

LT079

Low Density Polyethylene for film extrusion

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Sasol Polymers Polyolefins Business

Sasol Polymers LDPE: LT079

Density: 0.922 g/cm³

MFI: 0.75 g/10min

Features

- Tubular resin
- Good mechanical properties
- Good optical properties

Applications

- Light duty shrink film (50µm to 80µm)
- Lamination film

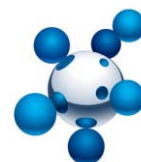
Additives

- Antioxidant
- Medium antiblock

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

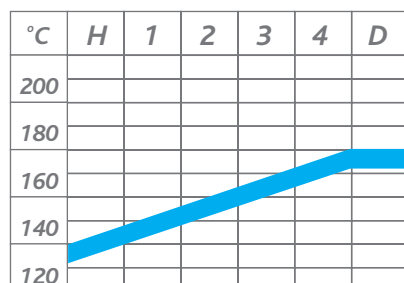
	Value	Unit	Test method	Based on
MFI (190°C/2.16kg)	0.75	g/10 min	PTM 058	ASTM D1238
Nominal density	0.922	g/cm ³	PTM 002	ASTM D1505
Tensile strength at yield	10	MPa	PTM 006	ASTM D882
	10	MPa	PTM 006	ASTM D882
Tensile strength at break	22	MPa	PTM 006	ASTM D882
	20	MPa	PTM 006	ASTM D882
Elongation	430	%	PTM 006	ASTM D882
	570	%	PTM 006	ASTM D882
Elmendorf tear	5	g/µm	PTM 009	ASTM D1922
	5	g/µm	PTM 009	ASTM D1922
Impact strength	120	F _{50g}	PTM 066	ASTM D1709
Haze	7.5	%	PTM 065	ASTM D1003
Gloss	60	units	PTM 064	ASTM D2457
Clarity	40	units	PTM 071	ASTM D1746
Coefficient of friction	0.42	units	PTM 026	ASTM D1894
	0.41	units	PTM 026	ASTM D1894
Blocking	<25	g	PTM 034	ASTM D3354

The above values were measured on 50µm film produced on a 65mm Macchi extruder with Macchi LDPE screw and a 250mm die, using 208°C melt temperature, 610mm FLH, 2.5:1 blow ratio and a die gap of 0.8mm.



Typical processing conditions

Film Extrusion



Optimum melt temperature: 190°C - 210°C. Should be processed on a conventional LDPE extruder, but can be processed on a LLDPE extruder (wide die gap) with drawdown limitations, inferior mechanical and film shrinkage properties. Recommended screen pack: 60/100/60 BS mesh.



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.