Tetra Brik® Aseptic 1000 Edge LightCap™ 30

Carbon footprint report example

Primary information contained in this report

- Verified package cradle-to-grave carbon footprint(s) that meet the requirements of the PAS 2060 standard on carbon neutrality.
- Verified carbon footprint(s) reduction for packages with plant-based polymers based on cradle-to-grave results that may be used to support public communication.
- “Plant-based” is used in the tables to describe versions of the package containing plant-based polymers in the opening and/or in the packaging material.

Verification

The carbon footprints of the included packages and the reduction have been verified by the Carbon Trust™ to PAS 2050:2011, ISO 14044:2006 and ISO 14067:2018. More informati on is available on www.carbontrust.com/tetrapak. A package with plant-based polymers in packaging material and/or plant-based polymers in the closure (if it has a closure) is eligible to carry the Carbon Trust Packaging verified CO_2e footprint Label if the reduction value between a plant-based package and its fossil-based equivalent is higher than 5%. Use of the Carbon Trust name and label need to be in line with relevant license agreements and guidelines.

Scope of the carbon footprint

Cradle-to-grave, including: raw material production, transport of raw materials, packaging material converting, closure converting, film extrusion and blowing, strip production, transport of packaging materials to filler, forming and filling of the package, transport of packaging materials to distribution centre and end-of-life. The terminology of ISO 14067:2018 has been used, which means that all relevant greenhouse gas (GHG) emissions and removals are covered in the term “carbon footprint”. The carbon footprint results are expressed in CO_2 equivalents (CO_2e).

Package footprint data

Tetra Brik® Aseptic 1000 Edge LightCap™ 30

Packaging material quality:
/ml BIO CLC Dup

Geographic scope:
Tetra Pak Global Average v10

PrintDated:
2024-05-28

Cradle-to-grave carbon footprint (g CO_2e/package)

	Standard packaging material		Plant-based packaging material	
Life cycle step	**Standard opening**	**Plant-based opening**	**Standard opening**	**Plant-based opening**
Total Cradle-to-grave	**64**	**52**	**53**	**41**

Carbon footprint % reduc on for packages with plant-based polymers based on cradle-to-grave results

	Standard packaging material		Plant-based packaging material	
Life cycle step	**Standard opening**	**Plant-based opening**	**Standard opening**	**Plant-based opening**
Reduction		-17%	-19%	-36%

Package properties

	Standard packaging material		Plant-based packaging material	
Life cycle step	**Standard opening**	**Plant-based opening**	**Standard opening**	**Plant-based opening**
Package weight, incl opening (g)	32	32	32	32

Biogenic carbon (g CO_2/package)

	Standard packaging material		Plant-based packaging material	
Life cycle step	**Standard opening**	**Plant-based opening**	**Standard opening**	**Plant-based opening**
Biogenic carbon in material	29	38	38	47

Geographic scope

Calculations based on 'Tetra Pak global average' data

Raw material: For the production of paperboard and aluminium foil, global average data from Tetra Pak's GHG reporting is used representing the performance in the last full reporting year. For production of plastics data as presented by Plastics Europe is used (www.plasticseurope.org) and for production of plant-based plastics data is from the Braskem 2023 'I'm green™ PE Life Cycle Assessment'.

Converting: Global average data from Tetra Pak's GHG reporting is used for converting operations and for the transport of raw materials to the converting factory. The packaging material waste rate in converting is used to calculate the impact to produce the extra raw materials required, which is allocated to the 'converting' results.

Forming and filling: Global average data from Tetra Pak's GHG reporting is used for the transport of packaging materials to the filler, and the forming and filling of the package. The calculations are based on the most recent version of the filling machine, relevant for the type and size of the package. Transport of packaging materials to distribution center is modeled based on average distances and transport emission factors from Tetra Pak's GHG reporting.

End-of-life: The end-of-life scenario represents the global average situation for cartons, based on Tetra Pak statistics. The 'cut-off' method has been used when modelling end-of-life: no environmental burdens nor credits have been included in the results for cartons going to recycling or incineration with energy recovery. End-of-life results include impacts from incineration without energy recovery and landfill.

Calculations

Rounded numbers are shown in the carbon footprint report. Unrounded numbers have been used when calculating the results.

The calculated results are not exact; they are indicative and based on a number of simplifications. For this package, we have used a representative material specification as the basis for the calculation of the results.

Biogenic carbon in the packaging material

Plants capture and store carbon from the atmosphere. When wood fibre is processed into paperboard, or sugarcane into plant-based polymers, the finished packaging material contains biogenic carbon captured from the atmosphere.

The biogenic carbon uptake for plant-based polymer is included into the calculated carbon footprint. The approach followed is the -1/+1 approach as described in section 6.5.2 of ISO 14067:2018. Removals of CO_2 into biomass are characterized as –1 kg CO_2e/kg CO_2 and emissions of biogenic CO_2 are characterized as +1 kg CO_2e/kg CO_2 of biogenic carbon in the calculation of the carbon footprint.

The release of biogenic carbon is accounted at end of life, unless burdens are transferred to other systems (incineration with energy recovery and recycling) or carbon is not released (landfill).

However, the accounting of biogenic carbon uptake is only applied to polymers, to show the difference between plant-based and fossil. It is not applied to paperboard as there are no fossil alternative to it in our packages.

In some cases, this may lead to a total negative carbon footprint. This means that the biogenic carbon uptake associated with the plant-based polymers in the package is higher than the calculated total emissions of CO_2e emitted during the package life cycle (including the end-of-life release under the model conditions).

The impact of LUC (Land Use Change) is also included in the modelling, in line with ISO 14067 and PAS 2050.

Updates and revisions

The results are based on version 10 of the Tetra Pak internal "CO_2 Product model" valid from April 2024.

The Carton CO_2 Calculator model has been certified by the Carbon Trust. The model is periodically updated to ensure that the latest available emission factors and material specifications are applied. The results of the model may not be directly comparable with those generated in earlier versions.

Tetra Pak®
PROTECTS WHAT'S GOOD