ESCR F_{50}	>50	hrs	PTM001	ASTM D1693 [2]
Shore D hardness	56	Shore D	PTM087	ASTM D2240
Vicat softening temperature	97	°C	PTM086	ASTM D1525

1) Crosshead speed 50mm/min
2) 100% Igepal CO630

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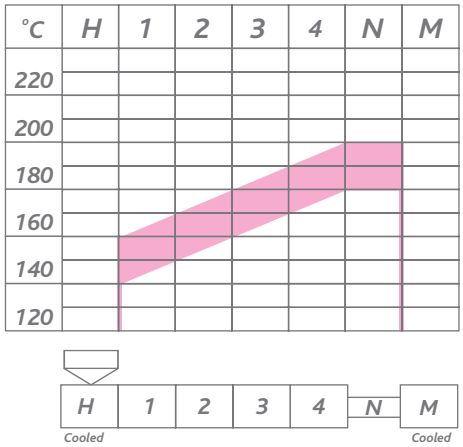
Typical processing conditions



Processing (Injection moulding)

HM440 processes over a wide range of temperatures. A typical melt temperature would be 180°C to 250°C at the nozzle. HM440 can be demoulded at fairly high temperatures due to it's high melting point. Hence cycle times can be reduced as well.

Processing (Masterbatch)

HM440 processes over a wide range of temperatures. A typical melt temperature would be 180°C to 250°C. HM440 can be used for various pigment concentrations due to it's high flow properties.

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.