



compostable

Certification Scheme

Products made of compostable materials
according to

EN 13432

if applicable, in connection with

ASTM D 6400,

EN 14995,

ISO 17088

ISO 18606

(January 2016)

Foreword

Since its foundation in 1993, European Bioplastics (former IBAW) has been committed to the establishment of a legal and technical framework for supporting the introduction of bio-plastics to the market. The association is owner of the Seedling mark, which is protected by trademark law. This mark is widely acknowledged and it creates confidence among consumers that a neutral and competent entity carefully inspected and evaluated test criteria. Thus, customers receive added value that they can take into consideration when making purchase decisions.

The certification scheme "Products made of compostable materials" was created and continuously refined in collaboration with DIN CERTCO and a dedicated committee of experts. It makes a distinction between the registration of materials, intermediates and additives and the certification of (end) products. It is continuously being further developed under the aegis of European Bioplastics in consensus with the stakeholders.

The Certification Scheme has been owned by European Bioplastics since 2012. The certification work is performed by both, DIN CERTCO (Germany) and Vinçotte (Belgium). Certification clients can choose either of the certification bodies for proving the conformity of products with the underlying standards. In the following, reference made to **the Certification Body** is a neutral expression for the respective certifier, chosen by a client.

Products made of compostable materials are given the right to bear the compostability mark upon fulfilling the requirements indicated under Section 4 according to the procedure described in this Certification Scheme. For materials, intermediates or additives, a notification of registration is issued if the requirements named under Section 4 are fulfilled.

In addition to the Certification Body's general terms and conditions, this Certification Scheme provides a basis for organizations who supply products made of compostable materials to label their products with the compostability mark, the so-called "Seedling". This proves that their products fulfill the requirements of EN 13432 as well as, if applicable, the additional/simultaneous requirements in EN 14995, ISO 18606, ISO 17088 and/or ASTM D 6400.

Acknowledged Certification Bodies

DIN CERTCO was founded in 1972 by DIN Deutsches Institut für Normung e.V. (German Institute for Standardization) for the awarding of the DIN marks and provides certification for products, persons, services and companies on the basis of DIN standards and similar specifications. As part of TÜV Rheinland (founded in 1872), which is one of the leading global player for testing, inspection and certification with more than 14,000 employees at about 500 locations in 61 countries, DIN CERTCO can offer this network to the benefit of their customers. Since 1997, at the early beginning of the seedling mark, DIN CERTCO has been the Certification Body for compostable Products. All certificate holders can be viewed on the daily updated homepage of DIN CERTCO (www.dincertco.de). DIN CERTCO owns an accreditation for product certifications according to DIN EN ISO/IEC 17065 from the German Accreditation Body DAkkS for the standards mentioned in this Certification Scheme.

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Vinçotte is an independent Belgian organisation that was established in 1872. Vinçotte employs worldwide (in 13 establishments on five continents) more than 2000 people including about 1600 engineers and technicians. Vinçotte has EN 45011 accreditation and is a notified body for a large variety of European Directives. During more than 15 years Vinçotte has built up expertise in the field of certification of compostable products.

Complete independence and neutrality is included in Vinçotte's mission. Vinçotte makes, with all of its expertise, the reputation of its clients to its own responsibility.

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Amendments

The following amendments have been made to the "Products made of compostable materials" Certification Scheme (April 2012):

- a) Deletion of "paraffins, paraffin waxes (natural)" from the Annex A 2.1
- b) Adjustments resulting from changes of ISO 17088 and ASTM D 6400 concerning requirements of ultimate biodegradation testing.
- c) Addition of ISO 18606 as basis for assessment
- d) Procedure and requirements for qualitative disintegration testing
- e) Addition of rules for selfadhesive labels
- f) Acceptance of OECD 301
- g) Specifications for testing of coffee pads and tea bags
- h) Acceptance of biodegradation test at 28 °C
- i) Specifications for non-wovens
- j) Editing changes

Earlier versions

"Products made of compostable materials" Certification Scheme (April 2012)

"Products made of compostable materials" Certification Scheme (2006-08)

"Products made of compostable materials" Certification Scheme (2002-08)

"Products made of compostable materials" Certification Scheme (2002-05)

"Products made of compostable materials" Certification Scheme (2001-07)

"Products made of compostable materials" Certification Scheme (1999-01)

"Products made of compostable materials" Certification Scheme (1998-04)

"Products made of compostable materials" Certification Scheme (1997-06)

Certificates and notifications of registration already in existence will remain valid and will be changed as part of the next renewal.

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- For double-sided coating, up to 25 % of the tested layer thickness of the polymer and up to 50 % of the tested layer thickness of the paper can be certified/registered without additional tests.
- For single-sided coating with 2 different polymers, up to 25 % of the tested layer thickness of each polymer and up to 50 % of the tested layer thickness of the paper can be certified/registered without additional tests.
- For double-sided coating with 2 different polymers, up to 12.5 % of the tested layer thickness of the polymer and up to 50 % of the tested layer thickness of the paper can be certified/registered without additional tests.

Recycled paper with less than 1 % additives, without pigmentation and without use of wet strengtheners

The same evaluation rules mentioned above regarding composting properties as for new paper apply.

