

ENVIRONMENTAL PRODUCTS INFORMATION & CLASSIFICATION

Methodology guidelines overview

SMART
PACKAGING
SOLUTIONS

antalisTM

WE SUPPORT OUR CLIENTS ALL AROUND THE WORLD



Represented in
28 countries



48,300
customers



Over
498 M€
revenue in 2019



Over
359,000
e-commerce orderlines



64 Sales Offices



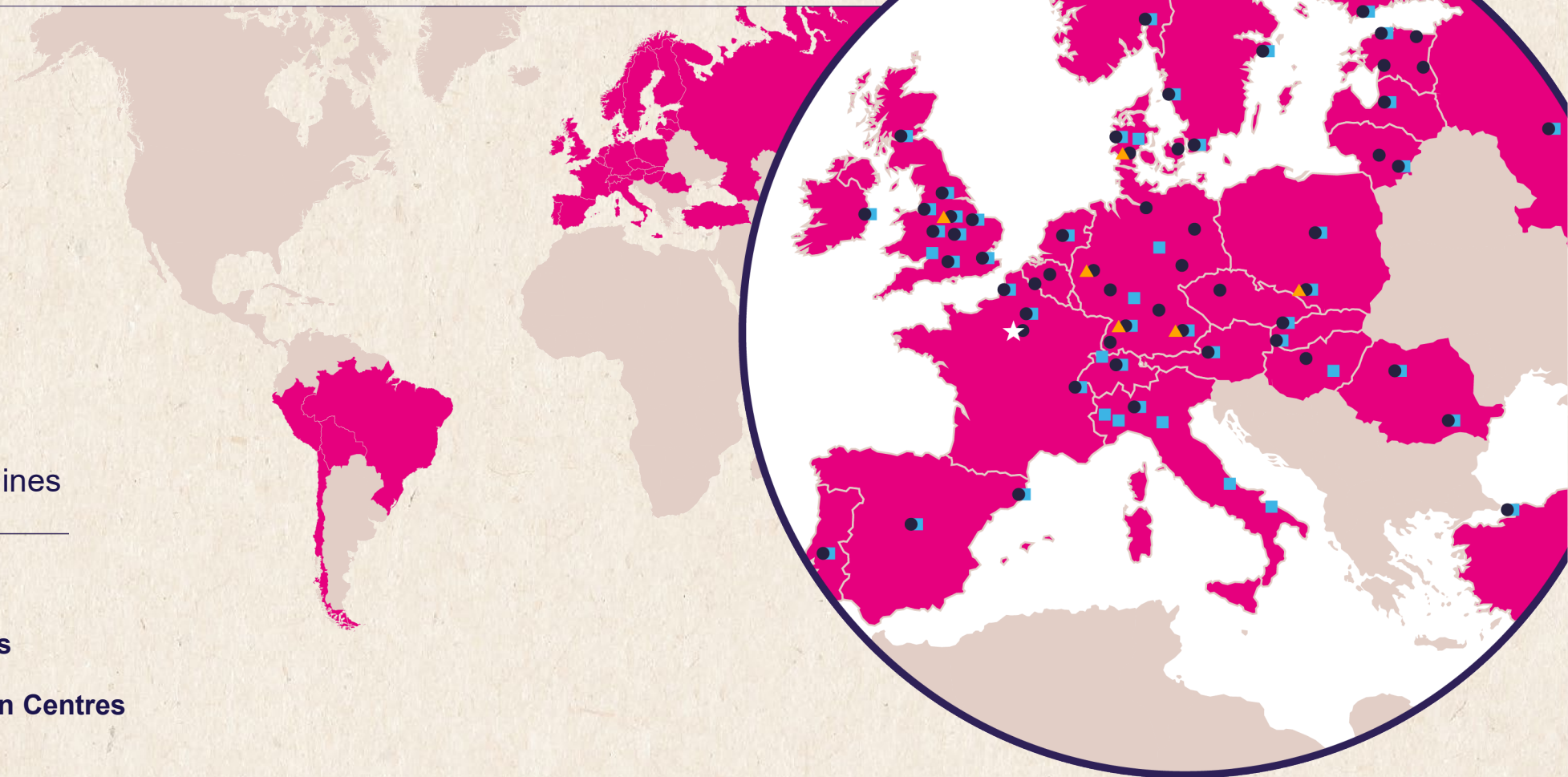
57 Logistics Centres



6 Packaging Design Centres



Global HQ



SUMMARY

Overview of the guidelines

- 01.** ANTALIS PACKAGING APPROACH PRESENTATION
- 02.** THE CLASSIFICATION
- 03.** THE SUPPLIER DATA SHEET AND THE CUSTOMER ENVIRONMENTAL CARD
- 04.** APPENDIX
- 05.** QUESTIONS & ANSWERS

- 01. ● **PACKAGING APPROACH**
- 02. THE CLASSIFICATION
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ANTALIS PACKAGING APPROACH PRESENTATION

Towards an informed choice for our customers

THE PURPOSES OF THE APPROACH AND THE GUIDELINES

Antalis, its Suppliers and its Customers united towards a single objective

01.	● PACKAGING APPROACH
02.	THE CLASSIFICATION
03.	THE ENVIRONMENTAL CARD
04.	APPENDIX
05.	QUESTIONS & ANSWERS

TO REACH ITS OBJECTIVES, ANTALIS PACKAGING IS IMPLEMENTING

- An environmental information management process
- Guidelines shared with our suppliers, our teams and our customers
- Product environmental information: classification and the environmental card



*Promoting purchasing of packaging products
with a lower impact on the environment*

01.

Sharing common criteria between our suppliers, our teams and our customers on the main environmental impacts of packaging solutions.

02.

Putting in place an environmental information management process.

03.

Structuring environmental information **to facilitate an informed choice for our customers, targeting solutions with a lower environmental impact.**

04.

Being a trusted partner for sharing information on the internet and in our catalogues.

THE 4 COMPONENTS OF OUR SYSTEM

4 interlinked components

antalisTM

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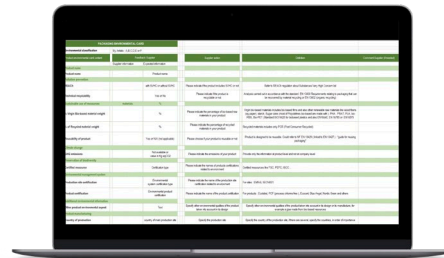


THE GUIDELINES

This is a document specifying the entire initiative, which is shared with suppliers, the Antalis teams and customers.

It is the framework for action which binds the parties.

In particular, it specifies the purposes, processes, criteria, definitions, and the legal and voluntary framework.



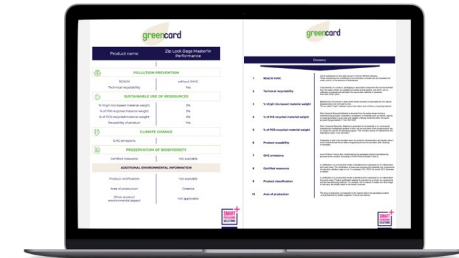
THE SUPPLIER DATA SHEET

This is a structured process for collating environmental information from suppliers, which incurs the latter's liability.



THE PRODUCT CLASSIFICATION

This is a system for assessing the environmental performance of packaging products which allows customers to orient their choice towards solutions with a lower environmental impact.



THE CUSTOMER ENVIRONMENTAL CARD

This provides the customer with comprehensive information, and is available on the website.

THE SIMPLIFIED PROCESS

The 4 steps in the process

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01.

DEFINING THE FRAMEWORK
AND THE PROCESS
FOR THE ENVIRONMENTAL
CLASSIFICATION AND
THE ENVIRONMENTAL CARD



DELIVERABLES

Guidelines, classification,
environmental card, process



RESP.

