



About the BBIA

The BBIA represents UK and non UK manufacturers, developers and distributors of products, chemicals and materials that have a common identity in their sourcing (partially or totally bio-based which means derived from plant-based, renewable sources) and in their end-of-waste performance (biodegradable or compostable in various environments which could be natural – in the case of bio lubricants, in soil in the case of soil mulch films - or in industrial composting, in the case of packaging).

The BBIA was established by seven founder members in June 2015 and in 2021 comprises 27 companies which produce: biopolymers for onward conversion into products; building blocks for the chemical industry from bio-based sources that may be used in pharma, cosmetics, paints and coatings, as well as lubricants, packaging, pesticides; members also distribute and sell products in the UK market; and include associations, consultants and the Scottish IBIOIC. BBIA members represent most of the value chain in the production, conversion and treatment of compostable packaging materials.

More details about the BBIA can be found on www.bbia.org.uk including reports and research¹ undertaken on compostable packaging, bioplastics, biodegradability and bio-based feedstocks.

BBIA and its members participate in numerous British Standards Institute groups related to current packaging and waste strategy discussions, notably:

1. Committee MI/002 Bio-based products
2. Committee SDS/003/04 Sustainable Resource Management
3. Committee PKW/000/0-/01 Packaging - Biodegradability
4. Committee PKW/0
5. Committee SCP/1/6 Chain of Custody

Furthermore, BBIA members are present on the following international standards committees:

At international level:

6. ISO TC 61 Plastics
7. ISO TC 308 Chain of Custody

At European level:

8. CEN TC 261 Packaging

¹ BBIA is also a partner in 2 EU financed research projects: under the Horizon 2020 grant for the Res Urbis project which researches into producing compostable materials using food waste as a feedstock, ending in December 2019; and in the BBI JU funding grant for Usable Packaging, a research project that began in June 2019 lasting for three years researching into producing compostable materials from industrial food waste such as from bakeries, wineries, pasta producers.

9. CEN TC 249 Plastics
10. CEN TC 411 Bio-based products

The importance of standards for packaging²

False claims for products and materials damage reputable producers, create uncertainty among consumers, and complicate end-of-life solutions. For example, a plastic bag labelled “biodegradable” but not certified to any recognised standard will not biodegrade in a known and identifiable time frame or a known and identifiable place, nullifying its claim and creating confusion for the whole supply chain, from consumer to waste management.

It is of primary importance to BBIA members that internationally recognised standards for biodegradable, compostable and bio-based plastics and packaging are applied in the UK and that UK government and organisations take a leading role in developing and promoting such standards. The enforcement of such standards through legislation and through legal recourse (the Courts, the CMA, the Advertising Standards Authority) is essential to ensure that there is certainty about the claims producers make for their products and materials.

We therefore fully support the intention of the CMA in this consultation to ensure manufacturers, suppliers, distributors and vendors understand the claims they can and cannot make about the environmental aspects of bio-based and biodegradable packaging. Those most damaged by false claims are those that have spent significant sums on production and certification of materials and products that are bio-based and biodegradable, only to see these undercut on the market by producers of uncertified materials that lead customers to believe they are similar. False and misleading claims do not just cause economic damage, they bring sectoral reputational doubt and uncertainty. This uncertainty is a snake oil market enabler without bringing any environmental benefit.

In the case of compostable materials, which are cited in the consultation document as an example of potential false claims, the only standard which is currently able to certify the compostability of a packaging product, its suitability for organic recycling and its compliance with end of waste status as a compost, is the BSEN13432:2000. Similarly, for non packaging compostable plastics as might be (for example) a product used in cosmetics, the standard is BSEN14995:2006.

No EU harmonised standards exist for “home compostable” packaging yet, although the EU is working on (BBIA is involved) a pan EU (and UK) standard for home compostable (paper or plastic) carrier bags. However, the term and marketing logo for home compostability is widely used and results from tests undertaken according TÜV Austria’s ‘OK Compost Home’ certification scheme criteria or TÜV Rheinland’s (DIN CERTCO) home compostable certification schemes aligned to the French standard NF T51-800 and the Australian standard AS 5810.

