PRODUCT DATA SHEET

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Linear Low Density Polyethylene

HF1820X

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Date of issue: February 21, 2019

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Melt Index: 2.0 g/10min

Density: 0.918 g/cm³

Features
- LLDPE Hexene copolymer
- Outstanding mechanical properties and unitization holding force

Applications
- Cast stretch film for pallet unitization.
- High-end film packaging.

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)	2.0 g/10min	2.0 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	1540 psi	10.6 MPa	ASTM D882
	Tensile strength at yield TD	1640 psi	11.3 MPa	ASTM D882
	Tensile strength at break MD	8070 psi	55.7 MPa	ASTM D882
	Tensile strength at break TD	6850 psi	47.2 MPa	ASTM D882
	Tensile Elongation at break MD	480 %	480 %	ASTM D882
	Tensile Elongation at break TD	890 %	890 %	ASTM D882
	1% Secant Modulus MD	22500 psi	156 MPa	ASTM D882
	1% Secant Modulus TD	24300 psi	163 MPa	ASTM D882
	Elmendorf Tear Strength MD	280 g/mil	280 g/25.4 µm	ASTM D1922
	Elmendorf Tear Strength TD	813 g/mil	813 g/25.4 µm	ASTM D1922
	Dart Drop Impact Strength (F_{50})	165 g/mil	165 g/25.4 µm	ASTM D1709A
	Haze	2.5%	2.5%	ASTM D1003
	Gloss (45°)	95%	95%	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 cast film line at 400 lb/hr, using 525°F (274°C) melt temperature, with a die width of 36 in (914 mm), a die gap of 25 mil (0.65 mm) and an air gap of 3 in (76 mm).

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Processing

HF1820X is formulated for cast monolayer and coextruded film, and has good thermal stability at elevated temperatures.

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 polypropylene 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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