

# PACFAST Packaging Carbon Footprint Fast and Standardised

Facts

## Who we are Department Life Cycle Engineering

#### **Expertise for sustainble solutions**

The department Life Cycle Engineering supports companies with the latest findings from current research in order to put sustainability into practice: application-orientated and future-oriented for sustainable products & technologies.

#### **Overview of product areas**



**Sustainability assessment** (e.g., LCA, EPD, PCF, PEF, critical reviews)

**Software and data bases** (e.g., GENERIS<sup>®</sup>, Fraunhofer AMP database)





#### Life Cycle Engineering Pioneers since 1989

With 35 years of experience in applied research, the Department Life Cycle Engineering is recognized worldwide for its methods, software and data solutions in the field of sustainability assessment.





### What is PACFAST?

Application that enables carbon footprints and other environmental indicators to be determined quickly, efficiently and soundly on the basis of the data and recyclability assessment already created in CHI-RA (cyclos-HTP)

### What is needed to use PACFAST?

Existing or emerging collaboration with the cyclos-HTP Institute, to determine recyclability.

### What do you get by using PACFAST:

- Generation of a carbon footprint or other environmental indicators in a matter of days.
- Standardised process that requires no additional work on your part (all other inputs are optional and help to specify the result).
- Report and results tables of the carbon footprint, with background information on the methodology.
- Competent expert knowledge based on 35 years of experience in LCA.
- Calculation consistent with ISO 14040/14044 and PEF standard.



## **PACFAST** Flow Chart





## **PACFAST** System boundaries

Production phase	A1	Extraction and processing of raw materials and processing of secondary materials used as input (e.g. recycling processes)		
rioudelloir phase	A2	Transport to the manufacturer		
	A3	Manufacturing		
Packaging consisting of several	A4	Transport for joining		
componentes	A5	Joining		
Utilisation phase	B1	Use or application of the product		
	B2	Inspection, maintenance, cleaning		
	B3	Repair		
	B4	Exchange, replacement		
	B5	Improvement, modernisation		
	B6	Energy consumption for operating the packaging (e.g. active refrigerated packaging, etc.)		
	B7	Transport during the utilisation phase		
Disposal phase	C1	Return and sorting / separation		
	C2	Transport for waste treatment		
	C3	Waste treatment for reuse, recovery and/or recycling		
	C4	Thermal utilisation		
Credits and burdes outside the	D1	Credits from material recycling		
life cycle	D2	Credits from energy recovery		

The life cycle phases shown in black in the table are included in the life cycle assessments as part of PACFAST V1.0; the greyed-out phases are not considered. Known distancey of transportation can be included in the assessment.



Under D, all influences are considered that are not directly part of the system under consideration, but are caused by it. These can be, for example, credits at the end of life, but also environmental impacts from previous life cycles of the material. According to the Circular Footprint Formula, these are allocated proportionally to the current life cycle.



## **CO<sub>2</sub> Footprint Report**

### Sample output





## PACFAST

### Additional information (optional)

Packaging	Component List	Materials	biobased?	Production location known?	Energy mix known?	Energy consumption known?	Transport routes production known?
Packaging xy	Component 1	Material 1.1	Yes	yes, DE	no	yes, 80 MJ/packaging	yes, 500 km/packaging
		Material 1.2	Yes				
		Material 1.3	No				
	Component 2	Material 2.1	No	no	yes, 80% renewable energies		
		Material 2.2	no				

The query is generated after the data is transmitted and can be used to specify the results. Details can be filled in at material, component or packaging level depending on knowledge



## **PACFAST** Opportunities for cooperation

#### Individual analysis

- Evaluation of a packaging and possibility to analyse the components
- Reporting

#### Group analysis

- Possible from 10 packages
- Same procedure and result as individual analysis

#### Portfolio analysis

- Evaluation of the complete product portfolio
- Reporting of a key figure for an aggregated portfolio
- Reporting of individual key figures possible by arrangement

