

MARMOLEUM®

AN INGENUOUS INVENTION



DID YOU KNOW ...



Renewable

raw materials are agricultural and forest based materials that bind CO₂ through photosynthesis when they grow.

More than 2/3 of the raw materials used in Marmoleum **grow back within a few years**. Up to 98% of the components are natural or have a mineral origin.

Compared to fossil based raw material resources with decreasing availability, renewable raw materials are **almost infinitely available**.

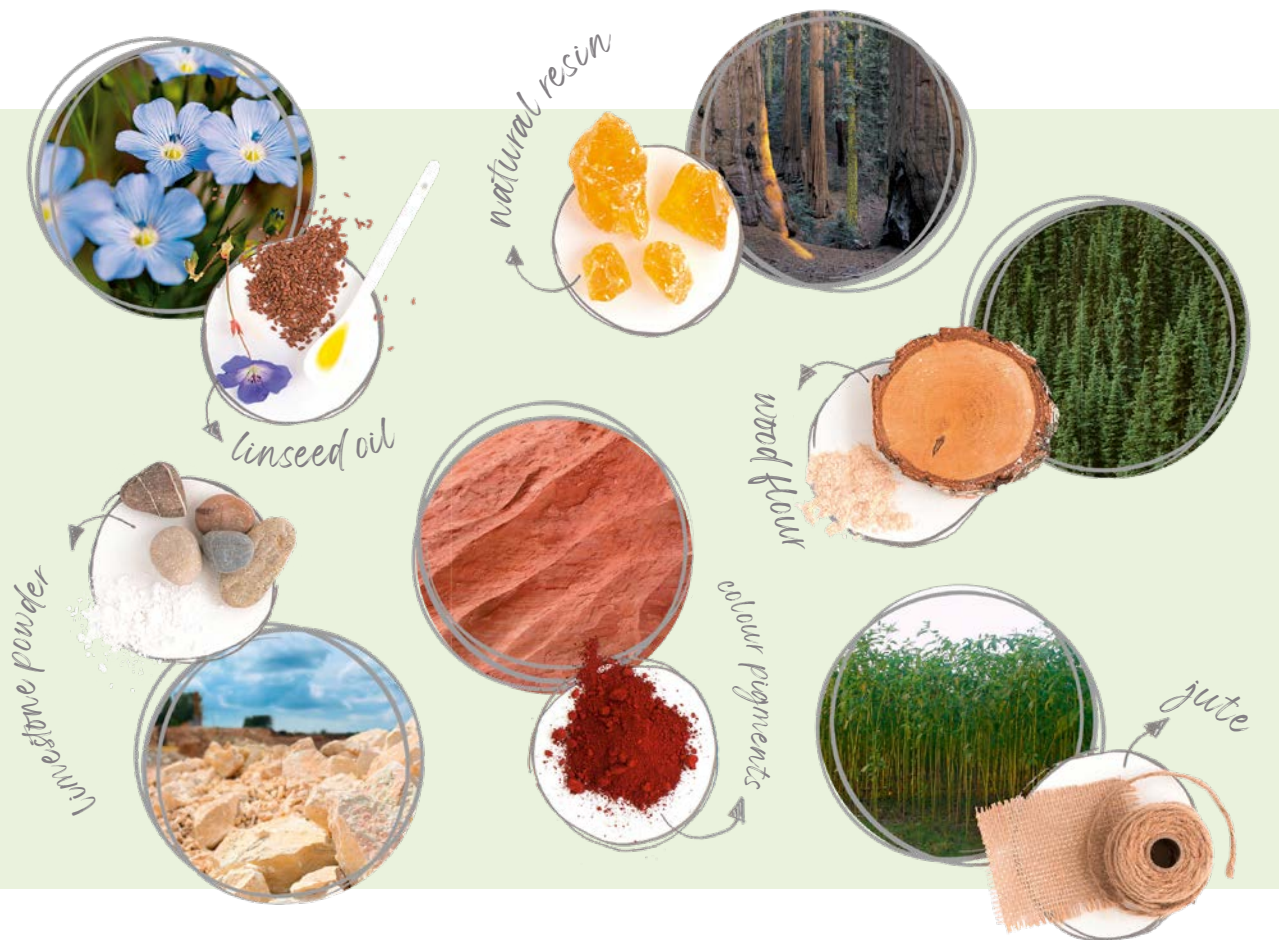


Compared to fossil fuels such as oil, natural gas, and nuclear energy, the volume of CO₂ emissions released through the **use of renewable energies** is significantly lower.

