



INEOS Polyolefins, your partner in metallocene film

INEOS Polyolefins is one of the leading polyolefins manufacturers in Europe, using proprietary technology licensed worldwide by INEOS Technologies. Advanced catalysts solutions, such as metallocene, are of prime importance in offering further product developments onto the marketplace.

INEOS Polyolefins operates plants across Europe for LLDPE and LDPE (Bamble in Norway, Grangemouth in Scotland, and Köln in Germany) using various production processes (gas phase and autoclave reactors) to offer a wide range of specialty and commodity film PE products.

The safety of operations is paramount to INEOS Polyolefins and the cleanness of the Gas Phase process together with proprietary metallocene catalysts which allow significant downgauging of films (and/or important energy savings) are important features of our environmental commitment.

INEOS Polyolefins is committed to developing and manufacturing product solutions required by the marketplace, enabling our customers to further develop their product offering. In this respect, the Eltex® PF product range marks an important breakthrough and is set to play a leading role in the future metallocene PE film market, both technically and commercially.

Information regarding our products is provided in this leaflet and also by having a look at our website:

www.ineospolyolefins.com



Offering much more than a product, offering you solutions!

INEOS Polyolefins



ELTEX® PF PRODUCT RANGE

The Eltex® PF product range offers the best combination of processing behaviour and mechanical strength.

Benefits from Eltex® PF:

- Lower energy consumption or higher output
- Less wear and tear on extruders
- More stable process due to better bubble stability in blown extrusion and lower neck-in during cast extrusion
- Significant downgauging potential
- No or less need for PPA
- Superior mechanical and optical properties vs. LLDPE C6 and C8
- Better processability than competitive standard metallocenes
- Better sealing and blocking performance than standard materials
- The LA & LJ versions are dedicated to lamination end-use

Further details can be obtained from INEOS Technical Service representatives.

As of today, the Eltex® PF products range consists of 9 commercially available products. This product range will be enlarged over the next few years.

Grade	MFR	Density	Additives	Typical Applications
Eltex® PF mLLDPE	190°C/2.16 kg (g/10min)	(kg/m³)		
PF6212LA	1.20	920.0		High quality lamination film
PF6212LJ	1.20	921.0	Slip/antiblock	High quality lamination film
PF6212AA	1.20	920.0		Consumer packaging; heavy duty sacks; thin film applications
PF6212KJ	1.20	921.0	Slip/antiblock	Consumer packaging; thin film applications
PF6220AA	2.00	920.0		Consumer packaging; thin film applications
PF6220KJ	2.00	921.0	Slip/antiblock	Consumer packaging; thin film applications
PF6130AA	3.50	918.0		High performance cast stretch
PF6612AA	1.20	926.0		Collation shrinkwrap ; consumer packaging
PF6612KJ	1.20	927.0	Slip/antiblock	Collation shrinkwrap ; consumer packaging



OTHER PE FILM GRADES

A. Liner Low Density Polyethylene (LLDPE)

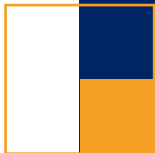
INEOS Polyolefins manufactures and sells C4 and C6 LLDPE. These materials are well established in the film market and are made using INEOS' proprietary gas phase process.

Grade	MFR	Density	Additives	Typical Applications
190°C/2.16 kg				
LLDPE	(g/10min)	(kg/m ³)		
LL0209AA	0.90	920.0		General purpose film
LL0209KJ	0.90	921.0	Slip/antiblock	General purpose film
LL2209AF	0.90	920.0	Processing aid	Sealing layers; lamination
LL0220AA	2.40	920.0		Cast handwrap; blending
LL0230AA	3.10	920.0		Cast stretchwrap
LL2640AC	4.10	930.0		Cast stretchwrap; anticling layer; bubble film
LL6208AF	0.90	920.0		Heavy duty sacks; liners; thin film applications
LL6608AF	0.90	928.0		Carrier bags; refuse sacks; liners
LL6608LJ	0.90	929.0	Slip/antiblock	Mailing film; carrier, bread and produce bags
LL8109AA	0.90	917.0		Mulch film; refuse sacks; liners; thin film applications
LL8109KJ	0.90	923.0	Slip/antiblock	Mulch film; refuse sacks; liners; thin film applications
LL6910AA	1.00	936.0		Overwrap; counter bags; shrinkfilm; boil-in-the-bag
LL6910KJ	1.00	937.0	Slip/antiblock	Overwrap; nappy bags; lamination
LL6908AA	0.85	936.0		Geomembranes
LL6120AA	2.30	920.0		Cast stretchwrap
LL6130AA	3.10	920.0		Cast stretchwrap
LL6430AA	3.20	926.0		Cast stretchwrap; anticling layer
LL6930AA	3.50	936.0		Cast stretchwrap; anticling layer