- Head of Marketing Packaging
- Head of CSR

02.

COLLECTING
THE INFORMATION
FROM SUPPLIERS



DELIVERABLES

Completed and signed
environmental card



RESP.

- Corporate Product Manager
- Local Product Manager
- Local Data Manager

03.

MAKING THE
INFORMATION AVAILABLE
TO HELP CUSTOMERS
MAKE INFORMED
CHOICES



DELIVERABLES

Information on the website
and in the catalogue



RESP.

- Corporate Product Manager
- Local Product Manager
- Local Data Manager
- IT Manager

04.

FOSTERING
TRUST



DELIVERABLES

Verifications of the information
in levels 1 to 3



RESP.

- 1) Corporate Product Manager,
Local Product Manager, Local
Data Manager
- 2) Local CSR experts
- 3) Experts

THE TRUST FRAMEWORK AND THE VERIFICATIONS

Antalis : a trusted partner

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Antalis wishes to be a trusted partner and establish a framework which prohibits false environmental claims and shares the regulations and voluntary references.

01

The procedure is based on a shared framework, compliant with the regulations, recognised voluntary standards, and technologies which are available at an economically acceptable cost.

02

The information collated from the supplier commits the latter to compliance with the “guidelines for environmental classification”.

- *Signature by the supplier of the information documented in the environmental card*
- *First level verification by the Product Managers (PMs) that this is complete*

03

The information received from the supplier is verified through spot checks to safeguard the reputation of Antalis as a trusted third party.

- *Second level verification by the country CSR managers or a local expert*
- *Third level verification by an expert in materials recycling*

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CLASSIFICATION EXPLAINED BY CRITERIA

Towards an informed choice for our customers

THE OVERVIEW OF THE CRITERIA AND LEVELS

The 3 criteria taken into consideration :
origin of components, recyclability and safety

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SOURCING OF MATERIALS

- Proportion of components from a renewable source
- Proportion of recycled components



RECYCLABILITY

- Recyclability or non-recyclability of the product



SAFETY

- Safety Absence of substances of concern

To allow customers to make an informed choice as regards solutions with a lower environmental impact, Antalis is putting in place an environmental classification for products based on 3 criteria.

THE ANTALIS CLASSIFICATION FOCUSES ON :

01. The **origin of the materials**
(recycled, biobased)
02. The **production of waste**
(recyclability)
03. **Safety**
(the presence or absence of substances of concern / EU-SVHC list)

Sourcing and recyclability are two key components of the circular economy.

This classification promotes the purchase of products with the highest ranking in the classification.

CLASSIFICATION CONCEPT : THE GREEN STAR SYSTEM

The product environmental impact is rated on a scale from 0 to 5 stars

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The rating is visible on the **product pages of the antalis website**
as well as in the **product catalogs**.

THE OVERVIEW OF THE CRITERIA AND LEVELS

Promoting the purchase of products made from the most sustainable resources (1st criterion) and recyclable products (2nd criterion)

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ALLOCATION OF POINTS BY THRESHOLDS FOR SOURCING

SOURCING	Biobased virgin material	% virgin biosourced	% virgin biosourced	% virgin biosourced	% virgin biosourced	% virgin biosourced	Weighting of the criterion in the ranking : 50 points out of 100
	Recycled material PIR + PCR	% recycled	% recycled	% recycled	% recycled	% recycled	
	Total Virgin + Recycled	100%	From 75 to 99%	From 50 to 75%	From 25 to 50%	Under 25%	
	Points	50	37,5	25	12,5	0	

ALLOCATION OF POINT BY THRESHOLDS FOR END OF LIFE

END OF LIFE	Technical recyclability	Recyclable	Not recyclable	Weighting of the criterion in the ranking : 50 points out of 100
	Point	50	0	

A points system is used for the sourcing and recyclability criteria. The Antalis classification focuses on the **origin of the materials** (recycled, virgin biobased) and the **production of waste** (recyclability)

The two criteria are weighted (50 points each) and each have thresholds and corresponding points.

These points based on the thresholds are added. The total allows the products to be ranked from 0 to 100 points corresponding to 0, 1, 2, 3, 4 or 5 stars. The classification is designed to **promote the purchase of products with the highest ranking in the classification.**

THE OVERVIEW OF THE CRITERIA AND LEVELS

The cumulative points from the 2 criteria
(more sustainable resources [1st criterion] and recyclability [2nd criterion])
allows stars to be allocated

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Number of stars						
Number of points (addition of the 2 criteria)	From 0 to 12,5 pts and exclusion criteria	12,5 pts	25 and 37,5 pts	50 and 62,5 pts	75 and 87,5 pts	100 pts

For the two criteria : origin of the materials (recycled, biobased) and **production of waste** (recyclability) :

- The two criteria are weighted (50 points each) and each have thresholds and corresponding points.
- The accumulated points for these two criteria give a number of green stars.
 - Sourcing : 0 to 50 points
 - Recyclability : 0 or 50 points

PRODUCTS EXCLUDED FROM THE CLASSIFICATION

Safety : excluding products containing substances of concern (3rd criteria)

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FOR THE 3RD CRITERION (SAFETY), PRODUCTS WHICH CONTAIN REACH SUBSTANCES OF VERY HIGH CONCERN (SVHC) ARE EXCLUDED FROM THE "GREEN STAR" CLASSIFICATION.

They will not receive any stars.

These components are deemed to be of concern, their usage is regulated, and they are only tolerated in the absence of any alternative.

To comply with the regulatory provisions and to inform the customer, this information is included on the environmental card.



FIND OUT MORE ABOUT REACH AND THE SVHC LIST

Focus on REACH and the products excluded from the classification : **"with SVHC"**

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REACH

Registration, Evaluation, Authorisation and restriction of **Chemicals**

This is a regulation adopted by the European Union to better protect human health and the environment from risks linked to all chemical substances (industrial or consumer goods). There is an equivalent regulation in the USA: Toxic Substances Chemical Act ([www](http://www.epa.gov/tsc)).



EXAMPLES

Main SVHCs

Heavy metals, phthalates, BPA, VOCs, fluorinated and brominated compounds.

Multiple applications in the plastics industry (materials, glues, adhesives) but also in the coatings (lacquers, paints, inks) or textile finishings (waterproofing, for example).



SVHC LIST

"Substances of Very High Concern"

Corresponds to the list of candidate substances in Annex XIV of REACH which are subject to authorisation. These substances are deemed to be hazardous and are only provisionally tolerated in the absence of an alternative.

The objective is to encourage the substitution of the SVHCs contained in the items in concentrations exceeding 0.1%.

This list is updated every 6 months (January and July) and currently (17.01.2022) contains **223 products**.

On the **environmental card**, they are identified as **"with SVHC"**.



REFERENCES

References to standards and regulations

- ECHA ([www](http://www.echa.europa.eu)) SVHC list ([www](http://www.echa.europa.eu))

CRITERIA INCLUDED IN THE CLASSIFICATION : REACH POSITIVE LIST

The products included in the classification, with stars, are all **"without SVHC"**

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REACH

Registration, Evaluation, Authorisation and restriction of **Chemicals**

The REACH system requires the identification and registration of all chemical substances used in Europe: any product which is not subject to a prohibition or restriction is authorised (on that date).

The chemical products which are not on the SVHC list or on the list of restrictions (annex XVII ([www](#))) are therefore authorised; **on the environmental card**, they are identified as **"without SVHC"**.

However, all products are regularly reassessed and products which are currently authorised could be subject to monitoring and later be prohibited or have their use restricted.

It is necessary to monitor changes related to REACH and to check the updates to the SVHC released every six months.