6.2.5 Manufactured items composed of registered materials and materials indicated in Section A

If registration/certification is being requested for a manufactured item that is intended to contain the fillers and processing auxiliaries indicated in Section A, it is possible to register individual compositions within a predefined composition range. The following documents and information must be submitted along with the application form:

- a) Disclosure of the manufactured item's chemical composition (including additives at concentrations below 1 % of mass).
- b) Safety Data Sheets according to REACH for all substances being used to determine substances' suitability for composting.

If substances' harmlessness cannot be determined using the Safety Data Sheet, then it may be necessary to perform additional tests (e.g. ecotoxicity testing). This is coordinated with the Certification Body and, if applicable, with the testing laboratories or external experts.

- c) The upper limit of 49 % by mass for the proportion of inorganic material and the upper limits specified in Section A for the respective fillers or processing auxiliaries may not be exceeded in the material as a whole.
- d) Safety data sheets according to REACH are to be submitted for all materials used as specified in Section A. Chemical characterisation has to be carried out according to Section B1 on the manufactured item or alternatively on all applied substances of Annex A.
- e) Test reports on testing quantitative compostability under practice-relevant conditions (disintegration) according to Section B3.
- f) An infrared transmission spectrum in accordance with Section C.

Should various portions of the materials named in Section A be used, then the test must be performed using the largest portion being included in the application.

Provided no more than 3 % of mass consists of inorganic filling according to Section A, then the disintegration test according to Section B 3 can be omitted.

Within the separate subgroups or Sections (as per Section A), other mixtures may, under the following conditions, be registered up to the upper limit documented in the test report:

Constituents can be fully or partially replaced by others belonging to the same subgroup – up to the approved upper limit. If the total amount replaced exceeds 10 % or exceeds the registered upper limit, a qualitative disintegration test is required.

Example: If a mixture is composed of 85 % of constituent A and 15 % of CaCO₃, then:

- in case 15 % CaCO₃ is replaced by 15 % Talcum (same subgroup, exceeding 10%), qualitative disintegration testing is required,
- in case 10 % CaCO₃ is replaced by 10 % Talcum (same subgroup), no disintegration testing is required,
- in case 15 % CaCO₃ is replaced in excess by 20 % Talcum (same subgroup but exceeding the approved upper limit of CaCO₃), a qualitative disintegration test is required.

6.2.6 Manufactured items with coatings

If manufactured items are coated, then the following types must be differentiated:

6.2.6.1 Coating using substances whose biodegradation has not been proven, but which have excellent water solubility and are being used in portions less than 1 % of mass.

The following documents and information must be submitted along with the application form:

- a) Disclosure of the manufactured item's chemical composition (including additives at concentrations below 1 % of mass).
- b) Data on the coatings layer thickness.
- c) Safety Data Sheets according to REACH for all substances being used to determine substances' suitability for composting.

If substances' harmlessness cannot be determined using the Safety Data Sheet, then it may be necessary to perform additional tests (e.g. ecotoxicity testing). This is coordinated with the Certification Body and, if applicable, with the testing laboratories or external experts.

- d) An infrared transmission spectrum in accordance with Section C.

Evidence of good water solubility can be provided, for example, by the Safety Data Sheet according to REACH. Alternative evidence is possible and will be evaluated by the Certification Body.

Annex

A Fillers, Colours and Processing Auxiliaries

Materials that may be used in varying proportions up to the given upper limits as additives in manufacturing or processing of compostable materials according to Section 6.2.5.

Main Group 1: Fillers

Subgroup 1.1: Inorganic fillers and pigments - admixture up to a maximum of 49 %

- Aluminium silicates
- Ammonium carbonate
- Calcium carbonate
- Calcium chloride
- Dolomite
- Iron oxide (pigment)
- Gypsum
- Mica
- Graphite (pigment)
- Kaolin
- Chalk
- Sodium carbonate
- Natural silicates (not otherwise listed)
- Carbon black (pigment)
- Silicon dioxide; quartz
- Talc
- Titanium dioxide (pigment)
- Wollastonite

Subgroup 1.2: Section 1.2.1: Organic fillers

Section 1.2.2: Non- modified native Cellulose

- Vegetable fibres

Section 1.2.2: Non-modified native Ligno-Cellulose

- Wood flour/wood fibres
- Vegetable fibres
- Cork
- Bark

Section 1.2.3: Non-modified natural Starch

- Starch
- Rye flour and other flours

Section 1.2.4: Miscellaneous

- Starch acetate (up to a substitution level of 1.6)

Main Group 2: Processing auxiliaries

Subgroup 2.1: Processing auxiliaries - admixture up to a maximum of 10 %

- Benzoic acid/sodium benzoate
- Erucic acid amide/erucic amide
- Glycerol monostearate
- Glycerol monooleate
- Natural waxes
- Polyethylene glycol (up to molecular weight 2000)
- Metal stearates, calcium stearates

Subgroup 2.2: Processing auxiliaries - admixture up to a maximum of 49 %

- Glycerin/glycerol
- Sorbite
- Citric acid ester (with linear, aliphatic chains up to a chain length of C22)
- Glycerol acetates
- Xylite