

Technical Data Sheet

Lotrène® Q1018 Series

Linear Low Density Polyethylene (LLDPE)

Description and use:

Lotrène® Q1018 Series are Linear Low Density Polyethylene resins produced in a gas phase reactor using butene (C4) co-monomer.

They are designed for blown film applications and can be used in pure form as well as blended with other PE resins, such as LDPE or HDPE and mPE resins for mono extrusion or co-extrusion process to modify film properties.

Lotrène® Q1018 Series are suited for many applications in the field of consumer, agricultural, industrial, food or hygiene packaging, for example: collation shrink, liners, FFS bags, heavy duty sacks, refuse, tunnel films, mulching films...

Additive Package:

| Product | Slip (Erucamide) (ppm) | Antiblock (ppm) | Thermal Stabilizers |
|---------|------------------------|-----------------|---------------------|
| Q1018N | No | No | Yes |
| Q1018M | 1000 | 3200 | Yes |
| Q1018H | 1500 | 3200 | Yes |

Values indicated are target values. Actual values might differ from batch to batch.

PROPERTIES:

| POLYMER PROPERTIES | VALUE | UNIT | TEST METHOD |
|-----------------------------------|-------|-----------|--------------------|
| Density @ 23 °C * | 0.918 | g/cm3 | ASTM D-792 |
| Melt Flow Index (190 °C /2.16 kg) | 1.0 | g/10 min. | ASTM D-1238 |
| Crystalline Melting Point | 122 | °C | Internal |
| Vicat Softening Point | 100 | °C | ASTM D-1525 (A120) |

Density and MFI are routinely measured during the standard quality control procedure. Other figures are given for information only. This data is not intended for specification purposes.

* Density of base resin

| FILM PROPERTIES | | VALUE (*) | UNIT | TEST METHOD |
|--------------------------|--------|-------------------|-----------|--------------|
| Tensile Strength @ Yield | MD/ TD | 11/11 | MPa | ASTM D-882 |
| Tensile Strength @ Break | MD/ TD | 38/33 | MPa | ASTM D-882 |
| Elongation @ Break | MD/ TD | 800/850 | % | ASTM D-882 |
| Secant modulus @ 1% | MD/ TD | 215/245 | MPa | ASTM D-882 |
| Impact Strength, F 50 | | 150 | g | ASTM D-1709 |
| Tear resistance | MD/ TD | 280/480 70/120 | g N/mm | ASTM D- 1922 |
| Haze | | 11 | % | ASTM D-1003 |
| Gloss (@ 45 °) | | 60 | - | ASTM D-2457 |

(The above properties are measured on a blown film under following parameters:

Screw 45 mm, L/D 30, die gap 2.2 mm, output 30 kg/hr, mass temperature 210°C, thickness 40 µm and BUR 2.5:1

Note: The values given in this technical data sheet are the results of tests carried out in accordance with standard test procedures. They are given as indication to enable customers to make the best use of our products but must be considered as average values provided without implying any undertaking from the resin manufacturer. Actual properties might vary depending on additivation and extrusion conditions.

Processing:

Extrusion temperatures: 180-220 °C

Melt temperature 200 °C

Blow-up ratio: 2:1 to 3:1

Die gap: > 1.8 mm

Lotrène® Q1018 Series can be processed at high output rates with moderate extrusion pressure, good bubble stability and gauge control on blown film lines designed for LLDPE.

Lotrène Q1018 Series can be blended with LDPE and other PE resins in order to improve film properties or processability on conventional mono or coextrusion machines.

Handling and Storage:

Lotrène® Q1018 Series should be stored in its original Packaging or in clean appropriate silos. The product should be stored in a dry and well ventilated area.

Lotrène® Q1018 Series should not be stored for more than three months nor be exposed to direct sunlight and/or heating during storage since this may adversely affect the properties of the product.

NB: **Lotrène®** Q1018 Series are not suitable for application in the pharmaceutical or medical sector.