The REACH process is managed by the European Chemicals Agency (ECHA).



EXAMPLES

Most of the products used do not pose any problems : the REACH procedure currently covers over 25,000 authorised products.



REFERENCES

References to standards and regulations

- REACH: Understanding REACH ([www](#))
- Local organisations supporting REACH in France ([www](#)), in Germany ([www](#)), in the UK ([www](#))

The "**recycled resources**" criterion : 0 to 50 points, based on the percentage incorporated

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Material that has been reprocessed from recovered [reclaimed] material by means of a manufacturing process and made into a final product or into a component for incorporation into goods or services”;

Definition from the ISO 14021:2016 standard



References to standards and regulations

- ISO 14021:2016 Environmental labels and declarations – Self-declared environmental claims ([www](#))
- French National Council of Packaging (CNE), environmental claims relating to product packaging (2021 edition) ([www](#))
- Local legislation: France's Anti-waste and Circular Economy Law (AGEC) ([www](#)) | Germany ([www](#)) | UK ([www](#))

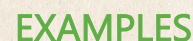


*Proportion, by mass, of recycled material in goods or packaging.
Only pre-consumer (PIR Post Industrial Recycled) and post-consumer
(PCR Post-Consumer Recycled) materials shall
be considered as recycled content".*

Definition from the ISO 14021 standard

It is necessary to specify the **type and the proportion** (in %) of recycled material, indicating whether this relates to the packaging or the content" (recommendations from the French National Council of Packaging, CNE) **to prevent false environmental claims**. And also "When the recycled nature of a product is stated, the **percentage of recycled materials actually incorporated must be stated**".

French Anti-waste and Circular Economy Law, AGECE



Example of Antalis products

Air Bubble mailer : uses 50 % recycled materials.

CRITERIA INCLUDED IN THE CLASSIFICATION : MORE SUSTAINABLE RESOURCES

The "**biobased or renewable resources**" criterion :
0 to 50 points, based on the percentage incorporated



RAW MATERIAL FROM A RENEWABLE ORIGIN



Animal or plant material, the renewal of which, with or without human intervention, offsets the natural disappearance or the amount used by humans, in terms of quality and quantity".

Extract from the practical guide to environmental claims (French Ministry of Ecology)



REFERENCES

References to standards and regulations

- French Agency for Ecological Transition (ADEME): Sustainable biobased products for public and private consumers – 2019 ([www](#))
- French Ministry of Ecology: Practical guide to environmental claims for use by traders and consumers ([www](#))
- EN 16575: 2014: Biobased products - Vocabulary [\(NF\)](#) [\(DIN\)](#) [\(BS\)](#)
- EN 16785-1: 2016: Biobased products - Biobased content [\(NF\)](#) [\(DIN\)](#) [\(BS\)](#)
- EN 16640: 2017: Biobased products - Biobased carbon content [\(NF\)](#) [\(DIN\)](#) [\(BS\)](#)



BIOBASED



...fully or partially derived from the biomass (plants, animals or algae, etc.). It is normally characterised by its biobased carbon content or by its biomass content. A product may be a construction material, a chemical intermediate, a ready-to-use daily product, etc."

French Environmental Agency

This relates to **virgin biobased** material, which comes directly from the biomass (forestry, agriculture, etc.), not recycled materials.



EXAMPLES

Example of Antalis products

Nautilus envelopes, PLA windows, biopolymer
Other examples: PE film made from sugar cane ;
100 % paper/card/wood products (non-treated).

CRITERIA INCLUDED IN THE CLASSIFICATION : MORE SUSTAINABLE RESOURCES

The % of more sustainable resources (recycled + biobased) :
0 to 50 points, based on the percentage incorporated



THE PROPORTION OF SUSTAINABLE RESOURCES FOR THE CORRESPONDING LEVELS

This is based on the following 2 aspects :

% virgin biobased

●
proportion (%) of the mass
which is biomass-derived
materials

% recycled materials

●
proportion (%) of the mass
which is recycled
materials

In each case, it must be possible to demonstrate these elements (studies and evidence) and base them on standards.

The points for the classification are determined by **adding these 2 parameters** (in % of the total mass) based on the thresholds: 0 point, 12.5 points, 25 points, 37.5 points and 50 points.

There are no mandatory standards which define the minimum biomass-derived proportion for a product to be defined as biobased. There are voluntary standards.



EXAMPLES

Example of Antalis products :

- Level A Corrugated card packaging (100 % recycled);
- Level B: Bubble envelope (50 % recycled)



REFERENCES

References to standards and regulations

- OK BIOBASED label - based on the EN-16640 standard ([www](#)) awarded 1 to 4* according to the biobased carbon content (1* = 20%+ to 4* = 80%+)
- French law 2015-992 / requiring that plastic bags include 50% biobased materials since 2020, increasing to 60 % in 2025 ([www](#))

CRITERIA INCLUDED IN THE CLASSIFICATION : TECHNICAL RECYCLABILITY

The "**recyclability**" criterion : 0 to 50 points: a product is or is not recyclable (y/n)



RECYCLABILITY



A characteristic of a product, packaging or associated component that can be diverted from the waste stream through available processes and programs and can be collected, processed and returned to use in the form of raw materials or products".

Definition from the ISO 14021:2016 standard

Two types of recyclability are defined :



TECHNICAL RECYCLABILITY

which is dependent on the materials and recycling processes



EFFECTIVE RECYCLABILITY

which depends on the users/consumers (sorting) and the authorities (collection and recycling facilities)

The criterion retained by Antalis is **technical recyclability**, according to the standard processes which are available and economically viable.

- (1) selective sorting
- (2) sorting > crushing > optical sorting, sink-float separation, magnetic separation, grading, etc., before reintegration into the industrial processes (paper/plastics industry).

See the **technical recyclability and effective recyclability** appendix.



EXAMPLE

Example of Antalis products :

LLDPE stretch wrap Manupackaging / Crocco /
LDPE ziplock bags (ref. Debatin)



REFERENCES

References to standards and regulations

- ISO 14021:2016 Environmental labels and declarations – Self-declared environmental claims - Type III environmental labelling ([www](#))
- EN 13430: Packaging - Requirements for packaging recoverable by material recycling ([NF www](#)) ([DIN www](#)) ([BSI www](#))
- Local legislation: France's Anti-waste and Circular Economy Law (AGEC) ([www](#)) | Germany ([www](#)) | UK ([www](#))

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THE ENVIRONMENTAL CARD

Towards an informed choice for our customers

INFORMATION CONCEPT : THE GREEN CARD

This document is providing a complete information related to the environmental impact of products

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This document is accessible on the **product pages** of the **antalis website**.

THE SUPPLIER ENVIRONMENT DATA SHEET

A process for collating environmental data from Antalis suppliers

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THE SUPPLIER ENVIRONMENT DATA SHEET

The supplier data sheet is an XLS template which allows information to be collated from Antalis suppliers.

It includes simple instructions and examples to illustrate how to complete the document correctly.

It is used as a way to automatically determine the classification, and the number of stars.

It is automated (IT department) and archived (SharePoint, Product manager).

It is signed and is binding on the supplier, and is used as the basis for the verification process.

