Eltex® PF6012KJ

Provisional Product Technical Information

Eltex® PF6012KJ is a metallocene LLDPE resin produced in Europe.

Applications

Eltex® PF6012KJ has been developed for use in highly technical film like food packaging, lamination, and other thin film applications where superior mechanical and sealing performance is required. In addition, **Eltex® PF6012KJ** offers easy extrudability and distinctive sealing properties.

Benefits and Features

Eltex® PF6012KJ is a polyethylene copolymer containing hexene-1 as the comonomer produced with a metallocene catalyst. It offers the following properties:

- Outstanding impact strength
- Low blocking for the film together with low abrasive character for the extrusion equipment
- Very low sealing initiation temperature
- Excellent Hot Tack strength, particularly advantageous for HFFS packaging lines
- Very good bubble stability and extrudability similar to best LLDPE blown film grade
- Properties ideally balanced in machine and transverse directions

Eltex® PF6012KJ is formulated with slip and antiblocking agents that offer high slip with easy opening properties. Addition of other polymers, masterbatches and pigments may alter film slip and antiblock performance.

Properties	Conditions	Test Methods	Values	Units
Rheological				
Melt Flow Rate	190°C/2.16Kg	ISO 1133-1	1.3	g/10min
Physical				
Density ISO 1872-1	23°C	ISO 1183-2	913	kg/m³
Mechanical*				
Dart drop impact Method A		ASTM D 1709	>1600	g
Tensile strength at Yield MD/TD		ISO 527-3	8 / 8	MPa
Tensile strength at break MD/TD		ISO 527-3	65 / 64	MPa
Tensile strain at break MD/TD		ISO 527-3	480 / 610	%
1% Secant modulus MD/TD		ISO 527-3	140 / 140	MPa
Elmendorf tear strength MD/TD		ASTM D 1922	180 / 360	g/25 µm
Optical*				
Haze		ASTM D 1003	4	%
Gloss	45°	ASTM D 2457	79	‰
Thermal				
Peaks melting temperature (DSC)		INEOS Test Method	97 - 114	°C
Additives				
Slip (erucamide)		INEOS Test Method	1000	ppm
Antiblock (silica)		INEOS Test Method	300	ppm
Other additives: antioxidants				

Data should not be used for specification work

* 25 µm film 2.5:1 blow-up ratio, 220°C melt temperature - MD = machine direction, TD = transverse direction

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Extrusion conditions

Eltex® PF6012KJ in lean blends can be processed on most standard extrusion equipment. Optimisation of conditions may be necessary, depending on the exact blend used.

Eltex® PF6012KJ rich film formulations are often processed on modified LDPE machinery, but for the best performance the use of purposely designed LLDPE machinery is recommended. Particular attention should be paid to maintaining a low melt temperature, and an efficient bubble cooling system should be employed. The recommended melt temperature range is 190 - 230°C.

For more details, please refer to the metallocene processing guide.

Storage

The product should be stored in a dry and dust free environment at temperature below 50°C. Exposure to direct sunlight should be avoided as this may lead to product deterioration. It is advised to process the product within maximum one year after delivery.

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