B. Low Density Polyethylene (LDPE)

INEOS Polyolefins is a key player in the LDPE European industry, manufacturing and selling a wide range of LDPE products using the autoclave process.

Grade	MFR	Density	Additives	Typical Applications
190°C/2.16 kg				
LDPE	(g/10min)	(kg/m ³)		
21D430	0.25	923.0		Heavy duty film; shrinkhoods
21H460	1.50	922.0		General purpose; shrink; foam
23H430	2.00	923.0		General purpose; shrink; foam
28H430	2.10	930.5		Nappy film; hygienic; cast
M21E760	0.50	933.0	1.7% MAA	Easy-tear applications
M21G764	0.95	926.0	1.0% MAA	FFS thin bags; blending
M21G864	0.95	926.0	1.0% MAA/slip/antiblock	Deep freeze, FFS thin bags
22D730	0.30	922.0		Blown film for extra strong bags and shrink film
22E740	0.50	922.0		Blown film for extra strong bags and shrink film
24F564	0.75	924.0	Slip/antiblock	Blown film for lamination
24F760	0.75	924.0		Blown film for lamination
22G764	1.20	922.0	antiblock	Blown film for strong bags and shrink film
22G564	1.20	922.0	Slip/antiblock	Blown film for carrier bags
22H760	2.10	922.0		Blown film for packaging
22H594	2.10	922.0	Slip/antiblock	Blown film for packaging
B24D230	0.35	924.0		EBA (8% BA) copolymer for stretch hoods
B24D760	0.30	924.0		EBA (3% BA) copolymer for elastic packaging film



Solutions to customers

INEOS Polyolefins is committed to have close and continuous collaboration with customers, machine manufacturers and brand owners.

INEOS Polyolefins has extensive research & development facilities in Brussels (Belgium) and is actively engaged in new development projects.

Contact:

Do not hesitate to contact our technical team for advices through your local contact.

You can also find additional information by having a look at our website:

www.ineospolyolefins.com

INEOS Polyolefins

Rue de Ransbeek 310

B-1120 Brussels

Belgium

Tel. +32 2 264 38 08

Fax +32 2 264 38 18

E-mail IneosPofEu@innovene.com

EXCLUSION OF LIABILITY

The information contained in this brochure, as at the date of publication, is accurate to the best knowledge and belief of INEOS Europe Ltd. and its affiliates («INEOS») and any further information or advice provided by INEOS relating to INEOS or third party materials is also given in good faith. INEOS makes no representations or warranties, express or implied, regarding the completeness, quality or accuracy of this or any other information and any decisions you make based on the information contained in this website or otherwise provided by INEOS, including as to the suitability or fitness of materials for a particular purpose, are your sole responsibility. The information contained in this website is subject to change, and your INEOS representative will be happy to help in providing you with the latest version of this information. Please otherwise note that we advise you regularly check the validity of the information you may have already downloaded from our website.

Except as required by mandatory law or as expressly provided in INEOS's standard terms and conditions of sale, INEOS accepts no liability whatsoever arising from the use of information supplied by this website or otherwise, or from the application, adaptation or processing of the products described herein, the use of other materials in lieu of INEOS materials or the use of INEOS materials in conjunction with such other materials.

Innovex, Novex, Rigidex, Eltex, Eltex P, Rigidex P, Innovene, INEOS and the breakthrough mark are all trademarks of the INEOS group, used with its permission, and are registered in a number of countries.