

ecau packaging

écologique compostable agri utile



Groupe Barthe
S'élever ensemble

The Barthe Group, which includes the Boutes and Garonnaise cooperages, has always known how to adapt and reinvent itself.

After years of packaging our barrels in plastic film, bubble wrap and cardboard, we had to address customer requests and forthcoming challenges.

Aware of our environmental impact, we had to tackle the question of how to reduce our plastic and cardboard usage whilst ensuring the same level of protection for our barrels.

After months of testing and research,
the Barthe Group has finally achieved what it set out to do:

100%
environmentally friendly
packaging



100%
compostable
packaging



100%
plant-based
packaging



100%
biodegradable
packaging



100%
recyclable
packaging



Ecology glossary

Waste: According to the French law of 15 July 1975, waste is considered to mean the following: 'Any residue of a production, transformation or usage process, any substance, material product, or more generally any tangible asset that has been abandoned or is intended to be abandoned by its owner' (Article L.541-1-1 of the French Environmental Code).

Sustainable development: Sustainable development is the idea that human societies need to live and meet their needs without compromising future generations' abilities to meet their own needs.

Bio-based: This is a product or material made entirely or partially from materials of biological origin.

Recycling: A waste treatment process for products at the end of their life, enabling some of their materials to be reincorporated into the production of new products.

Biodegradable: Any substance that decomposes and disappears 'naturally', i.e. without human intervention, is said to be biodegradable. This natural decomposition process happens thanks to living micro-organisms such as bacteria, fungi or algae. Temperature, moisture and oxygen also play a role. This means that if a biodegradable product is discarded in a natural setting, it will be 100% digested by these living micro-organisms and transformed into water, CO₂ or biomass without any adverse impact on the environment.

Plastic is therefore technically a biodegradable product. However, its biodegradation process can take hundreds or thousands of years.

In principle, any product can be considered biodegradable. This is why the question of time is a vital one when talking about a product's biodegradability! It would therefore be more accurate to say that a product is biodegradable within a period on a human timescale, i.e. fewer than 18 months.

Composting: A product or packaging is compostable if its biodegradation process is controlled by humans or living organisms.

There are two types of composting:

- Composting at home, at the bottom of the garden or in the kitchen. Max 30°C
- Composting as part of a specialist industry. 55°C – 60°C

However, the majority of the time that a product is described as being compostable, this does not mean it can be composted at home. In fact, very few materials can be composted naturally, as they require fermentation at a high temperature with very high levels of moisture, which can only be achieved in an industrial setting.

Composting enables faster biodegradation: after just a few months of repeating this fermentation process, the result is rich nutrients that are primarily used as 100% organic fertiliser.

EN 13432 standard: The EN 13432 standard dates from 2002 and is a harmonised standard from the European Committee for Standardisation covering the characteristics that a material must possess in order to be described as biodegradable or compostable. The term 'compostable' refers to standards relating to a decomposed material's non-toxicity if it is released into nature.

This standard is entitled 'Requirements for packaging recoverable through composting and biodegradation – test scheme and evaluation criteria for the final acceptance of packaging.'

- 90% biodegradation must be reached in fewer than six months
- When left in contact with organic waste for a period of three months, the bulk material must consist of at least 90% residue of less than 2 mm in diameter
- The material may not have any negative impact on the composting process
- A low concentration of heavy metals
- pH values within set limits
- A mineral salt content within set limits
- A concentration of volatile solid elements within set limits, a concentration of nitrogen, phosphorus, magnesium and potassium within set limits

Greenhouse gas: A gas of natural origin (water vapour) or anthropogenic origin (associated with human activities) that absorbs and re-emits part of solar rays (infrared radiation), the phenomenon behind the greenhouse effect. The primary greenhouse gases (GHGs) associated with human activities are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) and fluorinated gases: hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃).

CO₂ equivalent: Emissions of these gases are weighted by their global warming potential (GWP) and expressed as a CO₂ equivalent to give a total volume of emissions as a CO₂ equivalent.

The six greenhouse gases (GHGs) monitored under the Kyoto Protocol are: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulphur hexafluoride (SF₆), hydrofluorocarbons (HFC) and perfluorocarbons (PFC).



The plastic invasion

Today, poorly managed post-consumption waste (not reused, recycled, sent to controlled landfill or incinerated) amounts to hundreds of millions of tons per year.

It invades soils, rivers and oceans all over the world.

Nearly 150 million tons of plastic have collected in the oceans since the 1950s, and eight million more tons join it every year, the equivalent of one dump truck a minute.

Is cardboard even more dangerous than plastic?

13% of cardboard waste is buried in landfills.

A study showed that the ink printed on cardboard releases toxic chemical products. But will we one day come up with good, environmentally friendly, non-polluting solutions that are not hazardous to our health? Following the ban on single-use plastics, a study showed that the cardboard packaging replacing it is in fact even more harmful to the human body.

80% of cardboard is recycled but it takes 60 to 400 litres of water to produce 1 kg of cardboard.



Environmental impact

Boutes : Represented yesterday > Uses 10 tons of plastic and cardboard per year.

With annual consumption per person in France sitting at 70 kg of plastic and cardboard, this represents 140 people's worth of consumption.

Garonnaise : Uses one ton per person per year, equivalent to the consumption of 14 French people.

Reduction in greenhouse
gases from our packaging
by

-28%

Annual reduction of 1.5 %
in our carbon footprint,
i.e.