PACKAGING ENVIRONMENTAL CARD				
Environmental classification	By Antalis: A, B, C, D, E or F			
Product environmental card content	Feedback: Supplier	Supplier action	Definition	Comment Supplier (if needed)
	Supplier information	Expected information		
Product name	Product name			
Production prevention				
REACH	with SVHC or without SVHC	Please indicate if the product includes SVHC or not	Refer to REACH regulation about Substances Very High Concern list	
Technical recyclability	Yes or No	Please indicate if the product is recyclable or not	Analysis carried out in accordance with the standard EN 13430 Requirements relating to packaging that can be recovered by material recycling or EN 13462 (organic recycling)	
Sustainable use of resources	Main materials	%		
% Virgin Bio-based material weight		%	Please indicate the percentage of bio-based raw materials in your product	
% of Recycled material weight		%	Please indicate the percentage of recycled materials in your product	
Reusability of product	Yes or N/A (not applicable)	Please choose if your product is reusable or not	Product is designed to be reusable. Could refer to NF EN 13429 (linked to EN 13427) : "guide for reusing packaging"	
Climate change				
GHG emissions	Not available or value in Kg eq CO2	Please indicate the emissions of your product	Provide only the information at product level and not at company level	
Preservation of biodiversity				
Certified resources	Certification type	Please indicate the names of products/certifications related to environment	Certified resources like FSC, PEFC, BOC...	
Environmental management system				
Production site certification	Environmental system certification type	Please indicate the name of the production site certification related to environment	For sites: EMAS, ISO 14001	
Product certification	Environmental product certification	Please indicate the name of the product certification	For products: EcoLabel, PCF (process chlorine free), EcoCert, Blue Angel, Nordic Swan and others	
Additional environmental information				
Other product environmental aspect	Text	Specify other environmental qualities of the product taken into account in its design	Specify other environmental qualities of the production taken into account in its design or its manufacture, for example a plan made from bio-based resources	
Product manufacturing				
Country of production	Country of main production site	Specify the production site	Specify the country of the production site, if there are several, specify the countries, in order of importance	

THE CUSTOMER ENVIRONMENTAL CARD

The customer environmental card

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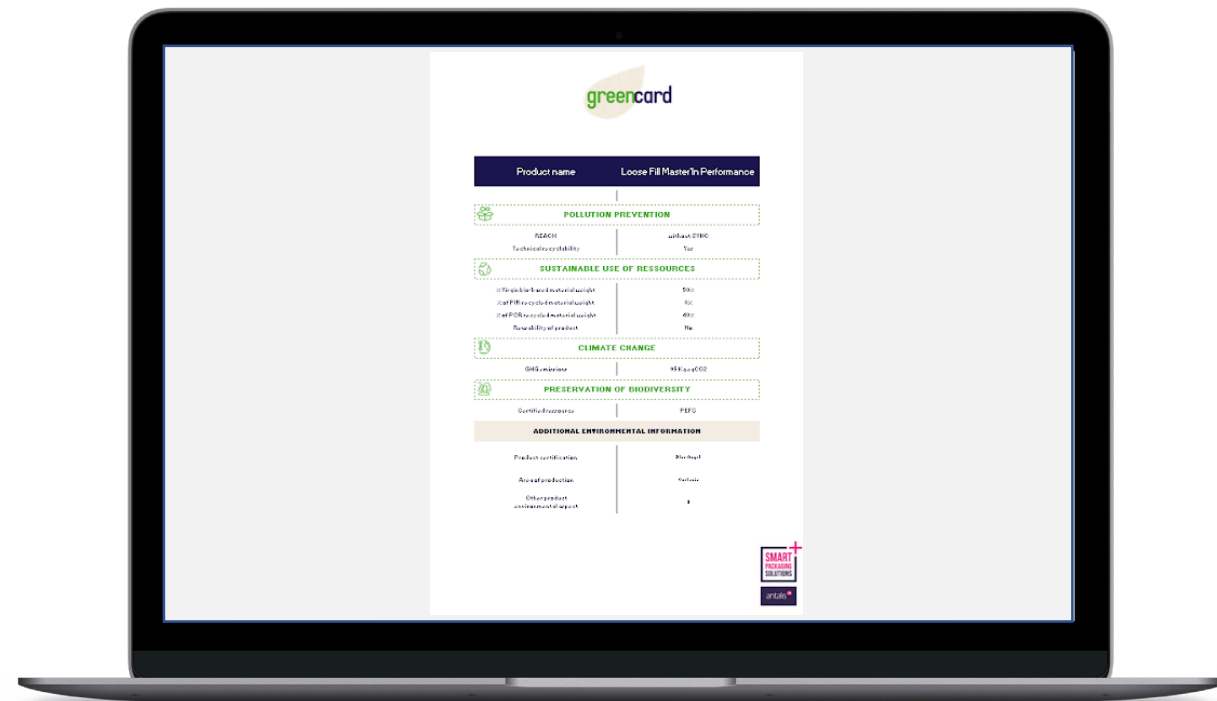
THE CUSTOMER ENVIRONMENTAL CARD

This is a PDF document used to provide the customer with comprehensive information.

It details the information used to create the classification and completes it with additional environmental information :

- 01. Product certification or management system certification
- 02. Certification for the resource (material)
- 03. Country of production
- 04. Carbon impact for the reference

The environmental card is available on the website.



INFORMATION ON THE ENVIRONMENTAL CARD

Details of information from the classification

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TOWARDS EXHAUSTIVE ENVIRONMENTAL INFORMATION

 POLLUTION PREVENTION	
REACH Technical recyclability	without SVHC Yes
 SUSTAINABLE USE OF RESSOURCES	
% Virgin bio-based material weight	0%
% of PIR recycled material weight	0%
% of PCR recycled material weight	0%



In addition to the stars in the classification, customers have access to the most comprehensive environmental information possible to guide their choices.



This starts with the information used for the classification, which we have already seen.



For recycled materials, the definitions for PIR and PCR are given in the appendix: Questions & Answers.

INFORMATION ON THE ENVIRONMENTAL CARD

Additional information for pollution prevention

RECYCLING AND RECOVERY CODE

In some countries, the use of codes to facilitate the recycling and recovery of packaging is mandatory.

These codes are derived from the European Directive 94/62/EC on packaging and packaging waste and the European Commission Decision 97/129/EC of 28 January 1997.

They are limited in number and have not been completed since.

If the component is not identified in the list of codes, code 7 "others" should be used

If the product is multi-component, code 7 "others" should be used



REFERENCES

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste ([www](#))

97/129/EC: Commission Decision of 28 January 1997 establishing the identification system for packaging materials pursuant to European Parliament and Council Directive 94/62/EC on packaging and packaging waste ([www](#))

INFORMATION ON THE ENVIRONMENTAL CARD

The "reusability" or "reuse" of the products

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SUSTAINABLE USE OF RESSOURCES

Reusability of product

Yes

REUSABILITY OR REUSE



Packaging is deemed to be reusable if its technical characteristics and its design allow it to be reused several times without adversely affecting the service provided, after cleaning, if necessary.



The terms "reuse" or "reusable" are defined in norms and sometimes laws



REFERENCES

In French law (Environmental Code, order dated July 2020), reuse is defined as follows: "Reuse: any operation by which the substances, materials or products which are not waste are used for a purpose identical to that for which they were designed."

United Kingdom? Germany?

INFORMATION ON THE ENVIRONMENTAL CARD

Additional information about sustainable use of resources

REUSABILITY

The reusability of packaging is defined by the EN13429:2004 standard. The standard contains a checklist of criteria including: Reusability of the packaging must be a deliberate objective; or The design of the packaging must enable the principal components to accomplish a number of trips or rotations in normally predictable conditions of use; etc.

Antalis aims to **identify, select, and promote** more and more **reusable packaging**.

REUSABLE PACKAGING

“Reusable packaging is packaging or packaging components that have been designed to accomplish a minimum number of trips or rotations in a reusable system during its life cycle.”

REUSE

“Operation by which a packaging that has been designed to be able, during its life cycle, to make a minimum number of trips or rotations, is refilled or reused for a use identical to that for which it was designed, with or without the use of auxiliary products present on the market that enable the packaging itself to be refilled; such packaging becomes packaging waste when it is no longer used.”



