

ecovio[®] F2330

Biodegradable compound for compostable film

® = ecovio and ecoflex are registered trademarks of BASF SE.

Product Description

ecovio[®] F2330 is our new biodegradable film product partly based on renewable resources. It is basically a compound of our biodegradable, aliphatic-aromatic copolyester ecoflex[®] F and a small amount of polylactic acid (PLA). Due to its outstanding mechanical strength ecovio[®] F2330 offers a great down gauging potential needed for very thin film applications like T-shirt, organic waste and fruit & vegetable bags etc. ecovio[®] F2330 already contains slip and antiblocking agents.

Our new ecovio® F2330 exhibits the following properties:

- High melt strength
- Good thermostability up to 230 °C
- Excellent processability on conventional PE-LD blown film lines
- Good mechanical properties
- Down gauging to 10 µm possible, typical thicknesses: 12-50 µm
- Good processability on bag making equipment
- Wet strength (e. g. needed in organic waste bag applications)
- Nice white translucent color
- Excellent welding properties
- Printable in 8 colors by flexo printing

ecovio® F2330 exhibits excellent compatibility to ecoflex®, polylactic acid and other biodegradable polymers. The processing of ecovio® F2330 on extrusion lines depends on the formulation, the extrusion technology and processing conditions. Trials are always recommended to assess the quality of the final product.

According to our experience pre-drying of ecovio® F2330 is not required if the granules are taken from an unopened bag.

Certification of Compostability and Biodegradability

ecovio® F2330 is a biodegradable & compostable compound. Available certificates:

| Certification body | DIN Certco | TÜV Austria | |
|-----------------------------|------------|-----------------------|-----------------|
| Norm / Certification scheme | EN 13432 | OK Compost (EN 13432) | OK Compost Home |
| Certification Number | 7W0085 | TA8012005241 | TA8022005242 |

Food Regulatory Status

Food contact certificates for ecoflex® and ecovio® grades including information about specific limitations and details concerning the food contact status for different regions can be obtained upon request via a local BASF representative or by contacting plastics.safety@basf.com. The suitability of the article for the application concerned must be ensured in each case by the person who places any finished food contact article on the market.

Form Supplied and Storage

ecovio® F2330 is supplied as lenticular pellets in 1 t big bags. Temperatures during transportation and storage may not exceed 60 °C at any time. Storage time of unopened bags may not surpass 12 month at room temperature (23 °C).

Quality Control

ecovio® F2330 is produced as a standard material in a continuous production process according to DIN EN ISO 9001. The melt volume rate, MVR, at 190 °C, 5 kg, according to ISO 1133 has been defined as specified parameter for quality control. A certificate can be provided with each lot number upon request. The ecovio granules have to be pre-dried (6 hours at 70 °C) before MVR measurement in order to obtain accurate values. Other data given in our literature are typical values, which are not part of our product specification for ecovio® F2330.

Applications

ecovio® F2330 has been developed for the conversion to flexible films using a blown film process. In view of numerous factors influencing functionality and shelf life of ecovio® films and finished articles made thereof the production parameters have to be tested by the converters before utilization. Additionally, sufficient field tests are required to ensure the right functionality of the articles made from.

We supply technical service information concerning the blown film process with ecovio® F2330 on demand.

Typical Basic Material Properties of ecovio® F2330

*see Quality Control

| Property | Unit | Test Method | ecovio® F2330 |
|---------------------------------------|-------------------|---------------|------------------------|
| Mass Density | g/cm ³ | ISO 1183 | 1.23 - 1.27 |
| Bulk Density | kg/m ³ | DIN EN ISO 60 | 800 |
| Melt Volume Rate MVR 190 °C, 5 kg* | ml/10 min. | ISO 1133 | 8.0 - 12,0 |
| Melting Points | °C °C | DSC DSC | 110 - 120 140 - 155 |

Typical Properties* of ecovio® F2330 Blown Film, 12µm

*not to be construed as specifications

| Property | Unit | Test Method | ecovio® F2330 |
|------------------------------|------|----------------------------|---------------|
| Tensile Modulus MD/TD | MPa | ISO 527 | 150/110 |
| Tensile Strength MD/TD | MPa | ISO 527 | 30/16 |
| Ultimate Elongation MD/TD | % | ISO 527 | 250/470 |
| Dart Drop | g | ASTM D 1709-04 Method A | 155 |
| Tear Propagation | mN | DIN EN ISO 6383-2 | 120/850 |

Note

The information submitted in this document is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data do not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance for a special purposes. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed. (February 2024)