² For more on the definitions of compostability and biodegradability, see our paper published on the BBIA website at <https://bbia.org.uk/wp-content/uploads/2021/05/Biodegradable-and-Compostable-Plastics-April-2021-1.pdf>

Whilst the UK may have left the European Union, the CMA should not immediately discount the many regulations and directives which the EU has approved with the UK's consent. One such directive is 2019/904³, which defines biodegradable plastics as “a plastic capable of undergoing physical, biological decomposition, such that it ultimately decomposes into carbon dioxide (CO₂), biomass and water, and is, in accordance with European standards for packaging, recoverable through composting and anaerobic digestion”. The standards being referred to are (BS) EN13432 and (BS) EN14995.

Generic biodegradability of materials that claim biodegradability in soil also have an EU standard adopted by BSI in the UK since 2018, the BS EN17033 which specifically gives the time frame and criteria for the biodegradation of films used in agriculture as soil mulch. Under this standard the use of such films meets the end of waste criteria of fertilisers recognised within the framework of the EU Fertiliser Regulation 2019/1009. Any other claims for such materials as “biodegradable” that do not meet the criteria of this standard should be examined in great detail.

Bio-based materials

A further potential source of confusion for the consumer is the use of the term bio-based. Essentially the bio-based content of a material defines to what extent a polymer contains “new” organic carbon – renewable carbon that is actively circulating in the carbon cycle, and can be derived from plants for use in polymers. In contrast, “old” carbon is fossil carbon that has been locked up in oil and gas deposits for millions of years. High bio-based carbon content is an indication that a material does not deplete finite fossil fuels and thus offers a high level of sustainability and is a positive environmental indicator. It can be easily measured using radiocarbon dating methods⁴. Biodegradable and compostable polymers often have relatively high bio-based contents, compared with fossil-fuel derived polymers. Note, however, that some biodegradable polymers are still made using fossil fuel carbon, in part or whole. The key here is that bio-based carbon content is measurable in any material.

Similarly, it is possible that some conventional polymers, e.g. polyethylene (PE), can be derived from plants such as sugar cane. They are thus bio-based, but they are not biodegradable, and cannot be processed via composting or AD, nor are they biodegradable in the soil. Thus it is essential to understand the distinction between bio-based and biodegradable materials.

The relation between standards and marketing claims

In the case of compostable packaging, which is likely to be the instance of most interest to this consultation as it is often a directly consumer facing product, whereas soil mulch is primarily sold within a B2B marketplace, the claims made about compostable packaging need to be related to their standards and end of life:

1. Compostability – are they industrially or home compostable ?
2. Compostable – is there a collection for these products in your area ?
3. Compostable – is it likely they will be composted ?

³ <https://eur-lex.europa.eu/eli/dir/2019/904/oj>

⁴ ASTM D6866 - 21 Standard Test Methods for Determining the Bio-based Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis

4. Bio-based: how much bio-based (renewable) carbon does the product contain?

In the case of 1, compostability, the claims are relatively easy to define and monitor. The certification bodies issuing certifications for home or industrial compostability trace those on their websites. Therefore a product vendor can quickly be seen to be making a claim backed by certification. A warning: we know of cases that claims are made with logos that look exactly as if they are certified but the products lack any certification at all. The central identifying feature to help control and monitoring is the serial or registration number given by the certification authority which must be visible on the product. If it is not, this is cause for concern and should signal a potential false claim as well as misuse of logo⁵.

The certifications will establish beyond doubt the claim to a material/product being compostable. We have absolute certainty that the certification programmes, which have been in force for over 20 years, are suitable for purpose. We are certain that a compostable material will compost. Claims made to this standard (BSEN13432 or 14995) are credible when the certification comes from an accredited certifier.

2. The product is compostable, is there a collection for it that will lead to potential recycling?

Italy is the European country with by far the largest market for compostable packaging products. These are both used for (caddy liners, carrier bags) food waste collections and along with them (coffee pods, tea bags, single use catering ware and many other products). The Italian authorities responsible for the control of the market for compostable packaging in Italy, BIOREPACK⁶ and the Italian composting and biogas association, CIC⁷ publish annual data monitoring the amounts of compostable packaging effectively recycled in composting and AD plants in Italy. Currently, this figure amounts to circa 70%, one of the highest recycling rates for any packaging material in Italy. The Italian market data for 2020 show 110,000 tonnes of compostable materials put onto the Italian market compared to circa 25,000 tonnes in the UK.