REFERENCES

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste ([www](http://www.unece.org/cefact/infocentre/faq.asp))
EN13429:2004 Packaging reuse (in NF BS DIN etc. versions)

INFORMATION ON THE ENVIRONMENTAL CARD

Carbon footprint, CO2, and Greenhouse Gas emissions

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CLIMATE CHANGE

GHG emissions

Challenge of climate change

Measuring and reducing greenhouse gases GHG is a **key issue for our common future**. Aware of the current methodological limits, of the maturity of the players in the value chain, of low data availability, Antalis wishes to be a trusted player in the transition by taking a useful first step.

Antalis strictly prohibits environmental claims and greenwashing. The actions undertaken will make it possible to collectively meet the challenge of climate change



REFERENCES

- GHG Protocol series ([www](http://www.ghgprotocol.org)) ;
- ISO series 1406x, 1408x and 1409x dedicated to carbon accounting method ([www](http://www.iso.org))
- French "Bilan Carbone" ([www](http://www.bilan-carbone.fr))
- Paris Agreement, COP21 ([www](http://www.un.org/parisagreement/))

THE CARBON FOOTPRINT

Two levels for measuring

GHGs are measured at two levels: either at **company level** as a whole, or at **product level**. In both cases, greenhouse gases are measured from upstream to downstream, in three different scopes: upstream scope (3 including product purchases)=, scope 1 and 2, and downstream scope 3

Quality and availability of data

GHG Measurement is hampered by the quality, availability and comparability of the data. Furthermore, emissions should not be counted twice.

A shared method for the carbon impact of products

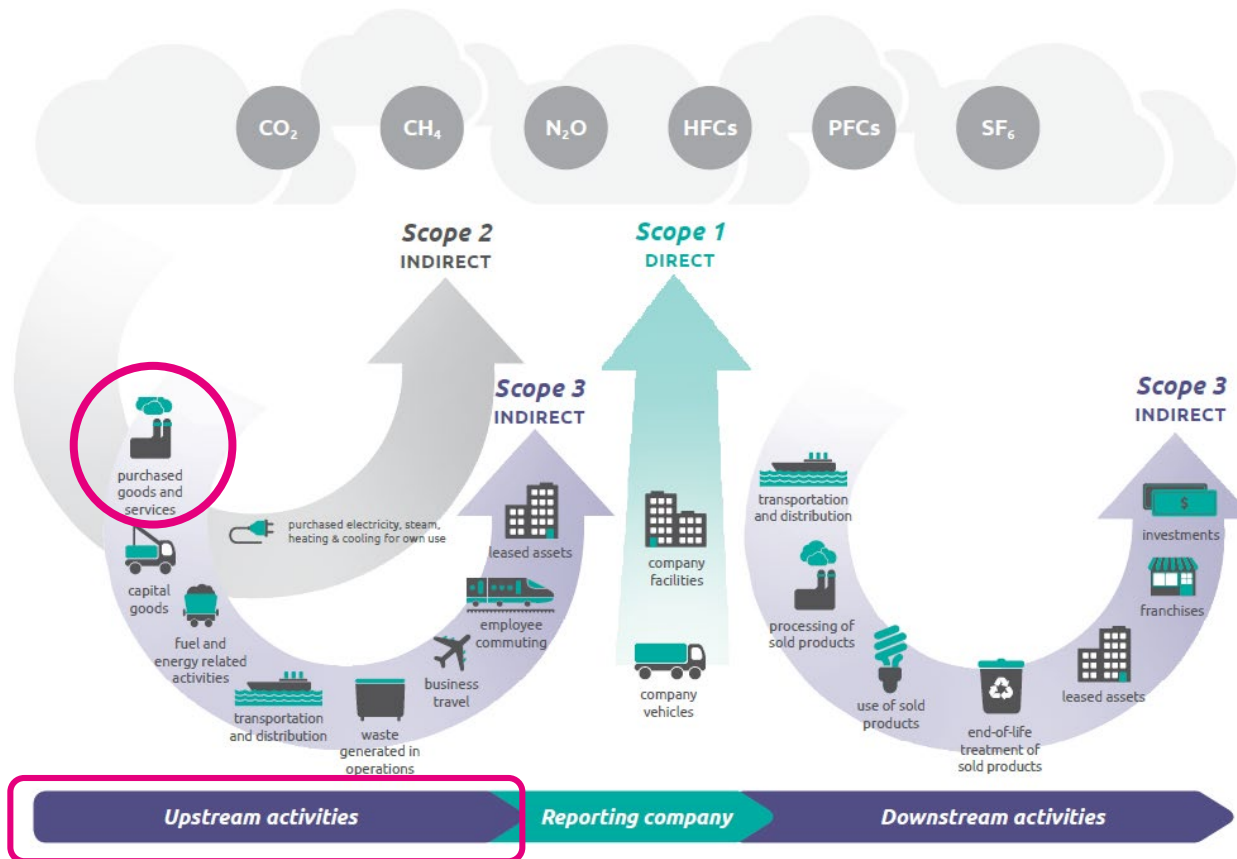
Because Antalis aim to be a **trusted third party**, we explain exactly how to proceed with the carbon footprint of products in the detailed following pages.

INFORMATION ON THE ENVIRONMENTAL CARD

Carbon footprint at **COMPANY LEVEL**

- 01. | PACKAGING APPROACH
- 02. | THE CLASSIFICATION
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Figure [1.1] Overview of GHG Protocol scopes and emissions across the value chain



The carbon footprint at company level is managed globally by the sustainability team, consolidated for all Business Unit (VisCom, Paper, Packaging)

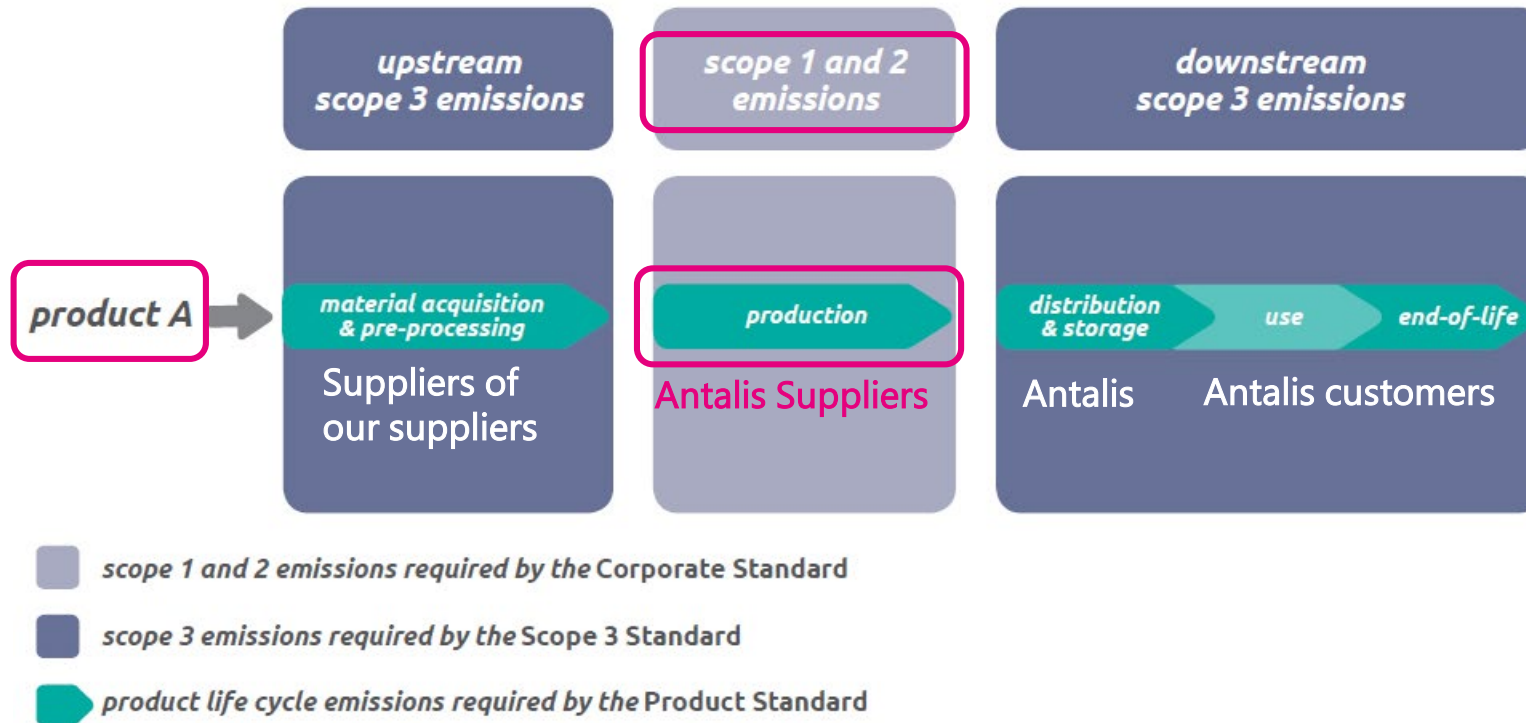
Products purchased from our suppliers are an **upstream** part of our business

