



FAGFLIS

SUSTAINABILITY

Ceramic tiles – for a sustainable future.



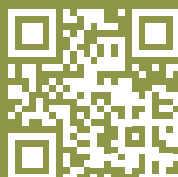
FAGFLIS SUSTAINABILITY

2025

Vs. 01.03

www.fagflis.no

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We are dedicated to reducing our climate emissions.

The world has a climate challenge. As a leading distributor of ceramic tiles and accessories in Norway, we work for a better future while reducing our impact on the environment.

At FagFlis, we work actively to reduce our emissions. Mapping climate emissions throughout our value chain has been an extensive task, and we cooperate closely with our partner CEMAsys to compile all the necessary documentation.

This documentation makes up our total carbon footprint, and the figures enables us to work systematically with our emission reduction.

Our aim is that FagFlis, together with our producers, will reduce our emissions and our impact on the climate. This magazine will provide you with insight into our environmental work and knowledge of how you can take a more sustainable choice in building materials.

Ceramic tiles are produced from natural raw materials, are made to sustain decades of high traffic wear and tear and do not release emissions to the indoor environment. We are convinced that ceramic tiles are highly relevant as a building material in the future.



Read about our climate compensated collections on page 5.



Planting of mangrove trees in the Heyerdahl Climate Park. Mangroves have a unique ability to bind carbon from the atmosphere and they capture up to five times more CO₂ than terrestrial tree species.

CLIMATE COMPENSATED COLLECTIONS

Our climate compensated collections is the complete solution for your projects.

As an importer of ceramic tiles and accessories, the production process is an integral part of our value chain, and our GHG protocol highlights this under Scope 3*. Our producers' EPD** gives us a clear picture of each product's Global Warming Potential (GWP).

When we know the product's GWP, we can take active action to compensate for the product's emissions, and that is precisely what FagFlis has done.

For selected collections, we have fully compensated the products' carbon emissions with climate credits. The project Heyerdahl Climate Park restores and plants mangrove forest in Myanmar, and through our purchase of credits we have financed the planting of thousands of new mangrove trees in this park.

You can now choose a complete solution for your project, which includes climate compensated adhesives, tiles and grout. Look for this label when you are building new or renovating.



*Scope 3: Includes all indirect emissions in the company's value chain, such as extraction of raw materials, production, transport and logistics, waste management and the like. **EPD: Read more on page 12.





HEYERDAHL CLIMATE PARK

The Heyerdahl Climate Park restores mangrove forests in the Ayeyarwadi region of Myanmar. Only 16% of the original forest remains, and restoration will – in addition to capturing CO₂ from the atmosphere – improve socio-economic conditions and habitats in the region.

The project aims to restore and protect over 2,000 hectares of mangrove forest. The work on reforestation in this area will continue for a total of 20 years, until 2035. By then, the target is 9,1 million new mangrove trees with the potential to capture 184.006 tCO₂ each year.

Project ID: 2088

<https://wif.foundation/ongoing-projects>



Read more about
Heyerdahl Climate
Park

One new mangrove tree
can sequester 1 tCO₂ over
a 20-year period.



MANGROVE

Mangroves belong in tropical areas. The tree grows in seawater, and the special root system forms a good habitat for many species. Large mangrove forests provide natural protection against extreme weather and tsunamis, and mangrove roots help filter water and protect nearby coral reefs.

Mangroves have a unique ability to bind carbon from the atmosphere and they capture up to five times more CO₂ than terrestrial tree species. A new mangrove tree can store 1 tCO₂ during its first 20 years.

80% of the carbon captured is stored in the soil, and fully grown trees produce enough oxygen for four people.



Germinated mangrove seeds is shaped like stalks with a pointed end. When they fall down naturally, they burrow into the ground and form roots within a few hours. These seeds provide the basis for new planting of forests. Photo: CEMAsys



EPD

EPD documentation is an international standard that indicates the product's GWP - *Global warming potential.*

EPD, Environmental product declaration, is a document that states a product's impact on the environment based on ISO 14025. The document makes it easier to compare products with similar functions, and thus make choices that are more sustainable.



FagFlis
Miljøhåndbok
(Environmental
handbook)

EPDs are transparent and objective, and the figures give a clear picture of the reality behind the production. The verification is done by a third party and the document is free and freely available to everyone.

The EPD will state information about the product's life cycle assessment and GWP - Global warming potential. These figures (GWP A1-A3*) form the basis for how we can compensate our products with climate credits.

