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Refining & Chemicals
Polymers

Polyethylene Lumicene® mPE M 1820 AP

Technical data sheet
Metallocene Polyethylene BLOWN FILM
Produced in Europe

Description

Lumicene® mPE M 1820 AP is a Metallocene based Low Density Polyethylene with hexene as comonomer.

Lumicene® mPE M 1820 AP is especially dedicated to film applications where outstanding mechanical and optical properties are required. Moreover it offers excellent sealing behavior at low temperature.

Lumicene® mPE M 1820 AP can be processed at high output rates with low extrusion pressure, excellent bubble stability and gauge control in comparison with conventional LLDPE and first generation metallocene based polyethylene. Furthermore, Lumicene® mPE M 1820 AP has a very low gel level.

Lumicene® mPE M 1820 AP is suited for many applications such as :

- Food Packaging
- Lamination Film
- Blown Stretch Film
- Deep-Freeze Packaging
- FFS bags

Lumicene® mPE M 1820 AP does not contain any Polymer Processing Aid based on Perfluoroalkyl Substance (PFAS)

Characteristics

Property	Method	Unit	Typical value
Density	ISO 1183	g/cm ³	0.918
Melt Flow Rate (190°C/2.16 kg)	ISO 1133	g/10 min	2.0
Melting temperature	ISO 11357	°C	110
Vicat temperature	ISO 306	°C	102.5

Values indicated are typical for this product. Density and MFR are properties routinely measured during "the standard quality control procedure". The other figures are generated by tests not included in the "standard quality control procedure", and are given for information only.
Data are not intended for specification purposes.

Information contained in this publication is true and accurate at the time of publication and to the best of our knowledge. The nominal values stated herein are obtained using laboratory test specimens. These are typical values not to be construed as specification limits. Before using one of the products mentioned herein, customers and other users should take all care in determining the suitability of such product for the intended use. Unless specifically indicated, the products mentioned herein are not suitable for applications in the pharmaceutical or medical sector. The Companies within TotalEnergies Petrochemicals do not accept any liability whatsoever arising from the use of this information or the use, application or processing of any product described herein. No information contained in this publication can be considered as a suggestion to infringe patents. The Companies disclaim any liability that may be claimed for infringement or alleged infringement of patents.

TOTALENERGIES ONE TECH BELGIUM
Zone Industrielle C
B-7181 Feluy
Belgium

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Blown film properties

These values have been measured on a 40 µm blown film.

Property	Method	Unit	Typical value
Tensile Strength at Yield MD/TD (*)	ISO 527-3	MPa	10/10
Tensile Strength at Break MD/TD (**)	ISO 527-3	MPa	59/55
Elongation at Break MD/TD (**)	ISO 527-3	%	644/705
Elmendorf MD/TD (**)	ISO 6383-2	N/mm	114/162
Dart test	ISO 7765-1	g	> 1000
Haze	ISO 14782	%	5.2
Gloss 45°	ASTM D2457		72

(*) Figures stated hereabove are obtained using laboratory test specimens produced with the following extrusion conditions: 45 mm screw diameter, L/D = 30, die diameter = 120 mm, die gap = 1.4 mm, BUR = 2.5:1, temperature = 210°C.

(**) MD : Machine Direction, TD : Transverse Direction

Handling and storage

Please refer to the safety data sheet (SDS) for handling and storage information. It is advisable to convert the product within one year after delivery provided storage conditions are used as given in the SDS of our product. SDS may be obtained from the website: www.polymers.totalenergies.com.

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