

GREENFLEX®

FL 45

EVA

Ethylene vinyl acetate copolymer

Greenflex FL 45 is an ethylene vinyl acetate copolymer (EVA) for extrusion/co-extrusion blown and cast film. Films produced with Greenflex FL 45 show a low fish eyes content, good elasticity, good optical properties, good sealability at low temperatures.

Main Application

Greenflex FL 45 is recommended for the production of co-extrusion film, lamination film, stretch film, stretch hood, barrier film for food packaging, agricultural film and for all those applications where the typical purity of film grades is required.

Main Properties

| Resin Properties | Value | Unit | Test Method |
|---------------------------------|-------|---------|-----------------|
| Melt Flow Rate (190 °C/2,16 kg) | 2,5 | g/10min | ISO 1133 |
| Vinyl acetate content | 14 | % | Internal method |
| Density | 0,935 | g/cm3 | ISO 1183 |
| Melting Point | 91 | °C | Internal method |
| Brittleness temperature | < -80 | °C | ASTM D 746 |
| Vicat softening point (1 kg) | 67 | °C | ISO 306/A |

| Film Properties * | Value | Unit | Test Method |
|--|---------|--------|--------------|
| Tensile stress at yield MD | 5,5 | MPa | ISO 527-3 |
| Tensile stress at yield TD | 5 | MPa | ISO 527-3 |
| Tensile stress at break MD | 28 | MPa | ISO 527-3 |
| Tensile stress at break TD | 26 | MPa | ISO 527-3 |
| Elongation at break MD | 500 | % | ISO 527-3 |
| Elongation at break TD | 700 | % | ISO 527-3 |
| 1% Secant modulus MD | 65 | MPa | ISO 527-3 |
| 1% Secant modulus TD | 70 | MPa | ISO 527-3 |
| Elmendorf tear resistance MD | 26 | N/mm | ISO 6383-2 |
| Elmendorf tear resistance TD | 50 | N/mm | ISO 6383-2 |
| Impact resistance F50 (Dart Drop Test) | 400 | g | ISO 7765-1/A |
| Dynamic coefficient of friction (COF) | > 0,5 | - | ISO 8295 |
| Haze | 2 | % | ISO 14782 |
| Gloss, 45° | 85 | % | ASTM D 2457 |
| Recommended film thickness | 25 ÷ 80 | micron | - |

| Mechanical Properties ** | Value | Unit | Test Method |
|--------------------------|-------|---------|-------------|
| Shore A | 92 | Shore A | ISO 868 A |
| Shore D | 40 | Shore D | ISO 868 A |

(*) Film properties are typical of a blown film extruded at 160 °C. Actual properties may vary depending upon operating conditions and additive package.

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

Processing notes

Greenflex FL 45 can be processed by conventional blown film extrusion equipments. Operation temperature from 150 °C to 170 °C is recommended. Depending on extrusion conditions, the suggested film thickness is from 25 to 80 µm.

Storage and Handling

Greenflex FL 45 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

Greenflex FL 45 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.

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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 the intended application. The product is not intended for use in medical devices and pharmaceutical applications; Versalis declines all responsibility and cannot be held liable in case of use in the above mentioned applications.