At fagflis.no/miljo/ you will find our Environmental handbook (*Miljøhåndbok*) with EPDs from our suppliers. If you are unable to find what you need, please contact us.

DAPHabitat System

ENVIRONMENTAL PRODUCT DECLARATION

www.daphabitat.pt

[according to ISO 14025, EN 15804:2012+A1:2013 and EN 15942]



Registration Number: DAP 002:2019



ECO EPD registration number: 00000878

Porcelain tiles

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PAVIGRÉS CERÂMICAS, S.A.



PAVIGRÉS[®]
GRUPO



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You can find EPS's from our producers at fagflis.no/miljo/

CERAMIC TILES

Products with high quality, good documentation and a long service life are essential to contribute to a more sustainable choice of building materials.

Ceramic tiles are a widely used material in the building sector, both for new construction and renovation of existing buildings. The tiles are frequently used in wet rooms, but also in other areas such as floors, outdoor areas, facades and swimming pools.

One of the great advantages of ceramic tiles is their durability. The material withstands high stress, the surface does not change character over time and minimal maintenance is required. From a life-cycle perspective, ceramic tiles have a long lifespan, at least 50 years, and they may well last throughout the life of the building. When tiles are replaced, it is more often based on new trends rather than physical needs for replacement.



Most of our collections contain recycled raw materials, and several ceramic tiles are being produced with more than 60% recycled content.

Ceramic tiles are made from natural raw materials such as clay, quartz, sand and feldspar. Raw clay and minerals are crushed into a fine powder and mixed with water. The water is then extracted by evaporation and we are left with a dry mass which is pressed into chips under high pressure. The tile can be glazed or fired as is, resulting in a glazed or unglazed tile.

Natural raw materials, water and high temperature are the essence of ceramic tiles, and the finished tile has no emissions (VOC*) to the indoor environment.



Ceramic tiles in porcellanato quality have a high wear resistance, and they can last for the entire life of the building.

Documentation

When we talk about documentation on ceramic tiles from an environmental perspective, it usually refers to EPD and various certifications.

Byggevareindustriens Forening (*The Construction Industry Association*) recommends using the EPD over other documentation schemes as it is international and comparable.

EPD is an example of an objective and transparent certification. An EPD is not in itself an environmental claim, but the document demonstrates an objective calculation of the tile's environmental impact and allows us to make our own assessment.

BREEAM-NOR and LEED are two wellknown environmental certification systems that assess projects according to their environmental impact. To gain points in a building project, all parts of the building must be documented, including materials such as ceramic tiles, cast, glue and grout. Based on the figures from the product's EPD, points are obtained and the building can be certified after achieving the target.

* VOC: Volatile Organic Compound - a combination of gases and odors emitted by everyday products.



Norway do not produce ceramic tiles, and we are dependent on imports. Our manufacturers are mainly located in Europe and are bound by both national and European requirements and norms in their production. The European ceramics industry is committed in efforts to reduce its climate emissions, and intensive work is being done to find even better solutions for energy, waste management, recycling and reuse.

Ceramic tiles are fired at high temperatures. The use of fossil fuel in kilns will be replaced by climate-friendly alternatives, and solutions based on green hydrogen or bio-gas rather than gas will become good alternatives in the future.

PRODUCTION OF CERAMIC TILES

The Paris Agreement also forms the basis for the ceramics industry, and more and more of our producers are verified under schemes such as EcoVadis. Italian tile producers are organized in Confindustria Ceramica* and bound by the standards, requirements and agreements defined by the industry organisation.

The ceramic tile industry is looking ahead, and in recent years new technology has contributed to an even wider transformation.

A number of manufacturers are building out areas of solar panels that operate large parts of their electricity needs. Surplus heat from kilns is used in other parts of production and up to 100% of the waste water is reused. Producers have also installed pools where they filter and clean water from the production and then reuse it in further production. In this way the water is circulated in a circuit, and consumption of the natural resource is minimized.

Breakage occurs both before and after firing a ceramic tile. Damaged tiles are collected and crushed back to powder before being returned to production. Manufacturers may also buy crushed tiles from waste companies and use this as raw material in new tiles.

A large share of ceramic tiles produced today will contain a proportion of recycled content. Our manufacturers produce ceramic tiles with proportions of 30%, 40% and up to 64% recycled content.



Ceramic tiles that are damaged before or after firing are collected to be sent back to production.