At company level, **Scope 1 and 2** are mandatory in most OCDE countries

INFORMATION ON THE ENVIRONMENTAL CARD

Carbon foot print at **PRODUCT LEVEL**

Figure [1.2] Relationship between a scope 3 GHG inventory and a product GHG inventory (for a company manufacturing Product A)



At product level, the information requested from the supplier is part of its carbon impact (**scope 1 and 2**), which is regulated in most OECD countries.

This does not include the impact of materials (suppliers of our suppliers)

The information requested is detailed on the following pages, points 1 to 9.

INFORMATION ON THE ENVIRONMENTAL CARD



Carbon footprint method at PRODUCT LEVEL

1. Goal

For Antalis, the goal is to collect **product information**, the most widely available, at the PIU (product) and SKU (reference) scale, reliable and comparable, based on recognized standards to allow customers to make a more informed choice on the "carbon footprint" of the product.

2. Recommended international standards

Suppliers must use GHG Protocol Product Life Cycle Accounting (LCA) and Reporting Standard 2013 ([www](http://www.ghgprotocol.org)) or ISO 14067:2018 GreenHouse Gases — Carbon footprint of products — Requirements and guidelines for quantification ([www](http://www.iso.org)). The two methods can be used interchangeably knowing that the use of the old GHG Protocol implies its update and each of them appropriate emission factors.

3. Fields of application

Scope 1 and 2 of the suppliers (emissions related to the direct activities of the company)

This option, regulated in most OECD (Organisation for Economic Co-operation and Development) countries, is undoubtedly the simplest, the one on which information should be the most widely available.

Antalis knows that **it is not sufficient to represent the CO2 impact** of the product insofar as it does not include indirect emissions linked to upstream activities (including raw materials) and downstream activities.

But It's a first **essential step** which will contribute to a global dynamic on the measurement and reduction of greenhouse gases.

INFORMATION ON THE ENVIRONMENTAL CARD



Carbon footprint method at **PRODUCT LEVEL**

4. Perimeter limits

The scope of GHG emissions from the supplier (Scope 1 and 2 of the suppliers) to Antalis is limited to “ex-works” or “ex-factory”.

After analysis and testing, for reasons of traceability, complexity, and quantity of data to manage and update, it is not possible at the launch of the program to integrate transport to Antalis warehouses. Suppliers must not consider indirect emissions related to their downstream activities.

5. Representation of the unit for carbon for the environmental card

The result must be calculated in KgCO₂e (which means Kg eqCO₂) per 1 Kg of the product.

6. Product scale representation and PIU to SKU conversion

In the Antalis product reference management, the **SKU (Stock Keeping Unit)** describes a clearly identifiable storage unit. It is a distinct type of item for sale, [1] purchased, or tracked in inventory, [2] such as a product or service, and all attributes associated with the item type that distinguish it from other item types. For a SKU, these attributes can include manufacturer, description, material, size, colour, packaging, and warranty terms. When a business takes inventory of its stock, it counts the quantity it has of each SKU.

The **PIU (Product Information Unit)** describes a grouping of the same item types with different attributes (different SKU of the same product are grouped in 1 PIU).

Most often, the measurement of the product's carbon footprint is done at the PIU scale. To convert a PIU measurement into a SKU, you must use the weight of the SKU product and therefore obtain the ratio KgCO₂e per Kg of product.

The result to be included in the Supplier File must therefore be expressed in **KgCO₂e per 1 Kg of product**.

INFORMATION ON THE ENVIRONMENTAL CARD



Carbon footprint method at **PRODUCT LEVEL**

7. Availability of data

If the data is not available or not strictly in accordance with the method specified by Antalis in the Supplier Sheet and in the Reference, the answer must be "not available".

8. Data Verification

At company level, there is currently no regulatory obligation to verify carbon data by a standardized external third party in Europe and worldwide.

At product level, Antalis does not require data to be verified by an external third party when launching the program.

However, the supplier must provide the carbon data in accordance with the requested method. He agrees by signing that he complies with the requirements.

Antalis will carry out random external verifications, starting from the 4th quarter of 2022 by a specialized consultant, to guarantee the credibility of the information provided to its customers. Antalis must be a **trusted partner**.

9. Regulatory verification

At company level. European requirements for verification of carbon data by an external third party should be generalized at company level from 2024 (on going CSRD directive).

At product level. Single-criterion carbon LCA analysis are also being developed in many companies. They remain voluntary but are the practice of the companies most committed to the low carbon transition, companies engaged in a trajectory validated by SBTi (less than 2° Paris agreement) and ACT programs (Assessing Low Carbon Transition).

INFORMATION ON THE ENVIRONMENTAL CARD

Certification of resources, materials,
raw materials, product components

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PRESERVATION OF BIODIVERSITY

Certified resource

PEFC

CERTIFICATION OF RESOURCES



Certification of the resource relates to the materials, the components of a product, whether virgin or not. For example, the FSC/PEFC certifications for timber; ISCC (biomass or waste).



Certification is a process which is based on verification by an external third party according to a recognised national or international standard.



REFERENCES

- FSC ([www](#))
- PEFC ([www](#))
- ISCC ([www](#))

INFORMATION ON THE ENVIRONMENTAL CARD

Product certification

ADDITIONAL ENVIRONMENTAL INFORMATION	
Product certification	Blue Angel



REFERENCES

(EU) Ecolabel (www); (Fr) NF Environnement; (Germany) Blue Angel; (Nordic countries) Nordic Swan (www)

PRODUCT CERTIFICATION



Certification is a process which is based on verification by an external third party according to a recognised national or international standard.



There are a number of recognised product certification labels. The best known of these are the European Union ecolabel, the French NF environment mark, the German Blue Angel label, and the Nordic Swan ecolabel in Nordic countries.



These labels are founded on a precise set of specifications and third party audits. They cover a broad category of products and services, including packaging products. They contain multiple criteria (materials, production conditions, etc.).

