IT`S A VORWERK WHEN NOT ONLY ITS LOGO IS GREEN

Vorwerk Eco Balance

Environmental and Energy Report 2021

VORWERK®

EINZIGARTIGE BODENBELÄGE *seit 1883.*
UNIQUE FLOOR COVERINGS *since 1883.*

CONTENT

ECO BALANCE 2021

PREFACE

It's a Vorwerk! When it's not only the logo that's green …

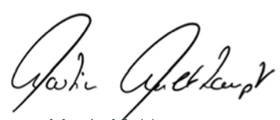
As a traditional, yet at the same time innovative family-run company, we bear a major responsibility towards our customers, staff and our location in Hamelin, Germany. This fundamentally includes first of all safeguarding the natural bases for life, the products and production methods that place less of a burden on the environment and conserve energy, as well as a social responsibility. We summarize this concept, the way we view ourselves at Vorwerk flooring, under the term Vorwerk Eco Balance and work continuously on thinking and acting in long-term contexts so that subsequent generations are equally able to live in a "green" world.

To attain the greatest possible transparency in the course of these actions we subject ourselves to audits by independent auditing institutes on a regular voluntary basis – far beyond what legislative requirements call for. The result: Floor coverings from Vorwerk currently bear all of the prime ecolabels for consumer products, as well as numerous internationally renowned insignias and certificates displaying relevance to health. These certifications provide proof that quality is one of the most sustainable features of Vorwerk flooring. Our floor coverings set themselves apart due to their highest-grade quality and durability, they have to be replaced less often, and as a result of their fine dust particle-binding and sound-insulating attributes, they make the environment around them healthier on the whole.

We achieve product performance in line with the Vorwerk Eco Balance system through the effective use of recycled and recyclable materials; this is supplemented by preventing waste via reprocessing during production – and we've been doing all of this since the 1960s. The efficient utilization of energy sources and the best possible conservation of resources are only natural thereby. Our vision is to develop products comprised nearly completely out of recycled material, products which, in turn, enable renewed application as reusable materials.

The Vorwerk Eco Balance concept, together with all activities and visions on our part, shows that Vorwerk flooring consciously perceives its responsibility towards human beings and the environment as a part of society, and shall willingly face challenges in the future as well.

Tobias Arnold
Executive management



Martin Multhaupt
Executive management

ENVIRONMENTAL POLICY AND ENERGY GUIDLINES

ENVIRONMENTAL GUIDLINES

1. For Vorwerk flooring, environmental protection is a corporate goal of its own.
2. All corporate decisions are reviewed in terms of their environmental compatibility aspects.
3. Vorwerk flooring does more in the area of environmental protection than legislators require to intensify environmental protection continuously.
4. The overall accountability for environmental protection lies with executive management
5. Production is implemented to place the smallest possible burden on resources.
6. Unavoidable environmental impacts are contained to the lowest possible level.
7. Instead of utilising end-of-pipe technologies, efforts are initiated at the causal processes themselves to reduce environmental burdens.
8. We want to use appropriate means to inform our staff and the general public about the targets set and the successes of our efforts in environmental protection.
9. Internal audits are conducted yearly towards maintaining the Environmental Management System.
10. We place the same demands on our suppliers that we place on ourselves.
11. We want to take the offensive in communicating our ecological concept to our customers to influence them to pursue our standards.
12. For us, the obligation to comply with environmental- and energy-related regulations is a given.

ENERGY GUIDLINES

1. Instigation towards enacting all measures for dealing with our energy flows in a manner that conserves resources along with making the means available to accomplish them originates from executive management.
2. The acquisition of energy data in all relevant sectors is obligatory.
3. A continuous monitoring of energy usages provides for rapid corrective measures in the event of variances.
4. For us, the continuous energy-related improvement of buildings and plant systems is a compulsory target to be met.
5. We promote and support dealing with energy on a rational and responsible basis in the course of daily work through information and training courses given to members of staff.
6. As regards the procurement of equipment and plant systems, as well as in the case of replacement purchases, attention is paid that best available techniques (BAT) are being employed and that the energy efficiency of the equipment, plant systems and services procured is evaluated.
7. The utilisation of renewable energies is reviewed regularly and implemented in alignment with business management deliberations.
8. All members of staff obligate themselves to handle and work with those energy sources provided in a sparing and responsible manner.
9. In terms of energy-related aspects, we ensure that plant operation is being optimised via preventive maintenance.
10. Data on energy are made available to all interested parties via our home page

