

ecovio[®] 40 FG2331

**Biodegradable compound for compostable film
with a bio-based content of 40 %**

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Product Description

ecovio[®] 40 FG2331 is a 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). ecovio[®] 40 FG2331 has a bio-based content of 40 %. Due to its outstanding mechanical strength ecovio[®] 40 FG2331 offers a great down gauging potential needed for very thin film applications like T-shirt, organic waste and fruit & vegetable bags etc. ecovio[®] 40 FG2331 already contains slip and antiblocking agents.

Our new ecovio® 40 FG2331 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: 12-120 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: 40 %

ecovio® 40 FG2331 exhibits excellent compatibility to ecoflex®, polylactic acid and other biodegradable polymers. The processing of ecovio® 40 FG2331 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® 40 FG2331 is not required if the granules are taken from an unopened bag.

Certification of Compostability and Biodegradability

ecovio® 40 FG2331 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	TA8012004670	TA8021903384

Certification body	ABA
Norm/Certification scheme	AS4736 Compostable
Certification Number	ABAM 10142

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® 40 FG2331 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® 40 FG2331 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® 40 FG2331.

Applications

ecovio® 40 FG2331 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® 40 FG2331.

We supply technical service information concerning the blown film process with ecovio® 40 FG2331 on demand.

Typical Basic Material Properties of ecovio® 40 FG2331

*see Quality Control

Property	Unit	Test Method	ecovio® 40 FG2331
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, 5kg*	ml/10 min.	ISO 1133	8.0 - 12.0
Melting Points	°C	DSC	110 - 120
	°C	DSC	140 - 155

Typical Properties* of ecovio® 40 FG2331 Blown Film, 12 µm

*not to be construed as specifications

Property	Unit	Test Method	ecovio® 40 FG2331
Tensile Modulus MD/TD	MPa	ISO 527	220 / 150
Tensile Strength MD/TD	MPa	ISO 527	33 / 28
Ultimate Elongation MD/TD	%	ISO 527	300 / 600
Dart Drop	g	ASTM D 1709-04 Method A	280
Tear Propagation	mN	DIN EN ISO 6383-2	150 / 500

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. (February 2024)