Nevertheless, not all councils in Italy yet have food waste collections that accept compostable packaging. Just as there is no 100% collection for many plastics, or other commonly recycled materials (paper, glass, aluminium cans, Tetrapak cartons) so there is no 100% collection of compostable packaging. It becomes a moot point therefore : can you claim the product is compostable (or recyclable) unless there is 100% recycling?

The Italians have (in agreement with the Italian equivalent of the CMA, the AGCM⁸) created a specific messaging which is evidenced here in the logo for Italian compostable packaging:⁹



⁵ See for example

https://docs.european-bioplastics.org/2016/publications/EUBP_Guidelines_Seedling_logo.pdf.

⁶ <https://biorepack.org/>

⁷ www.compost.it

⁸ <https://www.agcm.it/>.

⁹ <http://www.compostabile.com/>

The red circle shows the product will be accepted in composting plants as the logo is issued by the composting association itself, CIC. The phrase below states “Verify with your local Council/Operator this product’s acceptance in waste collection”.

Relative to the UK, this is too early to apply because the UK has still not determined the overall framework within which compostable materials will be collected and recycled. That consultation is ongoing now and the branding and messaging will be determined as a result. Nevertheless BBIA, in cooperation with the On-Pack Recycling Label and Renewable Energy Assurance Limited Schemes, is currently working on establishing a common branding for compostable packaging and a relevant messaging that will indicate to consumers how their packaging should be handled at end of life. That is expected at the end of 2021 and indeed we welcome the input of the CMA into that programme.

Currently therefore it is clear that a vendor/producer of compostable packaging cannot add such instructions to the package- the overhaul of the waste management system will not be complete until 2024 according to DEFRA’s timetable. In the meantime a vendor/producer can simply state that the product is compostable according to the determined standard.

We know that in the UK at present trade collections for compostable materials used in (for example) locations like offices, are available in 55 of the UK’s largest cities, covering 71% of the population of the UK’s 100 largest cities. These trade waste collections cover 45.4% of all UK postcode districts, a figure growing every year, up from 2% in 2010.

Relative to compostables sold to single consumers we estimate that currently some 30%+ of all compostables put onto the UK market are effectively collected for organic recycling and we know this from measuring inputs at the larger composting and AD sites in the UK. Moreover, as one third approximately of compostables put onto the UK market today are caddy liners and carrier bags used for food waste collection it is logical that these are effectively being recycled with the food they contain. But beyond this, we know from compostables collection systems undertaken by waste collectors like Vegware, Paper Round, Keenan, Biopack, in buildings and at events that much of the compostable table ware is effectively recycled through plants like Envar, Keenan themselves, Severn Trent Green Power, along with food waste.

However, we recognise that much more has to be done and are awaiting the outcomes of the Government waste and resource consultations and new regulations to understand quite what this will mean for materials made by our members.

3. Once collected, will the material be composted effectively ?

We know from more advanced biowaste management companies like Envar, Keenan Recycling, and Severn Trent Green Power, that compostable materials are treated easily. Certain products such as coffee cups, lids and stirrers, are permitted under EA rules to be composted in garden waste composting sites whereas those that may contain food must be sent either to AD or IVC composting plants¹⁰. Altogether there are a combined 250 composting plants across the UK.

As we said above, we know that circa 30%-40% of materials are effectively entering these plants from the measurement made in the collection systems and at the plants themselves. We are at the beginning of a new industry and it will take time to raise that figure to the 70% currently achieved in Italy. How quickly this happens will depend upon Government policies being elaborated by DEFRA.

¹⁰ <https://www.gov.uk/government/publications/animal-by-product-operating-plants-approved-premises>.

4. Bio-based

A material or product may contain a percentage of renewable carbon, i.e. they are derived from biomass (plants). The claim that a material is bio-based therefore needs to be backed by certification.