DEPICTION OF OUR ENVIRONMENTAL AND ENERGY MANAGEMENT SYSTEM

The following positions are in charge of implementing the Environmental and Energy Management System in their respective area of responsibility:

- **Executive management** for the entire facility
- **Process owner** for his/her process
- **Shift foreman** for his/her machines on his/her shift
- **Each member of staff** for his/her area of work

The Environmental and Energy Management Representative is appointed by the highest-echelon executives and bears responsibility for the maintenance and further development of the Environmental and Energy Management System. We preserve our high environmental standard through regularly scheduled internal and external environmental audits, and thus contribute towards safeguarding the site and its location.

The Environmental and Energy Management Representative has no authority to issue instructions. The representative acts merely in advisory capacities, but does so for all levels.

VORWERK FLOORING PRESENTS ITSELF

Together with the products it manufactures, Vorwerk flooring has stood for a unique blend of superior quality, sustained innovations and worldwide award-winning design since 1883. Millions of satisfied customers have been decorating their flats, houses and offices with products from this German manufacturer with a wealth of tradition for more than 130 years. In the process, Vorwerk flooring has redefined the limits of floor coverings time and again while offering products that lose nothing of their up-to-dateness or quality, even after many years.
Product development, production and quality assurance take place at the company headquarters in Hamelin, Germany and guarantee that the sweeping brand promise – It's a Vorwerk! – is kept through perfected performance..

Carpets and carpet tiles are woven, tufted, dyed, printed, coated, backed and sized at the production venue at Kuhlmannstrasse 11 in the city of Hamelin.

Approximately 10 hectares (24.7 acres) large, the carpetworks grounds are located in the industrial zone in the south of Hamelin.
The Fluthamel River flows to the south, the Stadthamel to the north. A residential development area adjoins further to the north. Other enterprises have settled with their facilities to the east and the west of the carpetworks.

The factory was built "on the outskirts of town" in the mid-1950s and has been successively expanded to meet production requirements. With 165 men and women on staff, roughly 3 million square metres of floor coverings are produced each year.

Site of Vorwerk flooring Hameln

ENVIRONMENTAL ISSUES SPECIFIC TO PRODUCTION AND LOCATION

Vorwerk flooring manufactures high-quality tufted and woven carpets using modern techniques and processes. Substances are utilised to a certain extent in the individual processes during the production phase which can have an environmental relevance.

OUR PROCESSES ARE STRUCTURED AS FOLLOWS:

PROCESSES	ENVIRONMENTAL RELEVANCE	MEASURES TOWARDS PREVENTION OF ENVIRONMENTAL IMPACTS
Weaving looms	Oils, greases, dusts, noise, general types of waste products, energy	Regular noise measurement, waste product prevention concept, proper storage of hazardous substances, reduction of energy use
Tufting looms	Oils, greases, dusts, noise, general types of waste products, energy	Regular noise measurement, waste product prevention concept, proper storage of hazardous substances, reduction of energy use
Dyeing plants	Oils, greases, acids, lyes, auxiliary dyeing and textile agents, noise, exhaust, energy	No CRM substances, no usage of APEO, regular waste-water inspections, regular noise measurements, fire-prevention training, waste product prevention concept, proper storage of hazardous substances, workplace measurements, emissions measurements, reduction of energy use
Finishing	Oils, greases, coating agents, dyes, fire-suppressing gases, exhaust, carpt remnants, energy	No substances with German Water Hazard Class 3, no CRM substances, no usage of APEO, brominated fire-fighting equipment, PFOA, PFOS, regular waste-water inspections, regular noise measurement, fire-prevention training, waste product prevention concept, proper storage of hazardous substances, workplace measurements, emissions measurements, reduction of energy use
Packaging plants	Propane gas, sheet foils, energy	Explosion prevention in compliance with ATEX and BGR 104/132 (a professional association's work health and safety ordinance), waste product prevention concept, reduction of energy use
Maintenance	Solvents, welding gases, oils, greases. energy	Explosion prevention in compliance with BGR 104/132, no substances with German Water Hazard Class 3, waste product prevention concept, no CRM substances, proper storage of hazardous substances, training to become fire-prevention aides