The greenhouse potential (CO₂ equivalent) of a material is the **relative contribution to the greenhouse effect, or in other words** the increase in global warming.

Manufacturing Marmoleum is climate positive and therefore does not contribute to global warming.

Imagine a floor covering made almost exclusively of natural materials and plants that grow, provide valuable raw materials and then regrow, often within only 12 months... that perfectly describes Marmoleum.



NATURAL MATERIALS

The natural raw materials used to make Marmoleum include linseed oil from the seeds of the flax plant, fibres from jute plant, wood flour from upcycled wood residues from controlled sustainable forestry, and limestone powder. The sustainable cycle produces a natural floor covering that is both robust and durable. That is what makes Marmoleum so unique compared to rubber flooring.

LINOLEUM FLOORING

Marmoleum 2.0/2.5/3.2 mm sheet *1



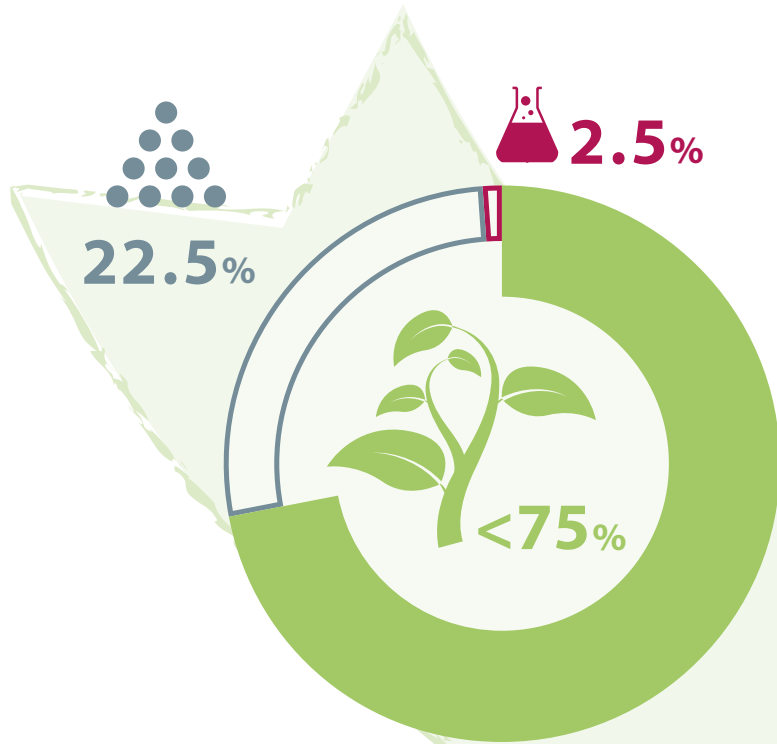
Natural (renewable)



Natural (mineral)

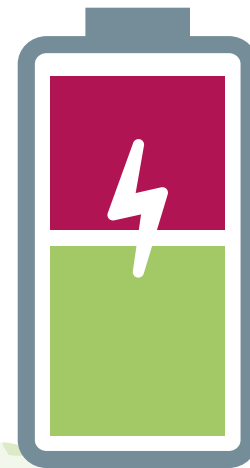
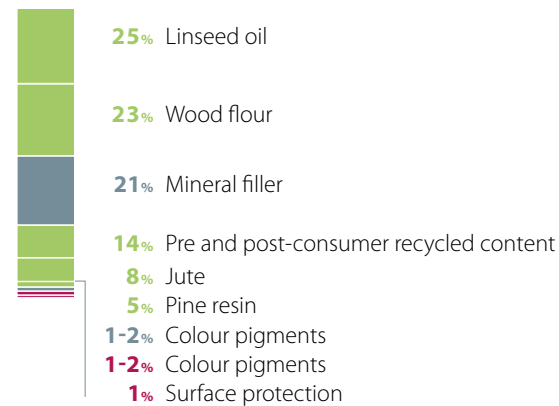


Chemical



The proportion of renewable raw materials is up to 75%. The main components are linseed oil, natural resin, wood flour and jute.

