

LL3910AA

Product Technical Information

LLDPE film products

Applications

LL3910AA is particularly suitable for use in lean and rich blend blown film applications, such as overwrap, counter bags, shrink film (lean blends, 10 to 30% LLDPE) and boil-in-the-bag applications.

Benefits and Features

LL3910AA is a linear low density polyethylene copolymer containing hexene-1 as the comonomer. It offers the following properties:

- Very high stiffness and downgauging potential
- Good optical properties
- High temperature resistance
- High water vapour barrier properties
- High creep resistance
- Excellent sealability and hot-tack strength
- For shrink film, higher shrink holding force and improved burn-through resistance

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

We recommend that you consult your INEOS technical representative for further advice on the use of LL3910AA.

Properties		Test Method	Value	Units
Physical				
Melt flow rate		ISO 1133 Condition 4	1.0	g/10 min
Density				
Conditioning ISO 1872/1		ISO 1183 Method D	936	kg/m ³
Vicat softening temperature		ISO 306 Method A	121	°C
Additives: antioxidants				
Film*				
Dart drop impact		ASTM D1709 Method A	65	g
Tensile stress at yield	MD/TD	ISO 1184	18/21	MPa
Tensile stress at break	MD/TD	ISO 1184	54/36	MPa
Elongation at break	MD/TD	ISO 1184	780 / 990	%
1% Secant modulus		ISO 1184	450	MPa
Elmendorf tear strength	MD/TD	ASTM D1922	35/325	g/25 µm



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Haze	ASTM D1003	13	%
Gloss (45°)	ASTM D2457	50	%

* 38 µm film, 2:1 blow-up ratio, 225°C melt temperature
MD = machine direction TD = transverse direction

Extrusion conditions

LL3910AA in lean blends can be processed on most standard extrusion equipment. Optimisation of conditions may be necessary, depending on the exact blend used.

LL3910AA 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 180 - 230°C.

Storage

Innovex LL3910AA should be stored in a dry and dust free environment at temperatures below 50°C. Exposure to direct sunlight should be avoided, as this may lead to product deterioration.

Regulatory Information

The product and uses described herein may require global product registrations and notifications for chemical inventory listings, or for use in food contact or medical devices. For further information, send an email to psnohreg@innovene.com. Unless specifically indicated, the products mentioned herein are not suitable for applications in the medical or pharmaceutical sector.

Health and Safety Information

The product described herein may require precautions in handling. The available product health and safety information for this material is contained in the Material Safety Data Sheet (MSDS) that may be obtained from the website <http://techservice.innovene.com>. Before using any material, a customer is advised to consult the MSDS for the product under consideration for use.

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