EXAMPLES FOR ENVIRONMENTAL PROTECTION THAT POINT THE WAY AHEAD

The “end-of-pipe technologies” mindset was left behind long ago. Thought is now given beginning directly with the production process itself.

Rather than extracting production remnants from the environmental media air and water and disposing of them afterwards, due to process modifications they are not incurred in the first place..

This became particularly evident through the realisation of three large-scale projects with which Vorwerk flooring distinctly reduced the burdens being placed on the environment. One of them deals with the construction of a new dye dispensing and batching station. Together with the residual substances incurred in conjunction with conversion of the process that would have had to have been disposed of until now, the new station doesn’t allow them to be created in the first place.

The other deals with recyclable floor coverings using the accompanying internal recycling plant system. About 40% of the textile remnants and residual materials incurred due to production are reprocessed and fed back into the production process.

In the case of tile production, here too no harmful emissions are incurred by refraining from the use of bitumen and PVCs.

In addition to their design, our elastic RE/COVER green floorings distinguish themselves due to their ecological composition. As early as the development phase a great deal of value was already being placed on utilising the greatest possible proportion of renewable raw materials. This approach enabled synthetic polyurethane to be successfully replaced with a natural substance extracted from castor or rapeseed oil.

IN SUMMARY, FOUR APPROACHES INSTITUTED BY VORWERK FLOORING TOWARDS REDUCING ENVIRONMENTAL POLLUTION BECOME CLEAR THROUGH THESE PROJECTS:

1. Modification of the production process and no use of any “end-of-pipe technologies”.
2. Modification of the product itself to diminish the burdens placed on the environment by production.
3. Development of new products to keep environmental impacts as low as possible.
4. Integration of our suppliers at the beginning of the development phase to ensure a transparency in the supplier chain that is as sustainable as possible.

THE GENERATION OF TEXTILE FLOOR COVERINGS

Optimisation and adjustments of existing processes in place are one way of reducing environmental pollution to a level that is as low as possible. The greater challenge is to design product optimisation in such a way that, in the end, a product emerges which has been ecologically improved to the benefit of the environment, and thus to the customer’s benefit, too.

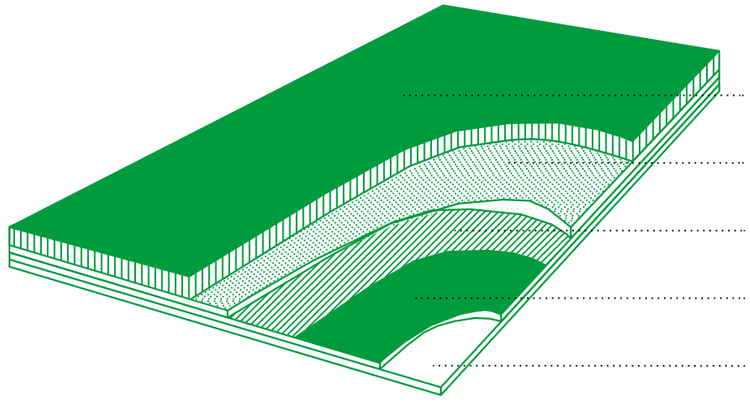
As far back as the 1990s, Vorwerk flooring had readily replaced the environmental pollutant foam backing of its carpeting

With a fully textile variant. With TEXtiles Carpet tiles Vorwerk has been even managed to refrain completely from using PVCs and bitumen as a heavy-duty coating. This shall continue to remain so in the case of the newly developed SL SONIC acoustic carpet tiles.

