

LLDPE - Product Data Sheet

LM 3076P

LLDPE

SASOL
reaching new frontiers



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Information

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Sasol Polymers
Polythene Business

Rotational moulding - injection moulding

Melt index: 5 Density: 0.934

Features

Medium rigidity
Excellent ESCR
Excellent low temperature resistance
Heat & UV resistant
Butene copolymer

Additives

Antioxidants
UV stabiliser
Internal mould release

Applications

Small parts for rotomoulding
Large parts for injection moulding
Thick walled parts
Outdoor articles

Performance properties - LM 3076P

Test	Value	Unit	Test method
MFI (190°C/2.16kg)	5	g/10min	ASTM D1238
Nominal density	0.934	g/cm ³	ASTM D1505
Tensile strength at yield	16	MPa	ASTM D638 ¹⁾
Elongation at break	1021	%	ASTM D638 ¹⁾
Impact energy at -40°C	30	J/mm	ASTM D3029 ³⁾
ESCR F ₅₀	> 1000	hr	ASTM D1693 ²⁾
Tensile strength at break	19	MPa	ASTM D638 ¹⁾
Flexural modulus	600	MPa	ASTM D790
Shore D hardness	56	Shore D	ASTM D2240
Vicat softening temperature	112	°C	ASTM D1525

¹⁾ Crosshead speed 50mm/min

²⁾ 100% Igepal C0630

³⁾ Tested on rotomoulded product

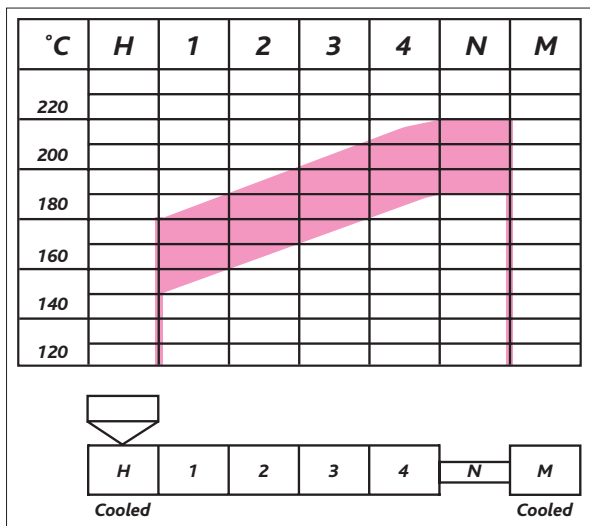


Processing (Rotational Moulding)

An air temperature of 270°C to 300°C is recommended for processing of LM 3076P. Temperatures above 300°C should be avoided as this would narrow the processing window considerably and could result in poor physical properties.

Processing (Injection Moulding)

LM 3076P has a medium melt viscosity making it unsuitable for moulds with long flow paths. Typical melt temperatures would be 200°C to 280°C. Parts can be demoulded at relatively high temperatures due to the materials high melting point.



Presentation

Supplied in pellet form packed in 25kg bags. Grinding of pellets is required to make it suitable for rotomoulding.

Food Packaging

This material complies with F&DA regulation 177.1520 when used unmodified and according to good manufacturing practices for food contact applications. Accordingly, this material may be used in all food contact applications (except holding food during cooking).

Conveying

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

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

We further recommend good housekeeping be practised throughout the facility.

Storage

As ultraviolet light may cause a change in the material, all resins should be protected from direct sunlight during storage.

Handling

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

Combustibility

Polyethylene resins will burn when supplied with adequate heat and oxygen. They should be handled and stored away from contact with direct flames and/or other ignition sources. In burning, polyethylene resins contribute high heat and may generate a dense black smoke. Fires can be extinguished by conventional means, with water and water mist preferred. In enclosed areas, fire fighters should be provided with self-contained breathing apparatus.