In detail



Energy requirements:
116.9 in MJ/m²
 corresponding to 31.56 kWh

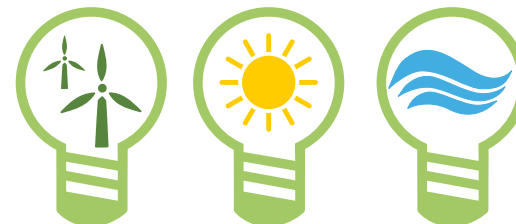
60.2%
 renewable energy

116.9 MJ of energy per m² is required for the production of Marmoleum 2.5 mm sheet.

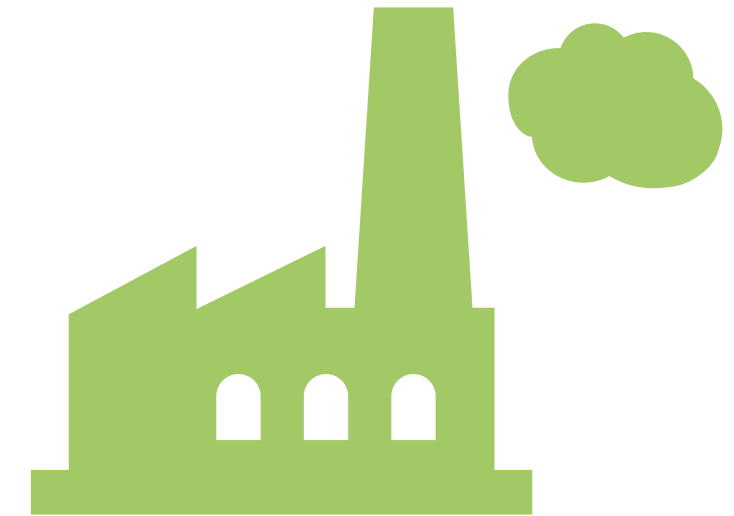
The proportion of renewable energy is more than 60%.

Marmoleum 2.0 mm sheet
 78.7 MJ per m² and 59.5% renewable energy

Marmoleum 3.2 mm sheet
 198 MJ/m² and 61.1% renewable energy



*1 According to EPD 4790690881.101.1 dated 01.03.2024, see [Linoleum Download Center](#) | Forbo Flooring Systems



-0.663
 kg CO₂ equivalent / m²

Marmoleum 2.5 mm sheet: -0,663 kg/m²

Marmoleum 2.0 mm sheet: -0,26 kg/m²

Marmoleum 3.2 mm sheet: -1,67 kg/m²



marmoleum
 climate positive
 CRADLE TO GATE

CARBON NEUTRALITY

WHAT MAKES THE DIFFERENCE?

Renewable raw materials Low carbon building products make an active contribution to climate protection because they consist of renewable raw materials. Such products remove CO₂ from the atmosphere when they grow and are therefore climate positive.

Climate-optimized production Products such as Marmoleum 2.5 mm sheet consist primarily of renewable raw materials and are also manufactured in a climate-optimized manner through the use of optimised transport routes, renewable energy and recycled/upcycled materials.



Climate positive
production without compensation

No compensation Marmoleum takes more CO₂ from the atmosphere than was used throughout the entire manufacturing process. That is natural climate positivity.

^{*2} GWP A1-A3: -0.663 kg CO₂ equivalent /m²

Industrially produced raw materials

In the case of building products consisting predominantly of non-renewable raw materials, large volumes of climate-damaging CO₂ are produced during the manufacturing process because energy is used to produce these raw materials on an industrial scale.