Nearly all of our products are composed of 100% synthetic fibres. This is why they are particularly recommended for people with allergies, and they are easily recyclable

BENEFITS

- They use recycled material
- No mothproofing required
- Flame retardant agent uses aluminium hydroxide
- Fully recyclable
- They insulate the sound of footsteps
- Recommended for allergy sufferers



STRUCTURE OF A TUFTED CARPET

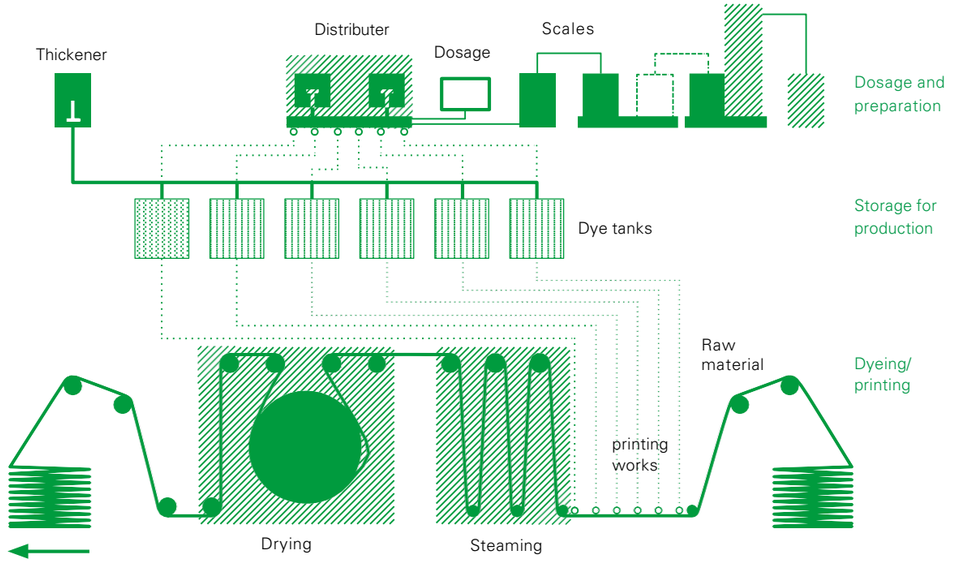
THE DYE DISPENSING AND BATCHING STATION

The dye dispensing and batching station was set up above the dyeing systems so that a vertical material flow is possible.

At the uppermost level, the dye solutions are computer-controlled and thus dispensed and batch prepared more precisely than ever before. This alone reduces the occurrence of faulty batches and residual solution which can no longer be utilised to a minimum.

We are also able to manufacture smaller quantities of dye in order to dye smaller lots. This had not been possible before in light of the previously available technology

The creation of waste products is therefore already being avoided during the production process, obviating the need to filter out and dispose of them at considerable cost in terms of time and money. A reduction of the pollutant load in effluents emitted from the dye dispensing and batch preparation station by approx. 80% has been achieved by installing this new plant system.



DYE DOSAGE AND BATCH PREPARATION STATION

SUBSTANCES HAZARDOUS TO WATER QUALITY

Carpets from Vorwerk are dyed according to different processes. However, all of these are water-based, i.e. fundamentally no organic solvents and allergy-promoting substances are used.

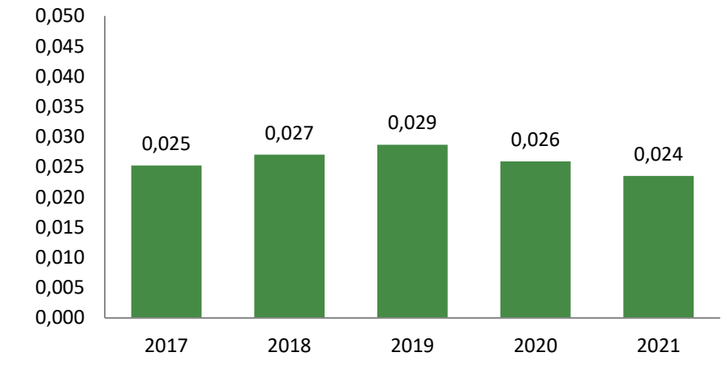
Wastewater is incurred through these dyeing techniques. The wastewater is treated at our own multistage preliminary sewage treatment plant to an extent to which it complies with the tolerances stipulated in the municipal wastewater regulations of the City of Hamelin. The wastewater is cooled, the suspended matter is sifted out, the water is neutralised and, in the end, discharged indirectly into the sewerage system and, consequently, fed to the municipal wastewater treatment plant.

