

LDPE - Preliminary Product Data Sheet

SASOL
reaching new frontiers



LT033

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Information

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Sasol Polymers
Polythene Business

Film

Melt Index: 0.33

Density: 0.921

Features

Tubular resin
Good mechanical properties
High impact strength
High tear strength
Wide processing range

Additives

Antioxidant

Applications

Heavy duty sacks
Agricultural film
Thick film
Heavy duty shrink film

Performance properties - LT033

Test	Value	Unit	Test method	Based on
MFI (190°C/2.16kg)	0.33	g/10min	PTM 058	ASTM D1238
Nominal density	0.921	g/cm ³	PTM 002	ASTM D1505
Tensile strength at yield	MD 11	MPa	PTM 006	ASTM D882
	TD 11	MPa	PTM 006	ASTM D882
Tensile strength at break	MD 26	MPa	PTM 006	ASTM D882
	TD 25	MPa	PTM 006	ASTM D882
Elongation	MD 402	%	PTM 006	ASTM D882
	TD 541	%	PTM 006	ASTM D882
Elmendorf tear	MD 1.3	g/μm	PTM 009	ASTM D1922
	TD 4.0	g/μm	PTM 009	ASTM D1922
Impact strength	242	F50g	PTM 066	ASTM D1709

The above values were measured on 100μm film produced on a 75mm Barmag extruder with a GPDP screw and a 250mm die, using 197°C melt temperature, 770mm FLH and 2:1 blow ratio.

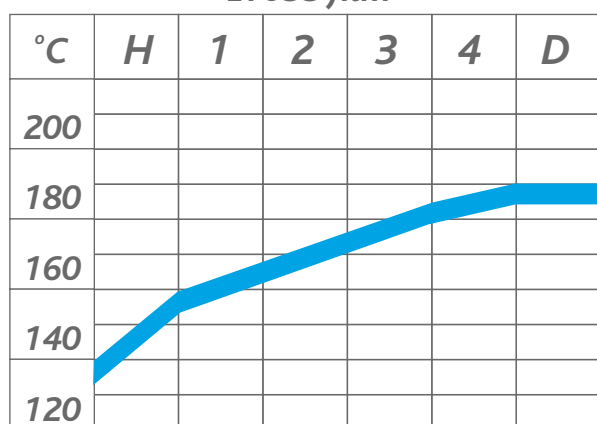
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Processing

Optimum melt temperature: 190°C. Should be processed on a conventional LDPE extruder, but can be processed on a LLDPE extruder (wide die gap) with drawdown limitations. The optimum blow ratio is 2:1. However excellent properties are obtained at a blow ratio of 1.4:1 (for > 100µm thick film). Recommended screen pack: 60/100/60 BS mesh.

LT033 film



Presentation

Supplied in pellet form in 25kg bags.

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 foods 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 that 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 that 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 protection 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 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.