Energy-intensive production The production of synthetic rubber floor coverings such as Noraplan 913 involves the release of large volumes of climate-damaging CO₂. However, such products are sometimes labelled as climate-neutral – how is that possible?

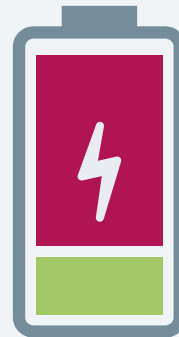
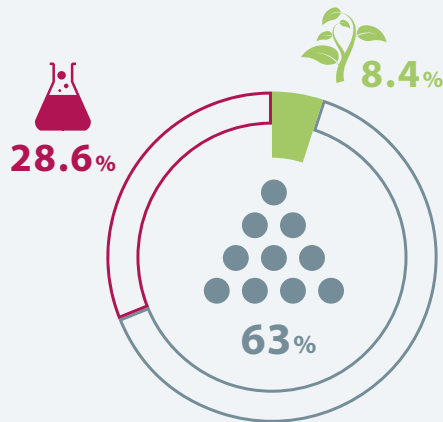


With compensation, products that generate high levels of CO₂ emissions when manufactured can still be considered climate-neutral if the manufacturer makes financial contributions to climate protection projects, receiving compensation certificates in return. This scheme does not actually reduce the emission of greenhouse gases, it only compensates for them.

^{*3} GWP A1-A3: +5.87 kg CO₂ equivalent /m²

RUBBER FLOOR COVERING

Noraplan 913 roll goods, 2.0 mm *4

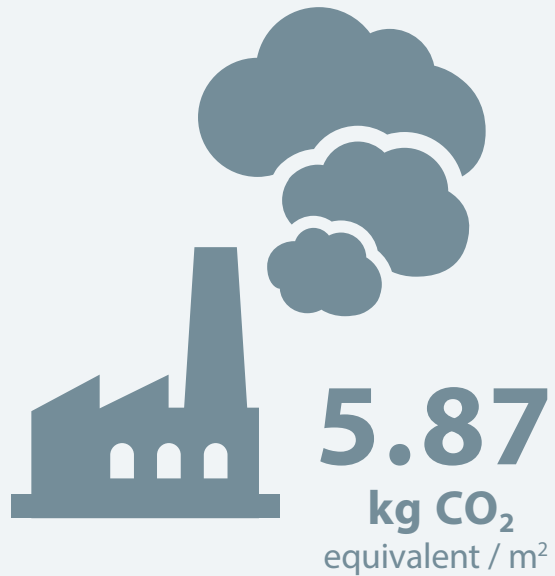
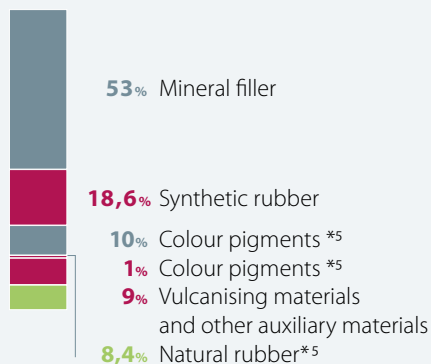


Energy requirements:
169.1 in MJ/m²
 corresponding to 46.7 kWh

24.3%
 renewable
 energy

A small proportion of this floor covering consists of renewable components, mainly natural rubber.

In detail



*4 Source: EPD-NOR-201 80125-IBA-DE dated 06.12.2018, see www.ibu-epd.com/veroeffentlichte-epds/
 According to the manufacturer's information from 2020, Noraplan 913 includes noraplan eco, noraplan sentica, noraplan signa, noraplan stone, noraplan valua, noraplan lona and noraplan unita

*5 Source: Manufacturer's information from 2018



Forbo Flooring Systems is part of the Forbo Group, which is one of the world's leading suppliers of floor coverings, building adhesives and transport systems, offering floor coverings for the commercial and retail sectors. High-quality linoleum, vinyl and textile floors as well as entrance flooring combine functionality and design to provide a wide range of comprehensive floor covering solutions.

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FLOORING SYSTEMS