Biodegradable Polymers

Product Information

**Version 1.1**
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G-PMF/SB

# ecovio® FT2341

## Biodegradable compound for compostable film with a bio-based content of 34 %*

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**Product Description**

ecovio® FT2341 is our new biodegradable film product partly based on renewable resources. It is basically a compound of our biodegradable, aliphatic-aromatic copolyester grades ecoflex® F and ecoflex® FS and a small amount of polylactic acid (PLA). ecovio® FT2341 has a bio-based content of 34 %*. Due to its outstanding mechanical strength ecovio® FT2341 offers a great down gauging potential needed for very thin film applications like T-shirt, organic waste and fruit & vegetable bags etc. ecovio® FT2341 does not contain slip agents. ecoflex® slip masterbatches have to be used to tailor the sliding properties required for easy processing on film extrusion and film conversion equipment.

* bio-based content measured according to ASTM D6866-12 ($^{14}C$ method)

For more information please visit us at www.ecovio.com

We create chemistry

Our new ecovio® FT2341 exhibits the following key 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: 20-120 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
- Bio-based content: 34 %*

ecovio® FT2341 exhibits excellent compatibility to ecoflex®, polylactic acid and other biodegradable polymers. The processing of ecovio® FT2341 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.

ecovio® FT2341 does not contain slip agents. ecoflex® masterbatches have to be used to tailor the slip properties of the final product. Detailed information concerning our ecoflex® masterbatches will be sent on request. According to our experience pre-drying of ecovio® FT2341 is not required if the granules are taken from an unopened bag.

## Certification of Compostability and Biodegradability

ecovio® FT2341 is a biodegradable & compostable compound. Available certificates:

European standard EN 13432

European standard EN 13432

Home composting

| Certification body | DIN Certco | Vinçotte | | |
|---|---|---|---|---|
| Norm / Certification scheme | EN 13432 | OK Compost (EN 13432) | OK Compost Home | OK Biodegradable Soil |
| Certification Number | 7W0228 | O13-1267-A | O13-1268-A | O14-1417-A |

## Food Regulatory Status

ecovio® FT2341 is one of the few biodegradable plastics, which complies in its composition with the European food stuff legislation for food contact as well as with the regulations of the US food and drug administration for food packaging. A detailed food law status is given in our specific certificates which are send on request via a local BASF representative or Plastic Safety (plastics.safety@basf.com). The converter or packer has to check the suitability of the article for the application.

* bio-based content measured according to ASTM D6866-12 ($^{14}C$ method)

## Form Supplied and Storage

ecovio® FT2341 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® FT2341 is produced as a standard material in a continuous production process according to DIN EN ISO 9001:2008. 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® FT2341.

## Applications

ecovio® FT2341 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 utilisation. Additionally sufficient field tests are required to ensure the right functionality of the articles made from ecovio® FT2341.

We supply technical service information concerning the blown film process with ecovio® FT2341 on demand.

## Typical Basic Material Properties of ecovio® FT2341

*see Quality Control

| Property | Unit | Test Method | ecovio® FT2341 |
|---|---|---|---|
| Mass Density | g/cm³ | ISO 1183 | 1.33-1.35 |
| Bulk Density | kg/m³ | DIN EN ISO 60 | 800 |
| Melt Volume Rate MVR 190°C, 5 kg* | ml/10 min. | ISO 1133 | 2.5-7.5 |
| Melting Points | °C<br>°C | DSC<br>DSC | 110-120<br>140-155 |

## Typical Properties* of ecovio® FT2341 Blown Film, 25 µm

*not to be construed as specifications

| Property | Unit | Test Method | ecovio® FT2341 |
|---|---|---|---|
| Tensile Modulus | MPa | ISO 527 | 270/160 |
| Tensile Strength | MPa | ISO 527 | 24/21 |
| Ultimate Elongation | % | ISO 527 | 340/610 |
| Dart Drop | g | ASTM D 1709-04 Method A | 150 |
| Tear Propagation | mN | DIN EN ISO 6383-2 | 4900/3000 |

## 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 purpose. 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. (December 2017)

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