

SilentReed LCA



Whenever we're looking for new designs, products or materials, nature is always our first source of inspiration.

We strive to create acoustical solutions that not only check the boxes of functionality and design, but that also contribute to creating a better tomorrow for our planet.

This Fast Track LCA is a quick assessment tool to determine the environmental impact of our products. We use it to assess the different steps in our production process and material usage. The FT LCA allows us to optimize the sustainability of our products at the start of the design process, resulting in significant environmental gains. The calculations are based on third-party life-cycle inventory databases which are in compliance with ISO 140040, 140044, EN15804, and the LCA handbook of the ILCD. The eco-costs indicator system is in compliance with ISO 14008.

In this FT LCA we differentiate between eco-costs and carbon footprint.

Eco-costs are the (marginal) costs which should be made to reduce the environmental pollution and materials depletion in our world to a level which is in line with the carrying capacity of our earth. As such, the eco-costs are virtual costs, since they are not yet integrated in the real life costs of current production chains.

A carbon footprint is the total amount of greenhouse gasses (including carbon dioxide and methane) that are generated by our actions. The carbon footprint is expressed in kg CO₂e, in which all greenhouse gas emissions (in kilograms) are converted to the CO₂ equivalent. We work primarily with biobased materials that store CO₂ in biomass (biogenic carbon). This stored CO₂ is subtracted from the carbon footprint to calculate the total emission of our product.

According to our calculations Silent Reed has a negative carbon footprint of -4 kg CO₂e, which means that for every square meter Silent Reed we produce, we actually decrease atmospheric CO₂. Silent Reed is therefore a very environmentally-friendly product.



Reed growth

-27 Kg CO₂e

Harvest

Transport to Reed commerce Miedema

0,5 Kg CO₂e

Transport to Het Stille Verzet

0,5 Kg CO₂e

Plywood
-1 Kg CO₂e

Reed
-26 Kg CO₂e

Adhesive
21 Kg CO₂e

Assembly
2 Kg CO₂e

SilentReed

-4 Kg CO₂e

The results in this FT LCA relate to the functional unit of 1 m² SilentReed acoustic panels.



