ExxonMobil Chemical

ExxonMobil™ LLDPE

LL 1002 series

Linear Low Density Polyethylene for blown and cast film applications

Key features

LL 1002 series are LLDPE grades, offering high gloss and excellent draw down in both blown and cast film applications.

They may also be used as a blend partner with LDPE resins to improve film properties and processability.

Several additive packages are available according to the required surface properties.

They are typically used in stretch film, produce bags, refuse bags and cast film applications.

Recommended film extrusion conditions

Blown film :

- Melt temperature : 180 - 220 °C
- High blow-up ratio

Cast film :

- Melt temperature : 250 - 290 °C

For extrusion of 100 % LLDPE or LL-rich blends on unmodified LDPE equipment or through narrow die gaps (<1.2 mm), it is advisable to add PPA masterbatch to prevent melt fracture.

Additive packages

	Antiblock (ppm)	Slip (ppm)	Thermal Stabilizer (non-BHT)
LL 1002 YB	-	-	++ (**)
LL 1002 KW	3500	1500 (*)	+
LL 1002 KZ	3500	1000 (*)	+

(*) Erucamide (**) High stabilizer level for cast film

Typical values

General properties		Test Method (based on ASTM)	Unit	Typical Value
Melt index		D 1238	g/10 min	2
Density		D 1928 / 4883	g/cm^3	0.918
Melting point (DSC)		D 3418	°C	122
Crystallization point (DSC)		D 3418	°C	107
Film properties				
Tensile strength at break	MD / TD	D 882	MPa	37 / 25
Elongation at break	MD / TD	D 882	%	600 / 720
1 % Secant Modulus	MD / TD	D 882	MPa	210 / 240
Haze		D 1003	%	11
Gloss (60° angle)		D 2457	%	10
Clarity		D 1746	%	50
Dart drop impact (A/Face)		D 1709	g/µm	2
Elmendorf tear strength	MD / TD	D 1922	g/µm	4 / 16

The film properties have been measured on 30 µm thick films of LL 1002 KW (Blow-up ratio : 2.5)

EUROPE May 2001 VP088 1.1