

Can cartons be recycled?

### **Tetra Pak's beverage cartons consist of three main materials:**

- Paperboard (typically 70-90%)
- Low-density polyethylene (typically 10-25%)
- Aluminium foil (about 5%, only in long life or aseptic packages)

Despite this mixture of different materials, cartons can be recycled.

Cartons are successfully recycled in large volumes throughout Europe, where high quality carton fibre has consistently been valued.

Many European countries achieve very high carton recycling rates. For example, in Germany and Belgium it is between 65 and 70% - only slightly ahead of Austria, Sweden and others. The European Union as a whole achieves a 30% carton recycling rate.

The carton recycling process is essentially quite simple. Baled cartons are dropped into a pulper, similar to a giant domestic food mixer, filled with water, and pulped for around 20 minutes. This delaminates the packaging, breaking down the package to produce a grey-brown slurry. The aluminium foil and polyethylene are separated from the fibre, which is recovered to make new paper products.



Recycled cartons can be made into a number of different products including high strength paper bags and envelopes

Wood fibres become shorter and lose some strength every time they are recycled, and can only be recycled about five times. This means that there always has to be an input of virgin material into the papermaking process to maintain quality.

Because of cartons' long, high-strength fibres, they reduce the need to buy virgin pulp. In the UK, the recovered fibre is used to manufacture new high-strength paper-based products.

The non-fibre remainder, mainly polyethylene and a smaller amount of aluminium, have been used in other countries in a number of applications including garden furniture, playground design, roofing materials and for energy recovery in municipal incinerators and cement kilns.

Tetra Pak and its partners are also currently developing plasma technology which enables the total separation of the polyethylene and aluminium. This permits the return of all three components of the carton to the productive chain as raw material.