-33 Tons
eq. CO2

100%

Biodegradable
& compostable

**Renewable
resources**

Organic fertilizer
& mulch

Hemp
packaging



As part of ECAU Packaging, the Barthe Group has joined forces with the company Geo-Chanvre in an exclusive partnership.

The benefits of hemp packaging

First of all, hemp packaging offers **more effective protection for barrels during transport** than the combination of cardboard and bubble wrap has provided thus far. However, the choice of hemp goes beyond seeking to protect our barrels, as our packaging is becoming **of use in the vineyards and in agriculture more generally**.

The discs that cover each of our barrel ends and the strips protecting the bilge can both be reused as **substrate for mulch**.

Positioned around the bottom of vines or used as another form of agricultural protection, hemp mulch **protects the soils from UV rays, prevents weeds from growing, and above all retains water and helps it be distributed more effectively**.



Finally, when it breaks down, this mulch **enriches the soil with humus, provides the nutrients that the soil needs and boosts the presence of microfauna**.



Product composition

The hemp packaging is made of **100% hemp fibres** that are linked by a patented spunlace system, enabling fibres to be created without any adhesives, additives, pesticides or GMOs, without sacrificing quality. The manufacturing process is **100% mechanical**, meaning that no chemical products are used to create the mulch.

This is a **100% biodegradable, 100% bio-based** product that can be used in organic agriculture.



Growing hemp in France

What is hemp?

Hemp or cannabis? These two terms are used to describe the same plant species, *Cannabis sativa*: the difference between the two is their **level of THC**, a psychoactive molecule. Hemp for industrial use only contains 0.2%, whilst cannabis contains between 5% and 20%.

To achieve this, hemp originally underwent genetic manipulation between strains.

The term 'hemp' is primarily used to describe the industrial plant and its plant fibre, whilst 'cannabis' also describes the psychotropic form used as a drug or for medical purposes.



NB: France had 176,000 ha of hemp in 1860, 700 ha in 1960.
Today: 1,300 hemp producers and 18,000 ha cultivated.

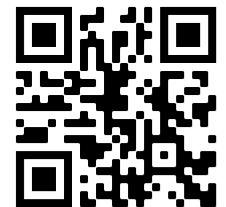
Hemp production in France:

This is a **100% French** sector: France is the European market leader for hemp and the second largest producer on the planet. The hemp used is therefore 100% French and comes from a hemp farm **fewer than 50 km** from the processing site.

Hemp production is highly regulated, which offers numerous benefits. **It is GMO-free cultivation without any crop protection treatments or waste: all of the hemp is used.** For ECAU Emballage, the fibre used represents approximately 24% of the plant's weight.

Hemp cultivation is a **responsible growing method**, based on respect for **air, water and soil resources. It is an excellent way of clearing up the soils thanks to its capacity to absorb carbon dioxide.** One hectare of hemp absorbs as much CO₂ as a hectare of forest, namely 15 tons.

The plant only requires **very low levels of water and does not need to be irrigated.** Its very low water requirements (hemp consumes much less water than cotton, for example) and the **lack of pesticide treatments make it a truly excellent environmentally responsible crop.**



Cling film

100% biodegradable and compostable





In order to reduce its environmental impact and help its clients manage their waste more effectively, the BARTHE GROUP has decided to collaborate and form an exclusive partnership with the company BioWrap.

This French company produces a cling film that is **100% biodegradable and compostable, helping to reduce plastic pollution and CO2 emissions.**

The raw materials used do not release any harmful gases and are non-polluting, helping to reduce greenhouse gas emissions and allowing carbon to return quickly to the soil.

98% bio-based

This bio-based film is made from 98% plant matter (potato starch).

A patented film unique in Europe

This film is certified for industrial composting under the EN 13432 standard and should be **disposed of in an organic waste bin for treatment on industrial composting sites** in order to activate the biodegradation and composting process, bringing its working life to an end.





Did you know?

There are two forms of composting:

Industrial composting: Decomposition occurs in three months and requires a temperature of 58 degrees Celsius.

Domestic composting: Decomposition takes place over six months at 28 degrees Celsius.

The EN 13432 standard states that after six months, 90% of the material in these bioplastics must have degraded under industrial composting conditions.



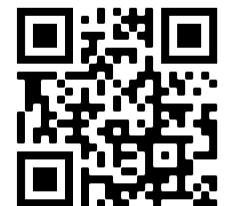
French
company



Plant
composition



Compostable
products



www.biowrap.fr

Film made in France

as effective as plastic

Properties:

- Extremely transparent film with plant structure
- Very good tensile strength
- Stretchiness (elongation properties) equivalent to a traditional film
- Excellent tackiness (ability to be removed and reattached)
- Product developed to actively help reduce companies' carbon footprint
- Certified as suitable for contact with food

Design:

The materials used for its composition and the production process are 100% French.

Like all other film types, this cling film is made via extrusion of blown film.

Parameters are set to ensure that the product offers the best possible level of performance, in particular its mechanical properties and tackifying effect.

Use:

The film can be used in the same way as all other cling films. There are two versions available, for use by machine or by hand. Its tackifying properties mean it can be positioned and repositioned against itself very easily.

Technical challenges:

It took more than 18 months of research and development to achieve the quality, mechanical properties and machinability that this film offers.

End of life:

- Its biogenic carbon is returned to the soil via composting
- Micro-organisms naturally break this cling film down into organic matter under suitable temperature, moisture and oxygenation conditions. This degradation process produces water, CO₂ and/or CH₄ and potentially other sub-products that are not toxic to the environment
- Mechanical recycling



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