

Assessment of finished product: What to look out for?

The EN 13432 standard specifies that packaging may be regarded as compostable if all its constituents may be considered as such, but it is acknowledged that some components may not be compostable.

Consequently, a distinction must be made between:

- a **component**: a packaging element that may be easily separated from the rest of the packaging
- a **constituent**: a packaging element that cannot be easily separated from the rest of the packaging



1. Components

According to this approach the packaging shown in the illustration opposite may be divided into two groups of (easily separated) components:

- the outer cover
- the container

The cover is itself an assembly of various constituents:

- the film, including the seal and the printing
- the label, itself comprising paper, ink and an adhesive.

According to the thinking behind the standard, the container (= component) may therefore not be compostable. However, for the sake of consistency, we think it is better to assemble only compostable components.

The products/materials used to produce packaging plus the manufacturing procedures may therefore have an impact on the final outcome: just because each constituent or component is compliant with the standard it does not mean they are automatically compliant when assembled.

So it is up to us to check that the assembly always complies with the requirements specified in the standard.

It may be as well to recall a few basic concepts so as to spell out the thinking behind this approach.

Within the meaning of the EN 13432 standard, compostability is mainly checked in the light of 4 criteria:

- **biodegradation**: this involves degradation by the effect of specific enzymes causing the chemical structure to alter quite significantly (at the same time releasing water, CO₂, methane and heat).
90% of the material must be biodegraded after six months.
- **disintegration / fragmentation**: the physical decomposition of the material into tiny pieces.
A non-fragmented residue (larger than 2 mm) of max 10% is admissible at the end of the tests.

- **regulated elements**: a check of the quantities of heavy metals such as mercury, lead, cadmium, ... and Fluor.
- **ecotoxicity**: a check to see that plant growth is not adversely affected

Special attention should be paid to the following items when the components/constituents are being assembled.

2. Film Seal

A film is certified OK compost INDUSTRIAL ¹ for a given maximum thickness. There is no certainty that a thicker film will disintegrate within the prescribed periods.

As a seal increases the thickness of the material locally, a check should be made to ensure the excessive thickness does not compromise the conformity of the sealed film in terms of its disintegration. Documentation may be used to carry out the inspection (for example to see if the seal thickness is lower than the certified thickness). The check may also involve applying a disintegration test to the finished product.

As packaging can exist in different shapes, executions and dimensions, this involves testing the most critical model, usually the one with the highest percentage of sealed area.

3. Colouring, additives and masterbatches

Additives, colourings or masterbatches may be used provided they do not affect compliance with the standard for the finished product.

The certification process is easier when certified additives, colourings or masterbatches are incorporated: as we are familiar with all the constituents it is easier for us to check their compliance when combined.

If these constituents are not certified, they will have to undergo specific tests, which are determined on a case-by-case basis.

¹ Same approach for OK compost HOME as well

4. Inks & print

Inks may contain heavy metals whose upper levels are specified by the standard. Consequently, some inks may be used as long as they do not exceed a certain dry weight percentage (of the finished product total). The OK compost INDUSTRIAL certificate invariably specifies the levels of use for certified inks.

Non-certified inks must undergo checks for regulated elements and, depending on the used quantities, ecotoxicity and biodegradation.

Regulated elements in colourings, additives and printing inks add up.

5. Labels

The excessive thickness resulting from a label being affixed may disrupt the disintegration and biodegradation process for the film / label pairing.

Some manufacturers of certified labels have solved the problem by resorting to line gluing, so the disintegration takes place between the lines of glue, the film and the label.

Another option is to use tiny labels, so the label disintegration delay may be counted in the non-disintegrated percentage allowed for the entire packaging.

6. Combination of certified materials

Each organisation that modifies the product is liable for its intervention.

 **Just because a raw material is certified does not mean that all products made from it are automatically certified. An assessment is always necessary.**

Cutting certified products in smaller parts is not considered as an alteration of the compostability characteristics of the product.

A combination (via co-extrusion or a blend) of certified materials cannot offer any guarantee that they will disintegrate or biodegrade.

A case-by-case analysis is required, possibly involving further tests.

7. Identification : Logo & « Sxxxx » code

The OK compost INDUSTRIAL logo may be featured only when the product in question has been formally certified.



The logos featured also must include a code, followed by a number (Sxxxx). The licensee-specific code enables us to guarantee product traceability on the market.

The "Sxxxx" code used is that of the Licensee liable for the final product. The code of another Licensee may not be used (raw material / resin supplier's code, for example), as this party will not be able to manage the subsequent use (printing, sealing, gluing, ...) and may not, therefore, be held liable for any non-conformities.

8. Ecotoxic or non-biodegradable content

Certified packaging may not contain toxic products as any residues will compromise compliance with the standard.

Similarly, some absorbent products, such as sponges, wipes or towels, may be contaminated by non-biodegradable or toxic products due to their use. In these cases, a warning that the *certification does not cover the possible presence of toxic or non-biodegradable residues on this product* must be communicated to the user.