

# fibreC Sustainability

## Holistic approach

Our principle of sustainability and our responsibility towards the environment are backed by the international environmental management certificate ISO 14001. We set ourselves high standards in the protection of the environment and use innovative technologies with ecological responsibility. fibreC, unlike most of the products available on the market, is based on organic base materials and it is fully recyclable. Profitability and sustainability are promoted by the economical use of resources.

The variety and efficiency achieved with fibreC facilitate high-quality, visually attractive, lasting and cost-effective constructions. This shows how the authentic material fibreC meets the current trend for natural, environmentally-friendly and sustainable, value for money materials, producing an aesthetic and modern effect.

## Food safe und no danger to health

The well-tried use of fibreC panels in professional bread and pizza ovens and the associated strict tests and food and certificates give the ecological material fibreC an excellent health certificate. Glass-fibre reinforced concrete is ecologically sound and thus completely safe from a health point of view. The fibreC baking surface has all the tests and certificates relating to food safety and security.

- Environmental management certificate **ISO 14001**
- **IBO - Certificate** from the IBO Institute in Vienna
- Listed in the **GreenSpec® Product list** / Leed Points
- Use of **exclusively high-quality raw materials**
- From **purely mineral components**
- Can be **100 % recycled**
- **Long-term stability**
- **Low maintenance** costs
- 90 % thinner than similar concrete panels
- Food safe & **safe from a health point of view**



Concrete has never been so green!

# A Look at the Green Facts

## fibreC close to nature



### 100 % recyclable

fibreC is based on purely organic base materials and is thus fully recyclable. Profitability and sustainability are promoted by the economical use of resources.



### ISO 14001

We set ourselves high standards in environmental protection and environmental management at Rieder is ISO 14001-certified.



### IBO Certification

The production of fibreC has 49% less greenhouse potential than fiber cement panels and aluminium sheeting. With its excellent Eco profile, fibreC consumes 78% less primary energy than high pressure laminate panels (Source: IBO product test 09/2007).



### GreenSpec & Green building

fibreC is part of the product list GreenSpec®. GreenSpec offers useful information on energy-saving construction and lists products that meet strict biological and ecological criteria for buildings.



### Carbon Footprint

The primary energy requirement for the production process of fibreC glassfibre reinforced concrete is only 202 MJ/m<sup>2</sup> (PEI). The manufacture causes 14.0 kgCO<sub>2</sub>eq/m<sup>2</sup> greenhouse potential and 0.04 kgSO<sub>2</sub>eq/m<sup>2</sup> acidification potential (AP).



### VOC-free & food safe

fibreC is free of pollutant emissions and thus absolutely safe for human health. Declaration of no-objection/ Food safety No. 28766 U 09



### Vision

The nature and the eco-friendliness of fibreC are of particular concern to us. We work round the clock to become even better and more eco-friendly despite the excellent life cycle assessment.

# Life Cycle Assessment

## Objective sustainability

The methodology of the life cycle assessment was developed to achieve an objective evaluation. It is regulated in the Norm DIN EN ISO 14040 and has been used for this study. As a result, the ecological choice of building materials can be based on scientific findings.

All material and energy contributions of the individual processes of manufacture and use of a cladding panel have been balanced in the process. These include the production of resources, the energy supply, the manufacture of the products required, the provision of the infrastructure, transport services and the use and disposal of the particular products. As part of the impact assessment, the emissions in air, water and soil were calculated and summarised them using equivalence factors into the following 3 impact categories (OI3 Index):

- Primary energy content not renewable (PEI ne)
- Global warming (GWP)
- Acidification (AP)

## Primary energy content not renewable (PEI ne)

The "Primary energy content not renewable" is calculated from the upper calorific value of all those non-renewable energy resources, used in the manufacturing chain of the product.

## Global warming (GWP)

The greenhouse potential GWP (Global Warming Potential) describes the contribution of a substance to the green house effect relative to the contribution of a similar amount of carbon dioxide.

## Acidification (AP)

Acidification is caused mainly by the interaction of nitrogen oxide- (NO<sub>x</sub>) and Sulphur dioxide gases (SO<sub>2</sub>) with other components in the air. The Acidification Potential (AP) is a measure of the tendency of a component to become acidified.

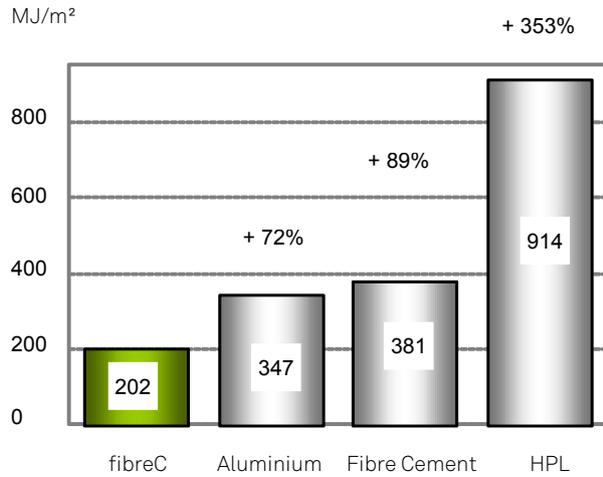
Source: [www.ibo.at](http://www.ibo.at)

## IBO Test certificate for ecologically recommendable product

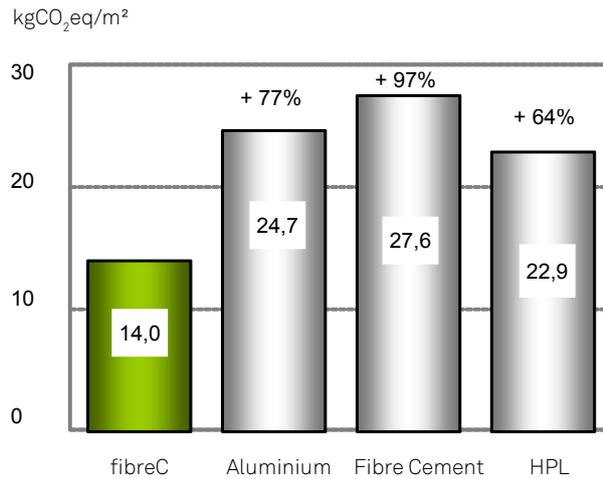
Comparisons show that the production of fibreC, unlike other cladding materials, is completed in a very ecologically sound manner. The manufacture of fibreC has 49% less greenhouse potential than in fiber cement panels and aluminium sheeting. With its excellent eco profile, fibreC consumes 78% less primary energy than high pressure laminates.

The IBO test certificate is regarded as a recognised and independent test seal, issued only to selected products that meet strict environmentally compatible and ecological criteria. It facilitates transparency and represents a reliable aid to decision-making for ecologically recommendable products. (Source: IBO Product test 06/2009).

## Primary Energy (PEI ne)



## Global Warming (GWP)



## Acidification (AP)