In the USA there is a formal USDA “Biopreferred” certification programme available based on the ISO16620/ASTM D6866 Biocarbon test method. Products can then carry a formal logo similar to that shown here:

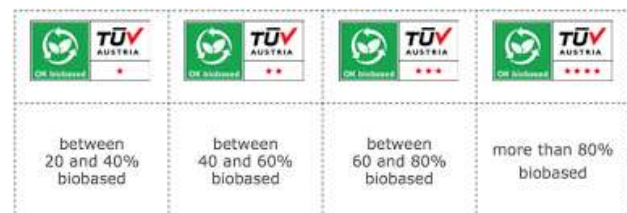


We are not aware of a formally ‘government-promoted’ identification programme yet in Europe, but would very much endorse the creation of a similar scheme in the UK (and indeed in the EU). However there are two fully independent and widely recognised certification programmes already in existence that certify based on performance to the same test methods:

DIN CERTCO Bio-based - which is administered locally in the UK by the Renewable Energy Association Ltd., (REAL Ltd) – provides a logo based choice of three levels depending on Bio-based percentage recorded for the material in question. Example:



TÜV Austria certifies to the OK Bio-based programme: This operates in a similar way to the DIN CERTCO scheme but awards a star rating according to Bio-based % achieved. Example:



A number of European Standards have been developed and adopted by BSI within the past five years which enable producers to reliably determine the bio-based content of their products. Generally speaking, there are two main standards, one EN16785 parts 1 and 2 which determine biomass content and EN 16440 which determines bio-based carbon content. Whilst it is possible to verify the results of both of these of standards independently, the simplest option is bio-based carbon content which can be assessed relatively quickly. The cost of such testing is low, and the principal laboratory used by many manufacturers is American, called Beta Analytic¹¹, where the test for bio-based carbon content costs approximately \$350 and takes a few days.

Standards exist for claims too, BS EN16484 for business to business claims and BS EN16935 for business to consumer claims. Since both of these standards relate to bio-based products, the products themselves must contain measurable bio-based content (carbon). As such, the use of terms related to allocation and attribution are not applicable to bio-based products.

We should note that a claim relative to the bio-based content is not a claim that relates to end of life of a material. A material or product may be bio-based but not compostable. An example is the “plant bottle” promoted by Coca Cola¹². Whilst made from polymers derived from sugar

¹¹ <https://www.betalabservices.com/>

¹² <https://www.coca-cola.co.uk/our-business/faqs/what-is-plantbottle>

cane the material cannot be composted. It is identical in its end of life impacts to any 100% fossil oil based plastic used for similar purposes.

Finally, damaging claims.

The association between concepts such as “biodegradable “ and “green” inevitably lead to a certain type of operator using them to promote packaging materials in the hope of gaining larger market share. The Holy Grail mission of many companies is to make plastic waste disappear and the internet is full of such claims. Generally these are claims that use additives that assist the oxidation of plastics in the open environment. This has led to an industry which is noted for being predominantly of British origin that produces additives. These may be defined as oxodegradable, oxobiodegradable, biotransformational, or prodegradant.

So-called oxo-(bio)degradable materials have muddied the waters with their claims to biodegradability. All of these materials contain transition metal or starch additives designed to destabilise the polymers and accelerate their breakdown. From a chemical viewpoint, the pro-oxidation catalysts accelerate the usual oxidation processes of the polyolefin and cause disintegration into microplastics at a faster rate. They require an extended period of exposure to UV sunlight and/or heat in the unmanaged and variable open environment, during which the PE or PP polymer breaks down via a non-biological process. Eventually, as the polymer breaks into smaller fragments, some biodegradation might begin to take place. These polymers lack intrinsic biodegradability, will not work in composting processes, could well give rise to microplastics in the environment, and raise the real issue that they may destabilise the recycling stream for conventional polymers. The European Plastic Recyclers’ Association¹³ has declared these products are not recyclable. The EU has banned such products¹⁴, and similar bans are in place worldwide in other locations. DEFRA, after Scotland and Wales, has indicated it is minded to proceed with a ban on such products.

