BEVERAGE CARTON RECYCLING IN EUROPE

THE ALLIANCE FOR BEVERAGE CARTONS AND THE ENVIRONMENT

Supporting the development of recycling solutions
Supporting packaging recovery organisations and local authorities in setting up collection schemes
Supporting promotion of beverage carton recycling among consumers

ACE members are committed to supporting and promoting beverage carton recycling across Europe. They ensure that all the materials used in their packaging are recyclable and facilitate and promote recycling by:

- Separate collection
- POLYETHYLENE LAYER
- ALUMINIUM FOIL
- POLYETHYLENE
- ADHESION LAYER
- PAPERBOARD

Separate collection is the most important prerequisite for driving beverage carton recycling.

47% of used beverage cartons in Europe are recycled.
DID YOU KNOW?
BEVERAGE CARTON FAST FACTS

ALL OF THE COMPONENTS OF THE BEVERAGE CARTON ARE FULLY RECYCLABLE

NEW VALUABLE PRODUCTS ARE MADE FROM USED BEVERAGE CARTONS

BEVERAGE CARTON RECYCLING HAS INCREASED FROM 6,000 TO 430,000 TONNES SINCE 1992

47% OF USED BEVERAGE CARTONS IN EUROPE ARE RECYCLED

SEPARATE COLLECTION IS THE MOST IMPORTANT PREREQUISITE FOR DRIVING BEVERAGE CARTON RECYCLING

POLYETHYLENE LAYER
ALUMINIUM FOIL
POLYETHYLENE ADHESION LAYER
PAPERBOARD
POLYETHYLENE LAYER

ABOUT ACE
The Alliance for Beverage Cartons and the Environment (ACE) provides a European platform for beverage carton manufacturers and their paperboard suppliers to engage stakeholders and partners seeking high environmental stewardship. It contributes expertise to EU policy, legislation, and standard-setting. Its members work together to demonstrate that beverage carton packaging is the smart environmental choice today and in the future.

ACE members are beverage carton producers Tetra Pak, SIG Combibloc and Elopak; they develop, manufacture and market systems for packaging and distributing food and produce packaging material at more than 20 plants in Europe. A great majority of the paperboard used by ACE members in beverage cartons in Europe is produced by Stora Enso in Skoghall (Sweden) and Imatra (Finland), and BillerudKorsnäs in Gävle and Frövi (Sweden). Stora Enso and BillerudKorsnäs are also members of ACE.

www.beveragecarton.eu

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The paperboard used in beverage cartons has maximum strength for the lowest possible weight and is a valuable raw material for new paper-based products. Paperboard gives stability and strength and is a renewable resource when sourced from responsibly managed forests.

Aluminium foil is thinner than a human hair and provides a barrier from oxygen, flavours and light (used in longlife packs only).

Internal layer seals the liquid and acts as an adhesive to the aluminium, fibre and external layer to keep out moisture.

**BEVERAGE CARTONS ARE FULLY RECYCLABLE**

A simple, closed-loop water-based process, called re-pulping, allows the paperboard to be separated from the non-fibre layers.

**ALL THE MATERIALS USED TO MAKE BEVERAGE CARTONS ARE FULLY RECYCLABLE.**

Some recyclers turn the polymer into gas, which is used to replace fossil fuels for energy generation. Another option is to recycle the polymer (or the polymer-aluminium mix) into granulates for new plastic products, such as garden furniture.

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**RECYCLING OF PAPERBOARD**
The virgin fibres used in beverage cartons have maximum strength for the lowest possible weight and are a valuable raw material for new paper-based products when recycled. Products that utilise this recycled fibre include: cardboard boxes, packaging for consumer goods, office stationery, gypsum board, and textile and paper cores.

**RECYCLING AND RECOVERY OF POLYMER AND ALUMINIUM**
The recycling and recovery process of the non-fibre components can vary depending on country and reprocessing infrastructure. Separated aluminium is used in a number of industrial applications, replacing virgin aluminium.

**WHAT IS A BEVERAGE CARTON?**

**ABOUT 37 BILLION BEVERAGE CARTONS WERE PRODUCED FOR THE EUROPEAN MARKET IN 2016.**

Beverage cartons enable distribution of liquid food either at ambient temperatures or under refrigerated conditions. They protect freshness, flavours and nutritional qualities of drink and food products during transportation, whilst on sale and in the home.

