



FLEXIRENE® MR 50 A BCA

LLDPE
Linear low density polyethylene bio circular attributed



SUSTAINABILITY

The product Flexirene MR 50 A BCA 'Bio Circular attributed' is a highly sustainable LLDPE produced using bionafta from renewable raw materials together with traditional raw materials. In order to attribute the sustainable feedstock component to the final product Versalis applies the Mass Balance approach, a recognized methodology that allows to trace the flow of materials along the value chain and to assign the sustainability characteristic of the raw material to the final product on a documentary basis. Flexirene MR 50 A BCA provides the same chemical composition and physical-mechanical performance of the traditional grade, in addition is accompanied by a sustainability declaration that certifies the share of bio attributed product. It is a linear low density polyethylene (LLDPE) with antioxidants, suitable for injection moulding. The production of Flexirene MR 50 A BCA allows to contribute to the circular economy, since the bionafta used derives from waste from industrial processing of organic substances (e.g. used cooking oils). Flexirene MR 50 A BCA will be bio circular attributed for 90%. The exact amount of 'bio circular attributed' product will be reported in the sustainability certificate issued upon the delivery of the product.

MAIN PROPERTIES

| Resin Properties | Value | Unit | Test method |
|---|-------|-------------------|-----------------|
| Melt Flow Rate (190 °C/2,16 kg) | 22 | 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 | 0,939 | g/cm ³ | ISO 1183 |
| Melting Point | 126 | °C | Internal Method |
| Brittleness temperature | < -70 | °C | ASTM D 746 |
| Vicat softening point (1 kg) | 113 | °C | ISO 306/A |
| Mechanical Properties * | Value | Unit | Test method |
| Tensile stress at yield | 15 | MPa | ISO 527 |
| Tensile stress at break | 15 | MPa | ISO 527 |
| Tensile strain at yield | - | % | ISO 527 |
| Elongation at break MD | > 450 | % | ISO 527 |
| Flexural modulus | 500 | MPa | ISO 178 |
| Hardness Shore D | 56 | - | ISO 868 A |
| Falling Weight | - | J | ISO 6603-2 |
| Izod impact strength, notched | - | J/m | IASTM D 256 |
| Environmental Stress Cracking Resistance (ESCR) | - | h | ASTM D 1693(B) |

(*) Values are referred to injection moulded specimens. Actual properties are typical and may vary depending upon operating conditions.





FLEXIRENE® LLDPE / Linear low density polyethylene bio circular attributed

MR 50 A BCA

MAIN APPLICATIONS

Flexirene MR 50 A BCA is recommended for the production of thin walled containers requiring high mechanical properties, lids, caps, closures, houseware and shock absorbers. Parts made by Flexirene MR 50 A BCA are characterised by optimum rigidity.

PROCESSING NOTES

Flexirene MR 50 A BA is easy to mould with the newest injection moulding machines. Results are excellent. Typical processing conditions (**):

Temperature profile of the barrel (°C): 170 - 230

Temperature of the mould (°C): 10 - 40

(*) Processing conditions are depending on several parameters: the shape of the part to be manufactured, the localisation of the injection point, the injection moulding machine and the cooling of the mould.

STORAGE AND HANDLING

Flexirene MR 50 A BCA is supplied in pellet form. This material may readily be conveyed and bulk fed through equipment designed for conventional pelletized 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 practiced 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 odor generation, color 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

Flexirene MR 50 A BCA 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 MANAGEMENT POLYETHYLENE

Center and South Europe and Americas

Versalis S.p.A.

Head Office
Piazza Boldrini, 1
20097 San Donato Milanese (MI) - Italy
tel. +39 0252032998 + 39 0252042262
tel. +39 0252042005 + 39 0252032072
+39 0252042984

Mantova
Via Taliercio 14 - 46100 Mantova (MN) - Italy
tel. +39 0376305520 / +39 0376305620

North Europe and ROW

Versalis S.p.A.

4531 Route des Dunes - CS 20060 Mardyck 59279
Dunkerque - France
tel. +33 328235516 / +33 328235512

Duesseldorfer Str. 13
65760 Eschborn - Deutschland
tel +49 15140260561

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

DISCLAIMER: it is the sole responsibility of the end-user to determine the safety, the regulatory compliance as well as the technical suitability of the product for application. The product is not intended for use in medical devices and pharmaceutical applications; Versalis declines all responsibility and cannot be held liable for use in the above-mentioned applications.