

# Preparing your beverage carton for recycling

## GRACE's guide for best practices

This document has been developed to provide best practices for GRACE partners and local carton associations about the necessary steps to be taken when preparing cartons for recycling.

These best practices draw on globally accepted principles found in the communications materials developed by existing national and regional associations representing carton packaging producers, liquid paperboard suppliers and producers of similar paper-based packaging, and aims to collate this guidance into one go-to document.

This document is intended to serve as a recommendation, and is not intended to overrule local/national guidelines in any way. It has been created to:

- Invite associations to reflect on the content of any existing guidelines and consider potential adaptations.
- Act as a basis upon which to develop suitable national guidelines, where they do not currently exist.

It is essential that any national guidelines are adequately communicated in order to avoid contradicting instructions from different carton producers or stakeholders.

## Guidelines must include the following essential elements



### 1. Emptying the cartons of any excess product

Excess residues add weight when used cartons are collected and they are undesirable in the recycling processes.

#### Recommended actions

- ✔ Consumers should remove excess product.
- ✔ Consumers should not rinse empty cartons with water unless specifically requested.



### 3. Attaching the cap or inserting the straw into the carton

Attaching the cap or inserting the straw into the carton is crucial to ensure that these components are captured within the recycling stream and avoid them becoming litter.

#### Recommended actions

- ✔ Consumers should attach the cap to, or insert the straw into, the carton before recycling.



### 2. Flattening the carton

Flattened cartons take up less room in the domestic and public recycling bins and during transportation after collection.

#### Recommended actions

- ✔ Consumers should flatten cartons – unless directed otherwise.



### 4. Placing in a recycling bin or returning to a collection point

The collection of cartons varies in each market, but consumers need to be informed of the recyclability of cartons and how/where they can be easily disposed of.

#### Recommended actions

- ✔ Consumers should be directed to check whether their cartons are collected or should be returned to dedicated depots in their area.

## The three simple stages of beverage carton recycling

This section has been developed to offer a general overview of the different stages of beverage carton recycling. Local associations should modify and tailor the documents based on the local needs and infrastructures in place. To raise public awareness regarding the recyclability of beverage cartons, it is necessary to show and explain how it is possible to recycle beverage cartons and show the potential application of the recycled materials. Therefore, it is envisioned that this information should be included in any local/national guidelines that are being, or have been, developed.

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### **1. Your cartons are collected and taken to a facility for sorting and baling**

An effective collection system is required for a well-functioning recycling system. By collecting all packaging materials separately from household waste, generally the volume of materials available for recycling is significantly increased, providing a more predictable, higher quality waste stream. This provides a strong incentive for investment and innovation in sorting and recycling technologies, which supports green economic growth.

Carton packaging is separated from other materials, either manually or mechanically and baled.



### **2. The baled cartons are mechanically deconstructed and separated, the fibres can then be used to make new products**

"Pulpers" are used in paper mills that use wastepaper as input material. It is a large tank with an agitator specifically designed for the input material: the cartons are put in, water added and stirred until the fibres detach from the films.

Some paper producers use so-called drum pulpers, which function like a large washing machine. The shredded beverage cartons are spun with water. On the inside of the drum there are shovels transporting the material upwards,

after which it falls down and increasingly shreds. The paper component slowly softens and detaches from the films. The fibre pulp is washed away through small holes in the drum wall. It is then cleaned, thickened and pumped to the paper machine, where it is mixed with other fibre streams depending on the specific recipe of the producer.

These recycled fibres are used to produce new paper products, while the remaining aluminium and polymers can be used for a variety of other new applications.



### **3. Aluminium and plastics are also recycled, where recycling capacity exists**

After the fibre has been recovered from the beverage carton in the paper mill and further processed, the plastic film (LDPE), with or without the thin aluminium coating, and the caps and closures (LDPE/HDPE/PP) remain as by-products (called PolyAl).

Recycled PolyAl can be used in various application, for example to make building materials, such as roofing and insulation panels.

## Sources

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