PRODUCT DATA SHEET

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Linear Low Density Polyethylene

HF1810X

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Melt Index: 1.0 g/10min

Density: 0.918 g/cm³

Features
- LLDPE Hexene copolymer
- Outstanding mechanical properties and processability
- Good heat sealing range

Applications
- General purpose packaging
- Heavy duty bags and high speed thin films
- Blown stretch film
- Blending into LDPE

Additives
- Antioxidant
- TNPP Free

Typical properties (not to be construed as specifications)		Value (English)	Value (SI)	Method
Resin Properties	Melt Index (190°C/2.16kg)	1.0 g/10min	1.0 g/10min	ASTM D1238
	Density	0.918 g/cm³	0.918 g/cm³	ASTM D792
	Base Density(1)	0.918 g/cm³	0.918 g/cm³	Sasol Method
Film Properties	Tensile strength at yield MD	2330 psi	16.0 MPa	ASTM D882
	Tensile strength at yield TD	2240 psi	15.4MPa	ASTM D882
	Tensile strength at break MD	8800 psi	60.7 MPa	ASTM D882
	Tensile strength at break TD	6990 psi	48.2 MPa	ASTM D882
	Tensile Elongation at break MD	580 %	580 %	ASTM D882
	Tensile Elongation at break TD	800 %	800 %	ASTM D882
	1% Secant Modulus MD	38000 psi	262 MPa	ASTM D882
	1% Secant Modulus TD	37000 psi	255 MPa	ASTM D882
	Elmendorf Tear Strength MD	380 g/mil	380 g/25.4 µm	ASTM D1922
	Elmendorf Tear Strength TD	850 g/mil	850 g/25.4 µm	ASTM D1922
	Dart Drop Impact Strength (F_{50})	120 g/mil	120 g/25.4 µm	ASTM D1709A
	Haze	12%	12%	ASTM D1003
	Gloss (45°)	50%	50%	ASTM D2457

(1) Base density is calculated assuming that the product doesn't contain any antiblock additive.

The above values were measured on a 0.8 mil (20 µm) film produced on a 2.5 in (63.5 mm) blown film extruder, using 448°F (231°C) melt temperature, with a 2.5:1 BUR, a die diameter of 6 in and a die gap of 70 mil (1.8 mm).

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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. Please consult the material safety data sheet (SDS) for more detailed information.

Storage

As ultraviolet light may cause a change in the material, all resins should be protected from direct sunlight during storage. If stored in cool (<25°C), dry area with low ambient light levels, polyolefin resins are expected to maintain their original material and processing properties for at least 12 months.

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.

Conveying

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

It is further recommended that good housekeeping is practiced throughout the facility.

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