All chemicals, dyes and auxiliary agents utilised are approved by the Environmental Management and Energy Representative on the basis of their data sheets regarding safety. The procurement thereof takes place only after release approval on the part of the representative has been given.

Strict specifications for auxiliary textile agents, dyes, oils, greases, acids and lyes with respect to their environmental relevance are already agreed upon with suppliers prior to actual purchase.

The processes in which hazardous substances are worked with run automatically and for the most part in closed systems so that impacts on people and the environment are restricted to a minimum.

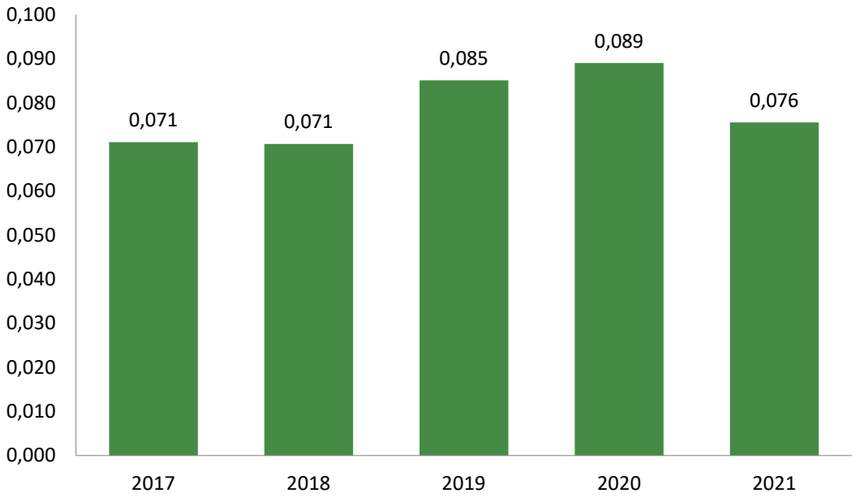
Many of the substances we utilise have been evaluated more strictly due to new categorisations on the part of manufacturers. This means that some of the auxiliary agents were graded higher from the German Water Hazard Class 1 to Class 2. In the course of REACH and the new Globally Harmonised System of Classification and Labelling of Chemicals (GHS) this is going to occur more frequently in the coming years.



´SUBSTANCES THAT ARE HAZARD TO WATER IN WHC 2 in kg/m²

HAZARDOUS SUBSTANCES

For years now the use of hazardous substances at Vorwerk flooring has been kept at a constantly low level. This is to be attributed particularly to the production in the dyeworks and finishing sectors that places less of a burden on the environment, as well as to strict control of the substances utilised.



HAZARDOUS SUBSTANCES ACCORDING TO ORDINANCE ON HAZARDOUS SUBSTANCES in kg/m²

WASTEWATER FIGURES

As an indirect discharger, Vorwerk flooring is obliged to keep a register of effluents and to report effluent emissions to the City of Hamelin and to the state office in charge of supervising industrial/commercial trade in an Emissions Statement.

