Biodegradable Polymers

Product Information

Version 1.0
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G-PM/PB

ecoflex® F Blend C1200

Certified compostable polyester for compostable film

Product description

ecoflex® F Blend C1200 is our biodegradable, statistical, aliphatic-aromatic copolyester based on the monomers 1.4-butanediol, adipic acid and terephthalic acid in the polymer chain. ecoflex® F Blend C1200 will biodegrade to the basic monomers 1.4-butanediol, adipic acid and terephthalic acid and eventually to carbon dioxide, water and biomass when metabolized in the soil or compost under standard conditions.

ecoflex® F Blend C1200 has properties similar to PE-LD because of its high molecular weight and its long chain branched molecular structure.

Certification of Compostability and Biodegradability

ecoflex® F Blend C1200 fulfils the requirements of the European standard DIN EN 13432, the US standard ASTM D 6400 and the Japanese GreenPla standard for compostable and biodegradable polymers. Specific certification details of this product can be obtained upon request.

Food Regulatory Status

ecoflex® Blend C1200 is one of the few compostable polymers, whose composition complies with the requirements of the Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food as well as with the requirements of the Federal Food, Drug and Cosmetic Act, 21 CFR for the use in single use polyester films, coatings, and molded articles. Specific limitations and further details concerning the food contact compliance status of this product 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

ecoflex® F Blend C1200 is supplied as lens shaped pellets in 1 t big bags or bulk containers. Temperatures during transportation and storage may not exceed 70 °C at any time. Storage time of unopened bags may not surpass 12 month at room temperature (23 °C).

Quality Control

ecoflex® F Blend C1200 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, 2.16 kg, according to ISO 1133 has been defined as specified parameter for quality control. A certificate can be provided with each lot number (10 t) upon request. In order to obtain a high accuracy for the MVR measurement the granules should be dried for 30 minutes at 70 °C using e. g. an electronic moisture analyser (e. g. Brabender Aquatrac plus). Other data given in our literature are typical values, which are not part of our product specification for ecoflex® F Blend C1200.

Applications

ecoflex® F Blend C1200 has been developed for the conversion to flexible films using a blown film or cast film process. Typical applications are packaging films, agricultural films and compost bags. In view of numerous factors influencing functionality and shelf life of ecoflex® films and finished articles made thereof these parameters have to be tested by the converters before utilisation.

We supply technical service information concerning the blown or cast film process with ecoflex® F Blend C1200 on demand.

Intellectual Property

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. Some uses of ecoflex® and product obtained by use of ecoflex® are subject of intellectual property rights. Purchase of ecoflex® does not entitle the buyer or any third to produce, offer or use any blends of ecoflex® protected under property rights and all their equivalents as listed here:

- EP-B 1656423
- EP-B 1838784
- EP-B 2707427

Typical basic material properties of ecoflex® F Blend C1200

Property	Unit	Test Method	ecoflex® F Blend C1200
Mass Density	g/cm³	ISO 1183	**1.25–1.27**
Melt Flow Rate MFR 190 °C, 2.16 kg	g/10 min	ISO 1133	**2.7 - 4.9**
Melt Volume Rate MVR 190 °C, 2.16 kg	ml/10 min	ISO 1133	**2.5 - 4.5**
Melting Point	°C	DSC	**110 - 120**
Shore D Hardness	–	ISO 868	**32**
Vicat VST A/50	°C	ISO 306	**91**

Typical properties of ecoflex® F Blend C1200 blown film, 50 µm

Property	Unit	Test Method	ecoflex® F Blend C1200
Transparency	%	ASTM D 1003	**82**
Tensile Strength	N/mm²	ISO 527	**35/44**
Ultimate Strength	N/mm²	ISO 527	**36/45**
Ultimate Elongation	%	ISO 527	**560/710**
Dart Drop	g	ASTM D 1709-04 Method B	**600**
Oxygen (23 °C, dry)	cm³/(m²·d·bar)	ASTM D 3985	**1200**
Water Vapour (23 °C, 85 % r.h.)	[g/(m²·d)]	ASTM F-1249	**135**

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. (January 2021)

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