

Description

Lotrène® Q1018 H is an ethylene-butene copolymer produced in a gas phase reactor. It is designed for delivering competitive performance in most blown film applications.

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

Lotrène® Q1018 H can advantageously be blended with LDPE or other PE resins used in blown film mono extrusion or coextrusion to improve film properties.

Lotrène® Q1018 H is suited for many applications in the field of consumer, industrial, food or hygiene packaging such as collation shrink, liners, Form-Fill-Seal, heavy-duty sacks, refuse sacks or other bags and non-packaging applications like agricultural films e.g. tunnel and mulching films.

Characteristics

| Property | Method | Unit | Typical value |
|--------------------------------|--------------------|-------------------|---------------|
| Density (*) | ASTM D-792 | g/cm ³ | 0.918 |
| Melt Flow Rate (190°C/2.16 kg) | ASTM D-1238 | g/10 min | 1.0 |
| Melting temperature | Internal method | °C | 122 |
| Vicat softening point | ASTM D-1525 (A120) | °C | 100 |

(*) Density as measured on base resin.

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

Processing

Lotrène® Q1018 H is typically extruded at a melt temperature around 200°C.

Lotrène® Q1018 H can be blown in the following conditions on machine designed for LLDPE:

>> Extrusion temperature: 180 to 220°C

>> BUR: 2:1 to 3:1

>> Die gap: > 1.8 mm

It is recommended to maintain extrusion temperature below 240°C.

An excellent blending of Lotrène® Q1018 H with LDPE and HDPE and mLLDPE was observed.

Additives

Antioxidant: yes
Processing aid: no
Slip agent: 1500 ppm (Erucamide)
Antiblock agent: 3200 ppm

Blown film properties

These values have been measured on a 40 µm film.

| | Method | Unit | Typical value (*) |
|---------------------------------|------------|------|-------------------|
| Tensile Strength at Yield MD/TD | ISO 527-3 | MPa | 11/11 |
| Tensile Strength at Break MD/TD | ISO 527-3 | MPa | 38/33 |
| Elongation at Break MD/TD | ISO 527-3 | % | 800/850 |
| Elmendorf MD/TD | ISO 6382-2 | N/mm | 70/120 |
| Secant modulus at 1% MD/TD | ISO 178 | MPa | 215/245 |
| Dart test, F50 | ISO 7765-1 | g | 150 |
| Haze | ISO 14782 | % | 12 |
| Gloss 45° | ASTM D2457 | | 57 |

(*) Figures stated here above are obtained using laboratory test specimens produced with the following extrusion conditions: 45 mm screw, L/D = 30, die = 120 mm, die gap = 2.2 mm, BUR = 2.5:1, temperature = 210°C. Figures are average values generated by tests that are not included in the "standard quality control" they are not intended for specification purpose.