

AMIR KABIR PETROCHEMICAL COMPANY

LLDPE LL0209 KJ or SR

Linear Low Density Polyethylene

A M I R K A B I R P E T R O C H E M I C A L C O M P A N Y

1 Product Description:

"LL 0209KJ" is a LLDPE copolymer with butene as comonomer which contains antioxidant, Slip and antiblock additives. It gives film of high slip which is easily separable.

It is recommended for general purpose applications. It is suitable for blending with conventional LDPE. Film made from pure LL 0209 KJ has the following advantages over conventional LDPE:

Easier sealing.

Greater drawdown capability.

Higher tensile strength.

Higher puncture resistance.

2 Applications:

- Food Grade
- refuse sacks.
- produce bags, carrier bags.

High Slip/Antiblock Grade



LLDPE

Additive	Silica	Talc
Neutralizer	Calcium Stearate	Calcium Stearate
Antioxidant	Irganox1010 , Irgafos168	Irganox1010 , Irgafos168
Antiblock	Siloblock47	Talc ABT 250
Slip	Erucamide	Erucamide

No.	Property	Value	Unit	Test Method
1 ►	MFR (190°C/2.16kg)	0.9	g/10min	ISO 1133
2 ►	Density	921	Kg/m ³	ISO 1183
3 ►	Tensile Strength at Yield MD/TD	10/11	MPa	ISO 527
4 ►	Tensile Strength at Break MD/TD	41/32	MPa	ISO 527
5 ►	Elongation at Break MD/TD	620/840	%	ISO 527
6 ►	Tear Strength MD/TD	145/370	g/25µ	ASTM D1922
7 ►	Dart Drop Impact	150	g	ASTM D1709

Typical properties:
these are not to be construed as specifications.

AKPC



ISO 9001:2000
Certificate No.: CH98/8032

ISO 14001:2004
Certificate No.: CH03/0112

OHSAS 18001:1999
Certificate No.: CH05/0675

Linear Low Density Polyethylene

LL0209AA / LL0209KJ

Typical properties	Test method (ASTM)	Unit	Value
Resin			
MFI@190°C, 2.16 kg	D1238	gr/10min	0.9
Density	D2839	gr/ml	0.920
Vicat Softening Point	D1525	°C	100
Film *			
Tensile Strength@Yield, MD/TD	D638	Mpa	10.5/11
Elongation@Break, MD/TD	D638	%	620/840
Tensile Strength@Break, MD/TD	D688	Mpa	41/32
Tear Strength, MD/TD	D1922	gr/25mic	145/370
Impact Strength, Dart	D1709	gr	150
Haze	D1003	%	10
Gloss (45°)	D2457	Rating	56

➤ Values shown are averages & are not to be considered as product specifications.

* 38 microns, 2:1 Blow ratio / MD=Machine Direction, TD=Transverse Direction

❖ Main application & Characteristics:

LL0209AA & **LL0209KJ** are linear low density polyethylene copolymers containing butene-1 as a co-monomer.

LL0209AA & **LL0209KJ** are suitable for general purpose films, neat or in lean blends with LDPE and other ethylene polymers. Lean blends applications include sacks of all types, FFS and agricultural films.

In lean blends they offer the following advantages:

- Greater draw down.
- Improved hot-tack and lower seal shrinkage.
- Better tear resistance.
- Higher tensile stress and elongation at break.

LL0209KJ offers high slip film with easy opening properties when used pure in thickness range 35-100 microns. Addition of other polymers, master batches and pigments or use of other thickness may alter film slip and anti-block performance.

If corona treatment is necessary, the level should normally be in the range 38-48 mN/m.

LL0209AA & **LL0209KJ** should be stored in the dry condition below the 50°C and avoided from the exposure of direct sunlight.

Recommended melt temperature for extrusion is about 180°C - 225°C.

* **LL0209AA** & **LL0209KJ** are suitable for food contact.

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LL 0209 KJ Liner Low Density polyethylene

- Product Description

- LL0209KJ are linear low density polyethylene copolymers containing butane-1 as the comonomer. In lean blends, this resin offer greater drawdown compared to LDPE neat and produced Films are tough with better tear resistance, high tensile stress and good hot-tack properties. LL0209KJ offers high slip film with easy opening properties when used pure in thickness rang 35-100µm. Addition of other polymers or use other thickness may alter film slip and anti-block performance.

- Typical data

Property	Test Method	Unit	Typical Value
Physical Properties			
MFI(190°C/ 2.16Kg)	ASTM D 1238	gr/10Min	0.9
MFI(190°C / 21.6Kg)			29.0
Density	ASTM D 1505	gr/cm ³	0.920
Optical Properties			
Haze	ASTM D 1003	%	12
Gloss(45°)	ASTM D 2457	%	50
Formulation			
Anti Oxidant			✓
Anti Block			✓
Slip Agent			✓
Mechanical Properties			
Dart Drop Impact	ASTM D 1709(A)	g	140
Tear Strength MD/TD	ASTM D 1922	gr/25µm	145/370
Tensile Strength at yield MD/TD	ASTM D 882	MPa	10/11
Tensile Strength at Break MD/TD	ASTM D 882	MPa	41/32
Elongation at Break MD/TD	ASTM D 882	%	620/840
Secant Modulus MD/TD	ASTM D 882	MPa	195/205
Puncture Resistance	BPC	N.Cm	800
Coefficient of friction	ASTM D1894		0.13
Thermal Properties			
Vicat Softening Temperature	ASTM D 1525	°C	100

* 38µ , 2.5:1 blow-up ratio, 225°C melt temperature.

The above data are typical laboratory average. They are intended to serve as guide only.