

# Sustainability evaluation of fermacell

Sustainability performance of Fermacell fibreboard compared to other gypsum boards. Evaluation performed by NIRAS A/S.

## About the evaluation

NIRAS has assessed and evaluated the environmental performance of Fermacell Gypsum Fibreboard compared to Environmental Product Declarations (EPD's) of products available in the market. The EPD from Fermacell Fiberboard has been compared to 21 gypsum plasterboard products. The comparison is done on the production of the products (cradle to gate) and do not take use, lifetime or disposal into account. The unit of comparison is 1m<sup>2</sup> of plasterboard.

## Important notification!

In order to make a final conclusion on which product has the lowest environmental impact the whole lifecycle must be considered. This comparison is only done on the production stage (A1-A3) of the EPD. Hence, no final conclusion on environmental performance can be made and the following results only reflect the production process.

Main conclusion from the comparison:

**In the production stage, fermacell outperforms all other gypsum board environmentally.**

The production of Fermacell has a lower impact on almost every environmental impact category than the 21 products it has been compared to.

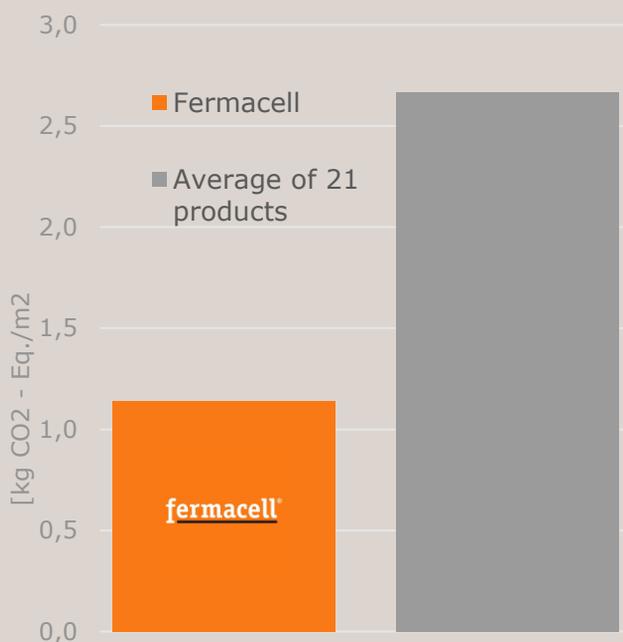


Figure 1 is a comparison between fermacell and a product average in the impact category "Global Warming Potential"

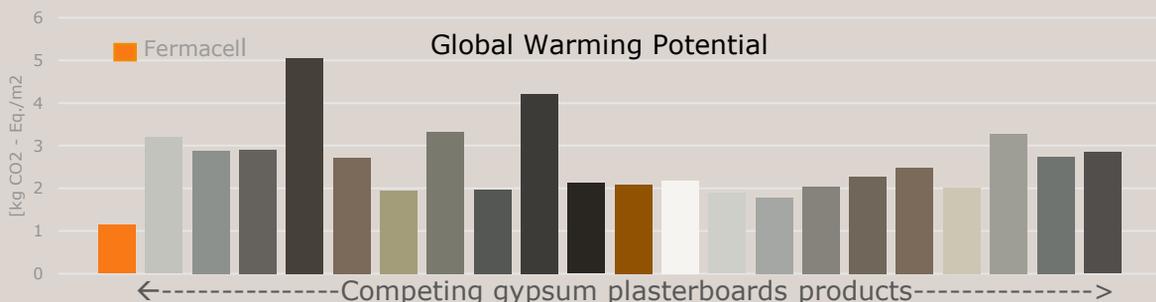


Figure 2 displays the global warming potential for all investigated product

# Background for sustainability evaluation

The results are made on a comparison between fermacell and 21 Environmental Product Declarations (EPD's) from gypsum board product manufacturers with similar functionality than fermacell. The EPD's of the competing products are found at [ibu-epd.com](http://ibu-epd.com), [edp-norge.no](http://edp-norge.no) and [environdec.com](http://environdec.com). Impacts on global warming are highlighted in figure 1 and 2, but seven impact categories have been assessed and, as displayed in figure 3, fermacell performs better than average in each category. In two categories, Acidification and Abiotic depletion (non-fossil), some competing products' EPD's show a lower impact than fermacell, but in every other impact category fermacell has the lowest impact on the environment.

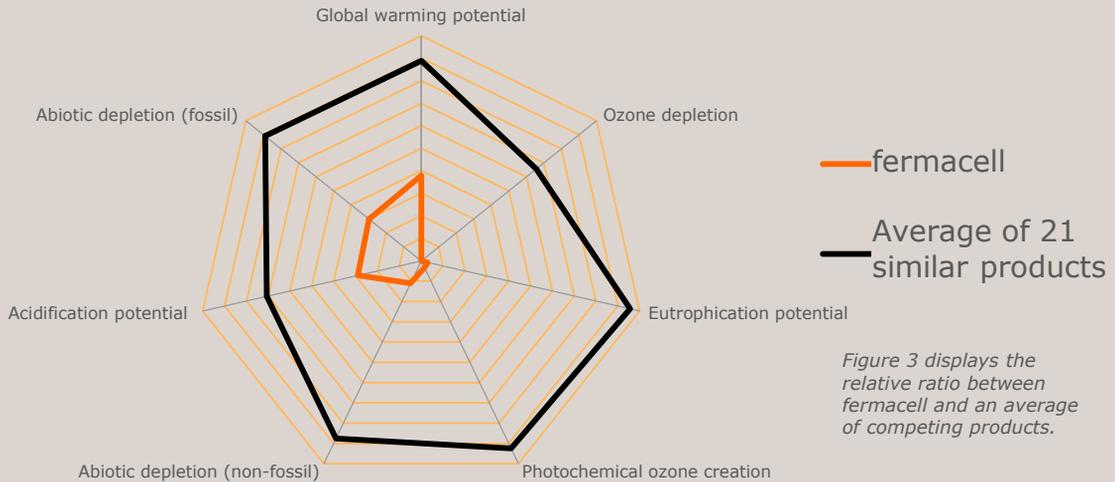


Figure 3 displays the relative ratio between fermacell and an average of competing products.

## The product: fermacell Gypsum Fibreboard



*Fermacell has a very simple and homogenous composition of 80% recycled gypsum and 20% cellulose fibers derived from recycled papers mixed with recycled water. There are no additives or preservatives used in the production of the fiberboard.*

## Environmental assessment by



**NIRAS** is an independent self-owned multidisciplinary consultancy firm presently with corporate offices in more than 10 countries and on-going operations in more than 85 countries worldwide. NIRAS has a staff of approximately 2,100 employees, of which about two thirds have an academic degree with the majority as MSc in Engineering. NIRAS provides consultancy from A to Z within the building industry.

### Sustainability experts

NIRAS consults within sustainable transition, circular economy, environmental assessments e.g. LCA's. NIRAS consults within certification schemes e.g. EPD, DGNB, LEED and BREEM,



Figure 4 shows the climate adaptation at the freight area in Aarhus