

# Lotrène Q2018C

LINEAR LOW DENSITY POLYETHYLENE

## Linear Low Density Polyethylene (LLDPE)

### DESCRIPTION AND USE

Lotrène® Q2018C is a Linear Low Density Polyethylene resin produced in a gas phase reactor using butene (C4) co-monomer.

Lotrène® Q2018C can be processed at optimal output rates with moderate extrusion pressure, good web stability and gauge control on cast film machines designed for LLDPE. Lotrène® Q2018C can advantageously be blended with LDPE or other PE resins used in cast film mono extrusion or co-extrusion to improve film properties.

Lotrène® Q2018C is for melt index 2.0 cast stretch film market. It is suited for many applications in the field of consumer, industrial, food or hygiene packaging as well as non-packaging applications like agricultural films e.g. mulching films.

### ADDITIVE PACKAGE

| Product | Slip (Erucamide) | Antiblock | Processing aid | Thermal Stabilizers |
|---------|------------------|-----------|----------------|---------------------|
| Q2018C  | no               | no        | no             | Yes (cast film)     |

### CHARACTERISTICS

| Property                       | Method             | Unit              | Value |
|--------------------------------|--------------------|-------------------|-------|
| Density (*)                    | ASTM D-792         | g/cm <sup>3</sup> | 0.918 |
| Melt Flow Rate (190°C/2.16 kg) | ASTM D-1238        | g/10 min          | 2.0   |
| Melting temperature            | Internal           | °C                | 121   |
| Vicat temperature              | ASTM D-1525 (A120) | °C                | 100   |

(\* density of base resin)

### CAST FILM PROPERTIES

| Properties                      | Method      | Unit | Value (*) |
|---------------------------------|-------------|------|-----------|
| Tensile Strength at Yield MD/TD | ASTM D-882  | MPa  | 9.7 / 9.6 |
| Tensile Strength at Break MD/TD | ASTM D-882  | MPa  | 37 / 23   |
| Elongation at Break MD/TD       | ASTM D-882  | %    | 330 / 670 |
| Elmendorf tear resistance MD/TD | ASTM D-1922 | N/mm | 12 / 193  |
| Secant modulus at 1% MD/TD      | ASTM D-882  | MPa  | 165 / 170 |
| Dart test, F50                  | ASTM D-1709 | g    | 35        |
| Puncture force                  | ASTM D5748  | N    | 25        |
| Puncture energy                 | ASTM D5748  | J    | 1.6       |
| Haze                            | ASTM D-1003 | %    | 1.8       |
| Gloss @ 45°                     | ASTM D2457  |      | 92        |

The above properties are measured 20 µm films produced on a cast film line under the following parameters: 30 mm screw, L/D = 30:1, die length = 600 mm, die gap = 0.8 mm, line speed = 50 m/min, temperature setting = 180-230°C. Melt temperature 250°C. Chill roll temperature: 25°C.

## Processing

Lotrène® Q2018C is typically extruded at a melt temperatures between 220 and 250°C.

Lotrène® Q2018C can be cast in the following conditions on machine designed for LLDPE:

- Extrusion temperature: 180 to 270°C
- Line speed: > 400 m/min
- Die gap: > 0.8 mm

An excellent blending ability of LOTRÈNE Q2018C with LDPE and HDPE and mLLDPE was observed.

## HANDLING & STORAGE

Polyethylene products should be stored in their original packaging or in clean appropriate silos.

The products should be stored in a dry and well-ventilated area and should not be exposed to direct sunlight and/ or heat in any form since this may adversely affect their properties.

As a general rule, our products should not be stored for more than three months from receipt date.

## SAFETY

Under normal conditions Lotrène® products do not present a toxic hazard through skin contact or inhalation.

For detailed information please refer to the Safety Data Sheet.

## FOOD CONTACT & REACH

Lotrène® polyethylene products manufactured by Qatofin Company Ltd (Qatofin) comply with US, EU and other food contact legislations. Limitations may apply.

All Qatofin Lotrène products are complying with REACH Regulation 1907/2006/EC. The aims of this regulation are to improve the protection of human health and the environment through better and earlier identification of the intrinsic properties of chemical substances.

Please contact your Muntajat representative for detailed compliance certificates.

NOT SUITABLE FOR PHARMACEUTICAL OR MEDICAL APPLICATIONS

## TECHNICAL DISCLAIMER

The values reported in this technical data sheet are the results of tests carried out in accordance with standard test procedures in a laboratory environment. Actual properties may vary depending on batch and extrusion conditions. Therefore, these values should not be used for specification purposes.

Before using this product, the user is advised and cautioned to make its own determination and assessment of the safety and suitability of the product for the specific use in question, and is further advised against relying on the information contained herein as it may relate to any specific use or application.

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