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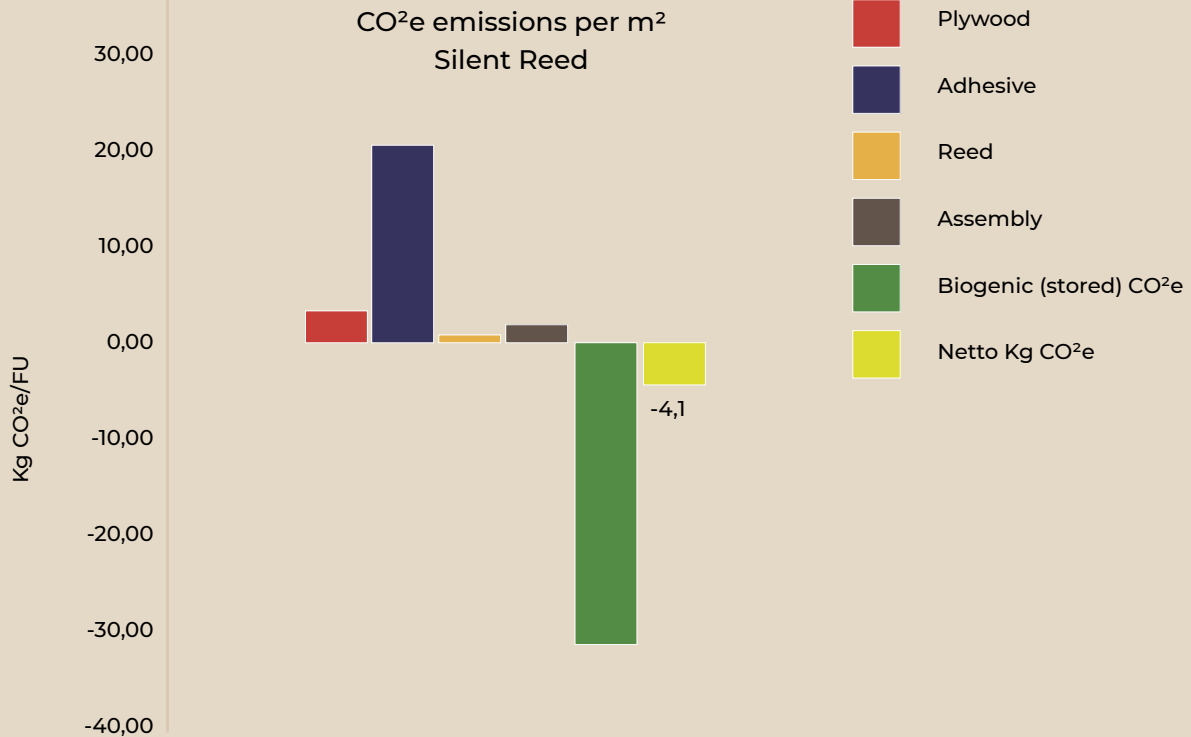
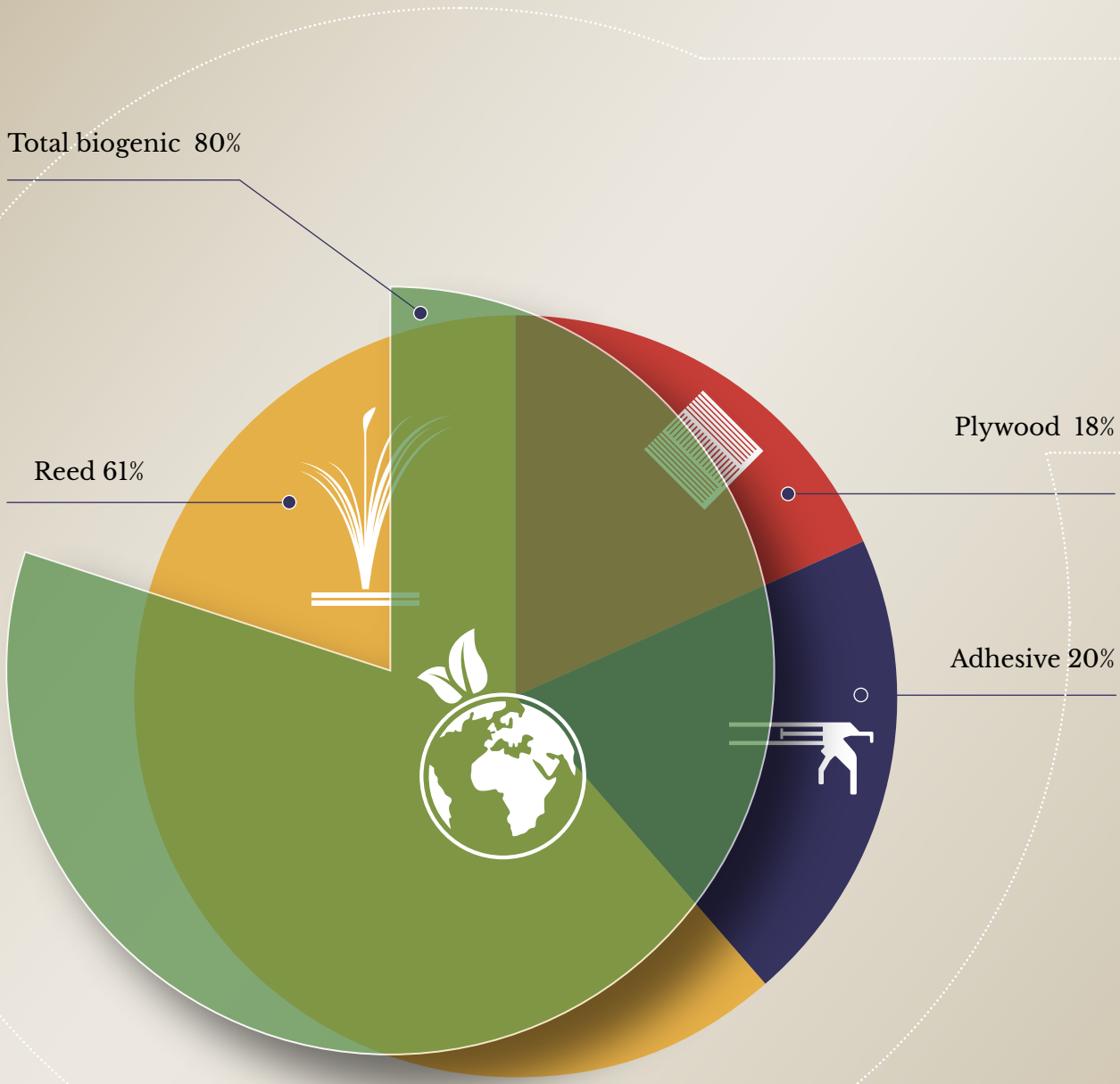
Life Cycle Inventory	Eco-cost (euro)	Carbon footprint footprint (Kg CO ² e)	Biogenic (Stored) CO ² e	Netto Kg CO ² e
Plywood	1,10	3,51	-4,72	-1,21
Adhesive	8,69	21,03	0,00	21,03
Reed	0,27	0,98	-27,01	-26,03
Assembly	0,55	2,13	0,00	2,13
TOTAAL				-4,08

Total biogenic 80%

Reed 61%

Plywood 18%

Adhesive 20%





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