These labels are established based on the ISO 14024:2018 standard: Environmental labels and declarations — Type I environmental labelling — Principles and procedures

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INFORMATION ON THE ENVIRONMENTAL CARD

The additional environmental information

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ADDITIONAL ENVIRONMENTAL INFORMATION

Other product
environmental aspect

OTHER CHARACTERISTICS WITH ENVIRONMENTAL PROPERTIES



In addition to the criteria used for classification and the various information outlined previously for the environmental card, Antalis offers the option to complete these with qualitative information (text) on any property, process or component with a lower environmental impact.



This may be the case for the glues used, for example: glue made from biobased material.

INFORMATION ON THE ENVIRONMENTAL CARD

Production zones

ADDITIONAL ENVIRONMENTAL INFORMATION	
Area of production	Europe

THE PRODUCTION ZONES



To encourage the purchase of packaging products close to their production zones, and thereby limit transport as much as possible, a list of zones of the world is proposed.



The zones to be used are as follows: Western Europe (EU27 + UK); Central and Eastern Europe; Asia; Africa and the Middle East; Oceania, Americas.



The country grid has not been retained as products sometimes come from several sites and production locations, and from different suppliers.

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APPENDIX

Towards an informed choice for our customers



THE ENVIRONMENTAL IMPACTS

General principles

VALUE CHAIN SIMPLIFIED DIAGRAM :
PRODUCT FOOTPRINT

Impacts/phase	SUPPLIER		ANTALIS	CUSTOMERS
	Raw mat	Prod	Retail	Use
Pollution prevention				
Sustainable use of resources				
Climate change				
Preservation of biodiversity				

THE MAIN ENVIRONMENTAL IMPACTS OF THE PACKAGING ARE

- the **production of waste** (recyclable or non recyclable),
- the **use of resources** (renewable or non renewable),
- the **carbon impact**,
- and the **production conditions**.

These are taken into account either in the [environmental classification](#), or [on the environmental card](#) created by Antalis Packaging.

The full environmental impact of a product can be determined by a **multicriteria life cycle analysis**. This analysis is **completed by the manufacturer** of the product when it is designed.

Every step must be included, from the materials to what happens after their use by the customer. The analysis of the environmental impacts across the entire life cycle is a highly complex task to engineer.

THE EUROPEAN UNION HAS SET UP A PRODUCT ENVIRONMENTAL FOOTPRINT (PEF)

Project to determine the harmonised methods for analysing impact. The EU identifies 19 environmental impacts, which include:

- o the depletion of resources,
- o global warming,
- o eutrophication of water (fresh and salt water).

REFERENCES

Product Environmental Footprint Category Rules (PEFCRs) and Organisation
Environmental Footprint Sector Rules (OEFSRs) ([www](http://www.efsa.europa.eu/en/efsarules))

TECHNICAL RECYCLABILITY

General principles

THERE ARE DIFFERENT INDUSTRIAL RECYCLING TECHNOLOGIES (NON-EXHAUSTIVE LIST):



IN THE RECYCLING NETWORK

- **Selective sorting** : the action of sorting and separating different categories of waste
- **Mechanical** : processing of waste using a machine to crush, separate or shred the waste. Washing and drying operations may be included depending on the reclamation process.
- **Organic** : composting or fermentation of biowaste to produce fertiliser or fuel such as biogas (e.g.: methanisation). These processes may be aerobic (using oxygen) or anaerobic (without oxygen).



IN INDUSTRY

In addition to the above 3, according to the processes

- **Chemical** : use of a chemical reaction to process the waste, to separate certain components, for example. This technique is mainly used for plastics (this includes depolymerisation by gasification, pyrolysis, dissolution or solvolysis).

A material which cannot be recycled will be incinerated ("thermal recovery") or sent to landfill: this is known as "final waste".

Considering the diversity of situations in different countries (networks, regulations, sorting practices), **Antalis is adopting technical recyclability.**

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The technical recyclability of a product is the ability of the material or materials to be recycled using existing, accessible technologies.



Ensure that the packaging design makes use of materials or combinations of materials which are compatible with known, relevant and industrially available recycling technologies [...].

EN 13 430 standard: 2004 ("Packaging Requirements for packaging recoverable by material recycling") (www)

EFFECTIVE RECYCLABILITY

General principles

Effective recyclability is only possible firstly, if the **technologies** are **available** for the products in question (technical recyclability), and secondly, if the **collecting and processing** system is also **available**.

Lastly, it depends on the **customer-user** and their **sorting habits**.

Extract from the standard ISO 14021:2016 :

A.

"The collection, sorting and delivery systems to transfer the materials from the source to the recycling facility are conveniently available to a reasonable proportion of the purchasers, potential purchasers and users of the product."

B.

The recycling facilities are available to accommodate the collected materials.

C.

The product for which the claim is made is being collected and recycled."

Extract from the Citeo-Tree methodology (France):

“

It must [...] be checked that the packaging being marketed (in France) relates to recognised industrial collection, sorting and recycling facilities. This check is a key factor in providing a declaration on packaging's recyclability. If these facilities are not available, the packaging will be "theoretically" or "technically" recyclable, but in fact, there is no infrastructure capable of receiving it, which means that it is not effectively recyclable"



REFERENCES

Ref. EN ISO 14021:2016 Environmental labels and declarations – Self-declared environmental claims point 7.7.4 ([www](#))

Ref. Fr. Citeo-Tree Methodology for assessing the recyclability of household packaging ([www](#)) April 2021 | Germany: xxx ([www](#)) | UK xxx ([www](#))

TDS / TECHNICAL DATA SHEET

General principles

The technical data sheet (TDS): is provided by the company which sells/manufactures the product and provides the **technical information deemed necessary for its use**. This is not a standardised document.



A TECHNICAL SHEET MAY BE STRUCTURED AS FOLLOWS (NON-EXHAUSTIVE LIST)

- Name and details of the company (distributor / producer);
- Commercial name / reference / range;
- Description
- Composition
- General properties (physical, dimensional, thermal, mechanical, electrical, chemicals, etc.): any sound technical element characterising the product.
- Applications
- Conditions for use and transformation
- Storage and transport conditions
- Packing

The technical elements must refer to a standard, indicating the conditions for measurement.

The date created and the date last updated are usually stated.

TRUST FRAMEWORK : SUPPLIERS' TDS



The information provided by the supplier is binding on them.

The supplier industrial TDS must be provided to Antalis, on request during random spot checks linked to the environmental classification.

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SDS / SAFETY DATA SHEET

General principles

The Safety Data Sheet (SDS)

or Material Safety Data Sheet (MSDS) is "a document which provides information relating to the protection of health, safety in the workplace, and the environment, notably indicating the protective equipment and the measures to be taken in an emergency" (INRS).



It must be based on the European regulation EU 2015/830 ([www](#)), which modifies the original REACH regulation EC 1907/2006 ([www](#)).

On an international level, the SDS is based on the ISO 11014 standard ([www](#)) which adopts the same structure as the European standard based on REACH.

The safety data sheet must be written in the language of the country (e.g. French law 31-12-1975): the compulsory languages can be found on the ECHA website ([www](#))



It comprises 16 standardised sections which define the information that is essential to users clearly and distinctly ([www](#))

TRUST FRAMEWORK : SUPPLIERS' SDS



The information provided by the supplier is binding on them.

The supplier industrial SDS must be provided to Antalis, on request during random spot checks linked to the environmental classification.