**RECYCLING AND ENERGY RECOVERY RATE IN 2016**

- **76%** RECYCLING AND ENERGY RECOVERY RATE IN 2016
- **47%** MATERIAL RECYCLING
SEPARATE COLLECTION IS THE MOST IMPORTANT PREREQUISITE FOR DRIVING BEVERAGE CARTON RECYCLING.

In most European countries, citizens either have beverage cartons collected at their doorstep or take them to collection points nearby.

LIGHTWEIGHT PACKAGING COLLECTION
Consumers put beverage cartons with other lightweight packaging, such as plastic bottles and metal cans, for collection.

PAPER PACKAGING COLLECTION
Consumers put beverage cartons alongside other waste paper and/or paper-based packaging for collection.

SORTING
At specialised sorting plants the collected materials, including beverage cartons, are sorted before being baled and sent to dedicated paper plants in Europe for recycling into new products.

IN GENERAL THERE ARE TWO WAYS OF SEPARATE COLLECTION FOR BEVERAGE CARTONS:

EXAMPLES OF BEVERAGE CARTON RECYCLING PLANTS IN EUROPE

PAPIERFABRIK NIEDERAUER MÜHLE
This German paper manufacturer is the largest recycler of beverage cartons in Europe. The paper mill uses the recycled fibres to manufacture high-quality corrugated paper for cardboard production.

FISKEBY BOARD
This paper mill in Norrköping, Sweden, produces board that is made of 100% recycled fibres from beverage cartons and other paper packaging. The polymer and aluminium is recovered as energy for the mill, replacing the need for other fuels.

SONOCO ALCORE
Sonoco Alcore, a dedicated beverage carton recycling plant in the UK, uses the recycled fibres to make industrial-size cores and tubes, which are used for rolls of plastic film, textiles and paper.

WEPA (FORMERLY VAN HOUTUM)
This paper mill in the south-east of the Netherlands produces Cradle to Cradle certified hygienic paper and hand towel paper. They have recently invested in an omnipulper to recycle beverage cartons into hygienic paper. An external partner reprocesses the polyethylene and aluminium into pellets and powder for the production of new products.

RECYCLING CARTON RECYCLING RATES (EU-28)

- 0% in 1992
- 5% in 1993
- 30% in 1995
- 40% in 1996
- 47% in 1997
- 48% in 1998
- 49% in 1999
- 50% in 2000
- 51% in 2001
- 52% in 2002
- 53% in 2003
- 54% in 2004
- 55% in 2005
- 56% in 2006
- 57% in 2007
- 58% in 2008
- 59% in 2009
- 60% in 2010
- 61% in 2011
- 62% in 2012
- 63% in 2013
- 64% in 2014
- 65% in 2015
- 66% in 2016
- 67% in 2017

This is nearly a 70-fold increase on 1992 figures, when just 6,000 tonnes were recycled. Combined recycling and energy recovery, during the period 1992–2016, reached nearly 700,000 tonnes (a 35% recycling rate). These figures reflect a clear long-term growth in engagement and collaboration. Recycling solutions, stakeholder engagement and innovation in recycling and reprocessing infrastructure will be key to achieving further increases in recycling rates.
BEVERAGE CARTON MAINTAINS GROWTH IN RECYCLING RATES

In 2016 47% of all beverage cartons sold in Europe were recycled, with some countries having rates over 70%.

Recycling of beverage cartons in Europe has grown steadily over the last fifteen years, with around 430,000 tonnes recycled in 2016.

This is nearly a 70-fold increase on 1992 figures, when just 6,000 tonnes were recycled. Combined recycling and energy recovery, the tonnage of the whole region reached nearly 700,000 tonnes (a 76% recovery rate). These figures reflect a clear long-term growth trend in beverage carton recycling since 1992.

The beverage carton industry continues to support recycling through promoting innovation in recycling solutions, stakeholder engagement and collaboration.

RECYCLING BEVERAGE CARTONS HAS MANY BENEFITS

• Enabling the efficient use of raw materials by extending their life into new products
• Reducing greenhouse gas emissions
• Diverting valuable materials from landfill
COMMitted to recycling

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