Water is an important ingredient in the production of ceramic tiles, and by filtering and cleaning the water after use, up to 100% of water can be reused.

Shipping and weight

Ceramic tiles are heavy material. New technology and production methods are more precise and allow for both larger and thinner tiles. Thinner tiles require less raw materials and will have a lower weight per square meter.

Transportation forms part of ceramic tiles' climate emissions, and as an importer, we are keen to convey the different opportunities to reduce emissions from transportation. More square meters per ton means less emissions per square meter.

The choice of transportation is important for the amount of climate emissions, and choosing consciously between ship, cars and train may significantly lower the figures on emissions. Railway is a low emission freight method for European transit freight, and thus our preferred method of transportation.

FAGFLIS - we commit to conscious climate choices

In collaboration with CEMAsys*, we have prepared an overview of our emissions in line with the GHG protocol**.

FagFlis is owned by Neumann Bygg, and we are part of the international STARK Group. Our common goal is to reduce our climate emissions in line with the goals of the Paris Agreement. Based on the climate statement calculated for the FagFlis group in 2022, we will reduce our emissions by 2030, and by 2050 at the latest we shall achieve net zero.

A large part of our value chain is located in other European countries. In order to see our total climate account, from our operations in Norway and the products we import, we have, in collaboration with CEMAsys, prepared a report on our emissions in line with the GHG protocol.

The report gives us an overview of our emissions according to Scope 1, 2 and 3. Scope 1 and 2 include our direct emissions, while Scope 3 deals with the production and transport of our products.

Our climate report is an important tool in our work to identify concrete measures to reduce our energy consumption and carbon emissions. It includes all parts of the FagFlis group. With annual reporting, we can now work systematically with our key figures and thus evaluate ourselves over time.

The mission to reduce our carbon footprint is well under way, and we recognize the need for a significant effort now and in the future to achieve our objectives.







STARK Group – an important partner in the green transition

Stark Group is certified by Ecovadis with the Platinum grade for its sustainability work, and is positioned among the top 1% of all assessed companies.

EcoVadis certifies companies' sustainability work, and two years in a row Stark Group has been awarded the highest degree, Platinum. EcoVadis assesses more than 100,000 companies in over 175 countries with a methodology built on international sustainability standards, including the Global Reporting Initiative (GRI*), the UN Global Compact and ISO 26000.

STARK Group has high ambitions, and the goal of being the preferred partner in heavy building materials makes the company an important partner for the green transition.

In February 2022, STARK Group was verified and approved by SBTi**. The approval is an important step for STARK Group's sustainability work and confirms the company's ambitious climate plan.

STARK Group acknowledges its responsibility as a supplier of heavy building materials in the B2B segment. The group has committed to the UN Business Ambition for 1,5°C pledge, with a reduction in emissions of 42% by 2030. With a focus on increased efficiency in heating, transition to renewable energy and close cooperation with producers, the company aims to achieve net zero by 2050 at the latest.

Achieving these goals is continuous work, and training of sustainability specialists ensures that sustainability is integrated in all parts of the group.

Performances and target achievements must be transparent. STARK Group therefore follows established reporting lines to ensure that sustainability efforts, actions and performances are measurable, manageable and reportable.

* GRI: Global Reporting Initiative. Delivers reporting standards for sustainability to companies, authorities and organisations.
**SBTi: Science Based Target initiative. Advises and supports companies in setting up emissions reduction systems in order to achieve the goals of the Paris Agreement.



CLIMATE CERTIFICATES

Certificates from CEMAsys are our proof of planting mangrove trees in Myanmar

FagFlis contributes with voluntary carbon credits to compensate for our emissions. The project and our credits can be tracked through a unique serial number.



See the current climate certificates in our *Miljøhåndbok*: fagflis.no/miljo/





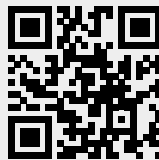
MILJØHÅNDBOK

At fagflis.no you will find the section *Miljøhåndbok*, a compilation page with documentation from our suppliers and information about our environmental profile.



CEMAsys

Delivers software solutions for the entire ESG segment (Environmental Social Governance), and conveys approved climate credits.



VERRA

Administers the VCS – Verified Carbon Standard – a standard for certification of carbon emission reductions.



STARK Group

Read more about STARK Group's work for the environment, sustainability and climate.

Available in Norwegian

This brochure is available in both printed and digital version in Norwegian.



www.fagflis.no