The risk of using these materials is that they accentuate the problem of littering by using marketing claims that the plastics will disappear if littered. A UK Court has already adjudicated that claims of biodegradability made for these materials are unlikely to meet consumers’ expectations and are therefore misleading¹⁵.

In the context of packaging, we fully agree with WRAP who state “The term biodegradable is therefore best avoided as a label for plastic materials as it infers a general behaviour of the material and could mislead users to think that something will automatically biodegrade in a reasonable timeframe.¹⁶”

These claims are extremely damaging for those industries producing materials certified as compostable or as soil biodegradable according to international standards and we ask specifically that the CMA takes strong action to stamp out the generic claims made for “biodegradability” for consumer products, in particular packaging.

Ends

June 15th 2021

¹³ <https://www.sustainableplastics.com/news/recyclability-report-wrongly-claims-use-recyclable-recyclability-evaluation-protocols>

¹⁴ https://ec.europa.eu/commission/presscorner/detail/en/QANDA_21_2709

¹⁵ <https://bbia.org.uk/asa-upholds-ruling-on-ancol-pet-products-oxo-degradable-bags/>

¹⁶ <https://wrap.org.uk/sites/default/files/2020-09/WRAP-Considerations-for-compostable-plastic-packaging.pdf>

Follow up information provided by BBIA

Sent on: Sunday, June 20, 2021 10:37:34 PM

To: misleadinggreenclaims@cma.gov.uk

Subject: Re: Guidance on misleading environmental claims

dear [✂] [REDACTED],

one element we perhaps have not delved into is the legal aspects relative to the Essential Requirements of Packaging put onto the UK market which are enshrined both in EU and UK law.

See

<https://www.legislation.gov.uk/ukxi/2015/1640/contents/made>

For the part which regards us, biodegradability, it is important to note that only materials adhering to one of the three standards relative to packaging, EN13430, 13431 and 13432 can be placed onto the market. (recycling, waste to energy and composting).

The EN13432 covers the definition of biodegradability through composting.

See part 3 article 4

"4.—(1) A responsible person **must not** place any packaging on the EU market unless it complies with the essential requirements.

(2) Reused packaging is not considered to be placed on the market for the purposes of this regulation.

(3) Packaging complies with the essential requirements—

(a) if it satisfies national standards which implement the relevant harmonised standards; or

(b) where there are no relevant harmonised standards, if it satisfies national standards which have been communicated to the Commission pursuant to Article 9(3) of the Directive and which are notified by the Commission to the member States as being deemed to comply with the essential requirements.

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(4) In paragraph (3), “harmonised standard” means the standard the reference number of which is published in the Official Journal of the European Union in accordance with Article 9(2)(a) of the Directive.”

Therefore unless a packaging material is certified to one of the 3 standards, it should not be placed on the market. As there has been no monitoring of the UK market for many years, there is a proliferation of (especially) plastics that are not certified to one of the three standards. Among these are the so called biodegradable plastics we mentioned in our document sent to you, related to oxodegradable plastics. When these meet none of the EU/UK standards of the Essential Requirements they are placed upon the UK market in breach of the law.

We really hope the CMA will take some action to clean up these claims.

Sincerely,

[✂]



Follow up information provided by BBIA

Sent on: Friday, July 2, 2021 2:26:54 PM

To: misleadinggreenclaims@cma.gov.uk

Subject: Re: Guidance on misleading environmental claims

Dear [✂] [REDACTED],

one point I was asked recently and I think worth pointing out to you is the definition of "biodegradable" under EU/UK law. When it comes to packaging see

<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32019L0904&from=EN#d1e803-1-1>

Biodegradable is defined in the directive which applies also to the UK because we have transcribed it into UK law, at Article 3.16

“a plastic capable of undergoing physical, biological decomposition, such that it ultimately decomposes into carbon dioxide (CO₂), biomass and water, and is, in accordance with European standards for packaging, recoverable through composting and anaerobic digestion”.

Therefore you cannot call a plastic biodegradable unless it is under Article 3.16 and meets the EN13432 or EN14995 standards.

[✂] [REDACTED]