

## LLDPE FILM

### LL 0220 KJ

LL 0220 KJ\* is a LLDPE copolymer with butene as comonomer which contains antioxidant, slip and antiblock additives. This grade is suitable for the production of blown film for light duty applications with a high slip requirement.

Film made from LL 0220 KJ can be produced at higher output compared to standard 1MFR LDPE butene copolymers.

### Applications

- Light and medium duty film.
- Stretch cast film.

### Typical Properties

Property/Grade	Test Method	Unit of measurement	Value
Melt flow rate (2.16 kg)	ISO 1133	g/10 min	2
Density	ISO 1872/1	Kg/m <sup>3</sup>	920
Vicat softening T°	ISO R 306-74	C°	93
Tensile strength at yield MD/TD	ISO R 1184	MPa	10/11
Tensile strength at break MD/TD	ISO R 1184	MPa	30/25
Elongation at break MD/TD	ISO R 1184	%	650/800
Tear strength MD/TD	ASTMD 1922-67	g/25 mic	100/270
Dart impact strength	ASTMD 1709-75	g	100

Film properties were measured on 38 micron film extruded at a blow up ratio 2:1 with a melt temperature of 225° C.

\*KJ: High Slip Antiblock.





**Food Contact Plastics**  
**Certificate of Conformity with the Requirements of EU**  
**Regulation 10/2011, as amended.**

**Certificate no: 2012/4667**

**Product name:** LLDPE Resin; 'LL 0220 KJ'  
**Manufacturer:** Sidi Kerir Petrochemicals Co. "SIDPEC"  
**Address:** km 36 Alex-Cairo Desert Road, Alnahda, Alameria, Alexandria, EGYPT  
**Date of Issue:** 7 February 2012  
**Pira Ref no:** 07A12J3146/11A12J4763

Samples manufactured from the above resin have been tested for overall migration with the simulants and test conditions listed below.

Test Conditions			
Food Simulants	Duration	Temp/°C	Test
Simulant A, B and D2	10 days	40°C	TI

TI = exposure to food simulant by total immersion.

The overall migration results obtained were found to be below the overall migration limits defined in EU Regulation 10/2011.

Additionally, Pira have carried out an audit of the formulation of the above product. All monomers and additives contained in the formulation are approved for use in food contact plastics and are listed in Annex I of EU Regulation 10/2011. None of these substance(s) is/are subject to restrictions (SML, QM or QMA) under this legislation.

The formulation of the above resin contains the following multiple function additive/s;

- Calcium salt of stearic acid, PM Ref 89040, CAS 57-11-4, FCM No 106, E470
- Silicon dioxide, PM Ref 86240, CAS 7631-86-9, FCM No 504, E551

(NB Multiple function additives are defined as those which are also approved for direct addition into foods and which would therefore be subject to separate food regulations).

The above resin can therefore be used to manufacture products which meet the requirements of EU Regulation 10/2011, as currently amended, for use with all classes of foodstuff for;

- (a) any period (including periods over 6 months) at room temperature or below, and/or
- (b) periods up to 2 hours at temperatures up to 70°C, and/or
- (c) periods up to 15 minutes at temperatures up to 100°C.

The product therefore also meets the safety requirements laid out in Article III of EC Regulation 1935(2004) under the above conditions of use.

NB Users are reminded that EU Regulation 10/2011 relates to finished articles/materials manufactured from plastics. Users of the above products are responsible for ensuring that their finished products comply with the overall migration limit and any specific migration limit/s mentioned above, by conducting appropriate tests on their finished products.

**Certified by: Dr Alistair Irvine**  
**Principal Consultant, Food Packaging Safety**