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REFERENCES

- EU-ECHA: Guide on the safety data sheets and the exposure scenarios ([www](#)) and the Guidance on the compilation of safety data sheets ([www](#))
- France INRS: The safety data sheet ([www](#)) | Germany DGUV ([www](#)) | UK HSE ([www](#))

CODIFICATIONS

The codifications for non-biobased products

THE MOST COMMONLY USED NON-BIOBASED COMPONENTS IN PACKAGING

PE	(CAS: 9002-88-4) Polyethylene. There is a distinction between LDPE: Low Density Polyethylene and HDPE: High Density Polyethylene
PP	(CAS: 9003-07-0) Polypropylene
PS	(CAS: 9003-53-6) Polystyrene; HIPS: High Impact Polystyrene; GPPS: General Purpose Polystyrene
PA	Polyamide: this designates a family, with each member having its own CAS number: PA 6 (Polyamide 6), PA 6/6 (Polyamide 66), PA 12, PA 11, etc.
PVC	(CAS: 9002-86-2) Polyvinyl Chloride
PET	(CAS :25038-59-9) Polyethylene Terephthalate

Polymers are codified based on the ISO 1043-1 standard: 2011 ([www](#)) and certain specific terms on the ISO 472 standard: 2013 ([www](#)).

Each chemical product is also identified with a CAS (Chemical Abstract Service) number which is recognised globally ([www](#))



REFERENCES

France, the chemical substances portal provided by INERIS (support for REACH) provides the risks and impacts of these substances ([www](#)) in Germany ([www](#)) in the UK ([www](#))

CODIFICATIONS FOR MATERIALS

The codifications for biobased and renewable products

Polymers are codified based on the ISO 1043-1 standard: 2011 ([www](#)) and certain specific terms on the ISO 472 standard: 2013 ([www](#)), including for biobased polymers.

Each chemical product is also identified with a CAS (Chemical Abstract Service) number which is recognised globally ([www](#)). Here are a few examples:

The most commonly used 100% biobased components in packaging

PLA	(CAS: 26100-51-6): Polylactic Acid
Bio PE, Bio PA	(PA 11,10/10)
PEF	(CAS: 28728-19-0): Polyethylene Furanoate
PHA	Polyhydroxyalkanoates, family of biodegradable polyesters; - o PHB (CAS 26063-00-3): Polyhydroxybutyrate - o PHBV (CAS: 80181-31-3): Polyhydroxybutyrate-valerate
STARCH	α (1-4)D-glucose homopolymer
CELLULOSE	β (1-4)D-glucose homopolymer - o Cellulose ester (CA: Cellulose acetate, cellulose butyrate, etc.) - o Cellophane, paper, cardboard

The most commonly used partially biobased components in packaging

Bio PTT	(CAS: 26590-75-0) Polytrimethylene terephthalate
Bio PET, BioPP Bio PA	(PA 6/10,10/12)
PBS	(CAS: 25777-14-4) Polybutylene succinate
PBAT	(CAS: 60961-73-1) Polybutylene adipate terephthalate

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QUESTIONS & ANSWERS



QUESTION RELATING THE CLASSIFICATION COMPARISON SCOPE ?

Why don't you compare packaging products based upon a similar material ?

THE ANSWER IS NO

The Classification aims to compare products with a same application whatever the raw material type.

Our goal is to help customers in selecting more eco-friendly products according to criteria that were identified in the European Survey conducted in 2021 as the most important to them.

The environmental impact is evaluated through 4 environmental criteria : Reach SVHC, Recycled material, Renewable material, Recyclability (Technical).

QUESTIONS RELATING TO RECYCLED MATERIALS

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Do you include PCRs and PIRs as recycled materials ?

For recycled materials, we use the proportion, by mass, of recycled material in goods or packaging.
Only "pre-consumer" and "post-consumer" materials must be considered as recycled content, in accordance with the following definitions for using these terms.

01. Pre-consumer material (before consumption) : PIR (Post Industrial Recycled)

"Material diverted from the waste stream during a manufacturing process, excluding reutilization of materials such as rework, regrind or scrap generated in a process and being reincorporated in the same process that generated it."

ISO 14021:2016.

This is waste in the industrial phase.

02. Post-consumer material (after consumption) : PCR (Post-Consumer Recycled)

"Material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product which can no longer be used for its intended purpose. This includes returns of material from the distribution chain."

ISO 14021.

This is the end user's waste.

REFERENCES

ISO 14021: 2016. Environmental labels and declarations. Self-declared environmental claims. Type II environmental labelling.

QUESTIONS ON THE DIFFERENCE BETWEEN VIRGIN MATERIALS AND RECYCLED MATERIALS

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Is wood fibre which has been recycled considered biobased in the classification ?

In the classification, we decided to distinguish so-called **virgin material** derived from nature and from the biomass (forestry, agriculture), which is classed as "**biobased**" or sometimes "**renewable**", from material which has been recycled, classed as "**recyclate**" or "**recycled material**".

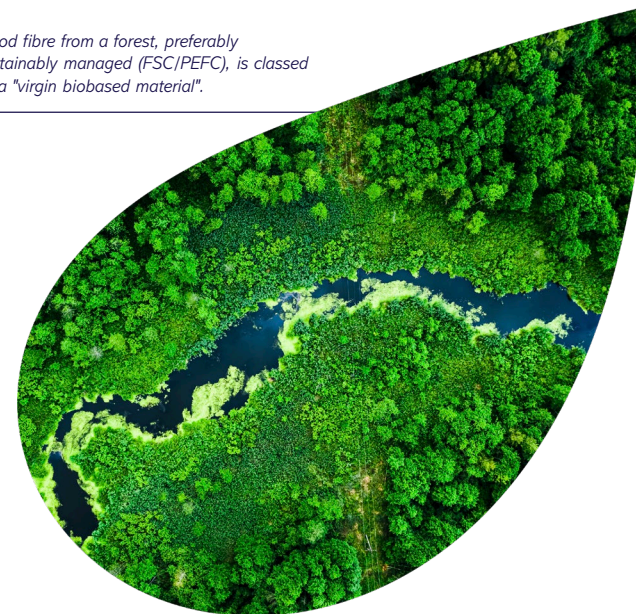
Wood fibre which has been recycled is therefore classed as "recycled material".

Wood fibre from a forest, preferably sustainably managed (FSC/PEFC), is classed as a "virgin biobased material".

When these two origins are taken into account in the classification, the total proportion (%) must not exceed 100%.

"Biobased" and "renewable" are two concepts with very similar definitions and usage, since materials which come from nature, from the biomass (biobased), are renewable.

Wood fibre from a forest, preferably sustainably managed (FSC/PEFC), is classed as a "virgin biobased material".



REFERENCES

Le terme « biomasse » est défini dans la norme ISO14021:2016

QUESTION ON HOW TO CALCULATE THE WEIGHT OF DIFFERENT MATERIALS.



How to complete the information on the origin of the products when the product is multi-component?

The question asked is: "The MasterIn Performance consists of 4 components: Top film, bottom film, adhesive and siliconised paper. The top film is made of 50% PCR material. The bottom film is made of 50% PIR material. The adhesive is normal. The paper is of FSC-mix origin. Do I enter the percentage of the film broken down to the material content of a single bag or how do we do it? Can I specify FSC-Mix."

Only components from recycling process (PCR and PIR) and virgin components from biomass ("virgin bio-based") should be included.

Where products are composites, i.e. a mix of virgin and recycled materials, they should be classified as PCR recycled (Post-Consumer Recycled). They are not pure virgin bio-based. A FSC-mix is partly from virgin biobased and partly from PCR material.

In this example:

Material	Weight share of the material	Origin	Calculation	Field to be completed in the supplier data sheet
Top film	X % weight	50 % PCR	X % weight x 50% (PCR)	% of PCR recycled material weight
Bottom film	X % weight	50% PIR	X % weight x 50% (PIR)	% of PIR Recycled material weight
Paper	X % weight	FSC Mix	X % weight	% of PCR recycled material weight
Adhesive	Not relevant	Not relevant	Not relevant	none

In the "PCR" field, the two percentages should be added together

QUESTIONS RELATING TO RECYCLED MATERIALS

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This is the end user's waste.

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