



versalis

Technical Data Sheet

www.versalis.eni.com

info.polyethylene@versalis.eni.com

RIBLENE®

FF 20

LDPE

Low density polyethylene

Riblene FF 20 is a high molecular weight low density polyethylene (LDPE) suitable for blown film extrusion. Riblene FF 20 is characterised by a good melt strength leading to a good bubble stability during extrusion.

Films manufactured by Riblene FF 20 are easily heat shrinkable and characterised by good mechanical properties.

Main Applications

Riblene FF 20 is recommended for the production of shrink film for medium loads, industrial packaging, mulch film and blend.

Main Properties

| Resin Properties | Value | Unit | Test Method |
|---------------------------------|-------|-------------------|-----------------|
| Melt Flow Rate (190 °C/2.16 kg) | 0.8 | g/10min | ISO 1133 |
| Melt Flow Rate (190 °C/5 kg) | - | g/10min | ISO 1133 |
| Melt Flow Rate (190 °C/21.6 kg) | - | g/10min | ISO 1133 |
| Density | 0.921 | g/cm ³ | ISO 1183 |
| Melting Point | 112 | °C | Internal method |
| Brittleness temperature | <- 75 | °C | ASTM D 746 |
| Vicat softening point (1 kg) | 91 | °C | ISO 306/A |

| Film Properties * | Value | Unit | Test Method |
|--|----------|--------|--------------|
| Tensile stress at yield MD | 10 | MPa | ISO 527-3 |
| Tensile stress at yield TD | 11 | MPa | ISO 527-3 |
| Tensile stress at break MD | 25 | MPa | ISO 527-3 |
| Tensile stress at break TD | 22 | MPa | ISO 527-3 |
| Elongation at break MD | 450 | % | ISO 527-3 |
| Elongation at break TD | 650 | % | ISO 527-3 |
| 1% Secant modulus MD | 160 | MPa | ISO 527-3 |
| 1% Secant modulus TD | 180 | MPa | ISO 527-3 |
| Elmendorf tear resistance MD | 40 | N/mm | ISO 6383-2 |
| Elmendorf tear resistance TD | 50 | N/mm | ISO 6383-2 |
| Impact resistance F50 (Dart Drop Test) | 250 | g | ISO 7765-1/A |
| Dynamic coefficient of friction (COF) | > 0.5 | - | ISO 8295 |
| Haze | 8 | % | ISO 14782 |
| Gloss, 45° | 62 | % | ASTM D 2457 |
| Recommended film thickness | 40 ÷ 150 | micron | - |

(*) Typical value for a film extruded with BUR 1:3, thickness 70 µm. Actual properties are typical and may vary depending upon operating conditions and additive package.

Processing notes

Riblene FF 20 is easily processable using blown film technology. Melt temperature should be between 170°C and 200°C. Recommended thickness: 40 - 150 µm.

Storage and Handling

Riblene FF 20 is supplied in pellet form. This material may readily be conveyed and bulk fed through equipment designed for conventional pelletised polyethylene resin, provided the equipment is designed to prevent accumulation of the fines and dust particles that are contained in all polyethylene resins. These fines and dust particles can, under certain conditions, pose an explosion hazard. We recommend that the conveying system used be equipped with filters of adequate size, operated and maintained in such a manner to ensure that no leaks develop and earthed adequately. We further recommend that good housekeeping should be practised throughout your facility.

The product should be stored in dry conditions at temperatures below 50°C and protected from sunlight. Improper storage can initiate degradation which results in odour generation, colour changes and can have negative effects on the physical properties of the product. Before using this product it is recommended to read and understand the relevant Safety Data Sheet.

Availability

Contact the versalis sales office nearest to you regarding availability and your specific application requirements.

Food Contact Status

Riblene FF 20 complies with the rules and regulations of the European Union, as well as other countries, regarding the use of plastic materials in food contact applications. Certificates of compliance are available upon request.

TECHNICAL SERVICE

versalis S.p.A.
Piazza Boldrini, 1
20097 S. Donato Milanese, Italia
Tel. +39 02 520.32087
Fax +39 02 520.52052

Versalis International SA
succursale française
Port 4531 Route des Dunes - BP
59
F-59279 Mardycq

versalis S.p.A.
Via Taliercio, 14
46100 Mantova, Italia
Tel. +39 0376 305667
Fax +39 02 52043

HEADQUARTER

versalis S.p.A.
Piazza Boldrini, 1
20097 S. Donato Milanese, Italia
Tel. +39 02 520.32087
Fax +39 02 520.52052

IMPORTANT: please consult the relevant safety data sheet for more detailed information. The information and data presented herein are to the best of our knowledge true and accurate but no warranty or guarantee, expressed or implied, is made nor is any liability accepted with respect to the use of such information and data.

versalis is available to provide the guaranteed values for each product on demand.
