

LIFE CYCLE ASSESSMENT

Up to 77 % CO₂-eq. savings with **SWISSFEEL-2-CYCLE**

As part of an independent LCA (Life Cycle Assessment) study by Carbotech AG, Basel, various mattresses were compared in terms of their life cycle assessments. The background to this is the fact that conventional hotel mattresses usually have to be disposed of well before the end of the product life cycle for hygienic reasons. This is usually done via waste incineration. This means that the hotel industry is largely responsible for both environmental pollution and cost-intensive squandering of resources since mattresses are replaced unnecessarily early.

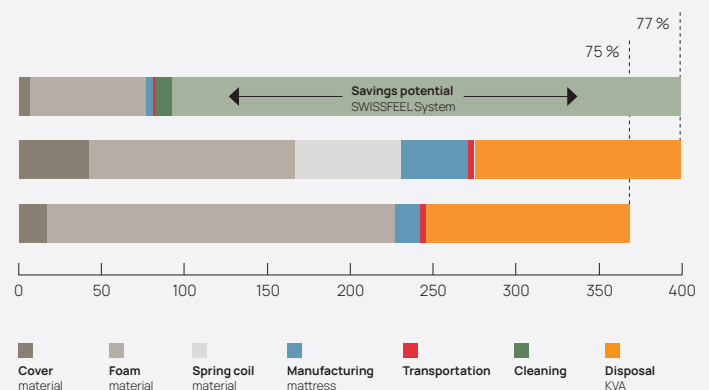
Swissfeel can solve these problems and offers with 2-CYCLE an alternative to the previous handling of hotel mattresses. SWISSFEEL-2-CYCLE combines two cycles. cycle 1 is based on the fully washable mattresses from Swissfeel, where regular washing, e.g. every five years, can significantly extend the useful life of the mattress. And once the stress limit has been reached, the mattresses switch to cycle 2, after renewed sanitization, for complete recycling.

To quantify the CO₂-eq. of SWISSFEEL-2-CYCLE, Carbotech AG, compared the life cycle assessments of conventional foam and spring coil mattresses with Swissfeel, as part of an independent study. Various scenarios were calculated in a standardized procedure, and emissions and resource consumption were considered quantitatively over the entire life cycle and evaluated using scientifically established methods. As a result, Swissfeel has a smaller footprint, measured in kg CO₂-eq., of up to 77%* than comparable conventional mattresses. Converted to a single 100 room hotel or apartment building, this could, in addition to the financial benefits, save over 60 tons of CO₂-eq., which is equivalent to 84 million UBP (environmental impact points) or 17 tons of heating oil.



extended product usage
SWISSFEEL washing service
for mattress (cover & core)

complete recycling
of the whole mattress
(cover & core)



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Original data of the independent study

Every product and every manufacturing process pollutes the environment and squanders resources. There is no such thing as climate-neutral production, and even planting trees does not neutralize the resulting environmental impact (keyword: green washing). Therefore, the most sustainable products are those that do not have to be produced in the first place.

Therefore, Swissfeel consistently focuses on both long-term product use and a manufacturing process in Switzerland that is as environmentally friendly as possible. Long-term product use through SWISSFEEL-2-CYCLE significantly reduces the number of mattresses that need to be produced over time, and the expensive but CO₂-energy-efficient manufacturing location in Switzerland and the special Swiss Mineral Foam reduces the environmental impact.

As part of the independent study by Carbotech AG, Swissfeel was compared with conventional foam and spring coil mattresses. This was also done considering different periods of use in order to reflect the intervals that have been common in practice to date when replacing mattresses (between five and eight years).

EIP	SWISSFEEL mattress	Spring coil mattress	Foam mattress
Cover material	9'794	62'963	29'383
Foam material	109'874	194'936	329'621
Spring coil material	-	115'533	-
Manufacturing process	16'598	64'231	49'795
Transportation	1'716	7'244	5'148
Cleaning	17'465	-	-
Disposal	-	131'027	131'175
Sum	155'448	575'935	545'122

kg CO ₂ -eq.	SWISSFEEL mattress	Spring coil mattress	Foam mattress
Cover material	6	42	17
Foam material	70	124	209
Spring coil material	-	64	-
Manufacturing process	5	40	16
Transportation	1	4	5
Cleaning	10	-	-
Disposal	-	124	123
Sum	92	398	368

*Source: Carbotech AG, Basel – 2023 | Calculated according to IPCC 2021, 100a
The comparative mattresses were selected based of identical formats, comparable firmness/lying comfort, and price ranges. The foams are PU foams in all cases. The figures shown here correspond to the comparative period of five years for conventional mattresses based on Dehoga hotel star classification and 15 years for Swissfeel including two washing intervals.