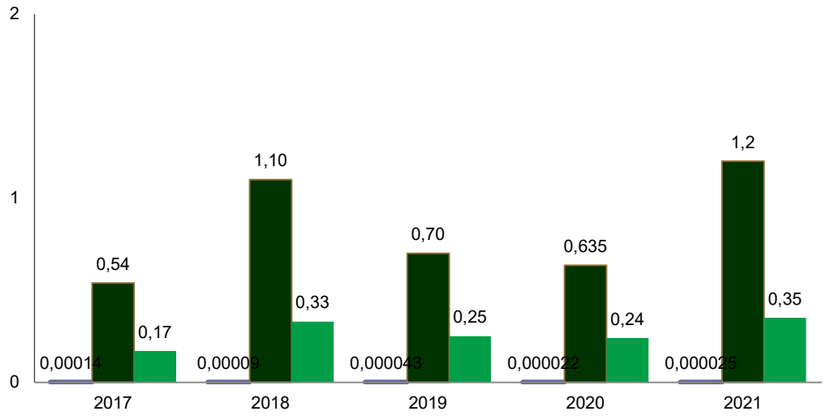
The legal basis for this is the German Water Management Act (“WHG”) and the municipal wastewater statute for the City of Hamelin.

Effluent emissions are audited every three months by independent expert assessors. The materials utilised are constantly inspected in terms of their AOX, COD and BOD content.

COD
Chemical Oxygen Demand, the demand for oxygen required in order to degrade pollutants in water

BOD
Biological Oxygen Demand, the amount of oxygen consumed by microorganisms within 5 days

AOX
Adsorbable Organic Halides, e.g. fluorine, chlorine or bromine



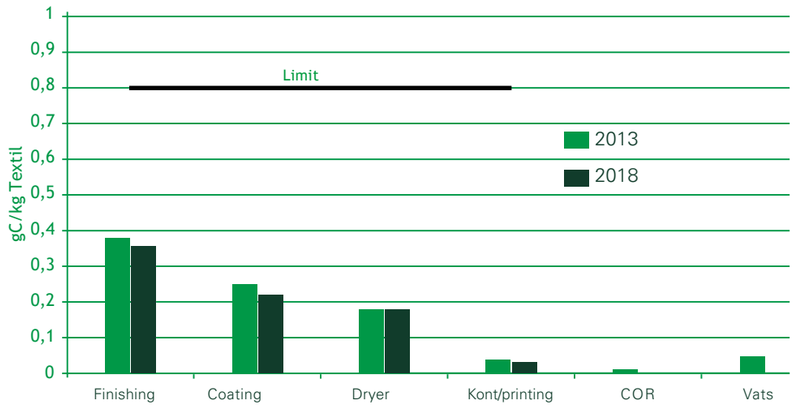
Wastewater Figures 2017 - 2021 (AVERAGE FIGURES in g./L)

EMISSIONS

Vorwerk flooring operates two plants requiring mandatory permits pursuant to the German Federal Emissions Protection Act. To be mentioned here are the dyeworks on the one hand and the coating plant on the other. In both cases, the emission of pollutants was able to be reduced via modifications in the products and processes.
Continuous measurements of our air gas values ensure that no danger exists as a result of air pollution. It goes without saying that Vorwerk complies with or lies below the levels stipulated by “TA Luft” (2002), the German technical directive for keeping The air clean. Due to the dismantling of the COR plant system in 2017, no emissions whatsoever are incurred in this sector.

The new plant for coating tiles is not governed by “4. BImSchV”, the 4th law to the German Federal Emissions Protection Act, due to its low levels of emissions during production.

The Vorwerk commitment to environmental protection and the introduction of an Environmental and Energy Management System following the DIN ISO 14001 standard have led to government emission measurements no longer having to be carried out every 3 years: they take place at 5-year intervals in the future. The most recent emissions audit occurred in January 2018..



TOTAL CARBON EMISSIONS COATING AND DYEING

RECYCLING PROCESS

The textile remnants incurred during production are reprocessed in a plant erected expressly for this purpose. They are subsequently reutilised in the production of texback® products.

The reprocessing of recyclate materials deals with a multistage system. Residual materials, for example, carpet remnants or foil sheeting, are first shredded into small pieces in a pre-shredder and stored in an interim silo.

The pre-shredded material is then agglomerated, recut, cooled and Transported to another silo for interim storage.

This granulate is now ground, sifted and finally transported to a silo where, as the need arises, the granulate is mixed with PE powder via a mixing device.

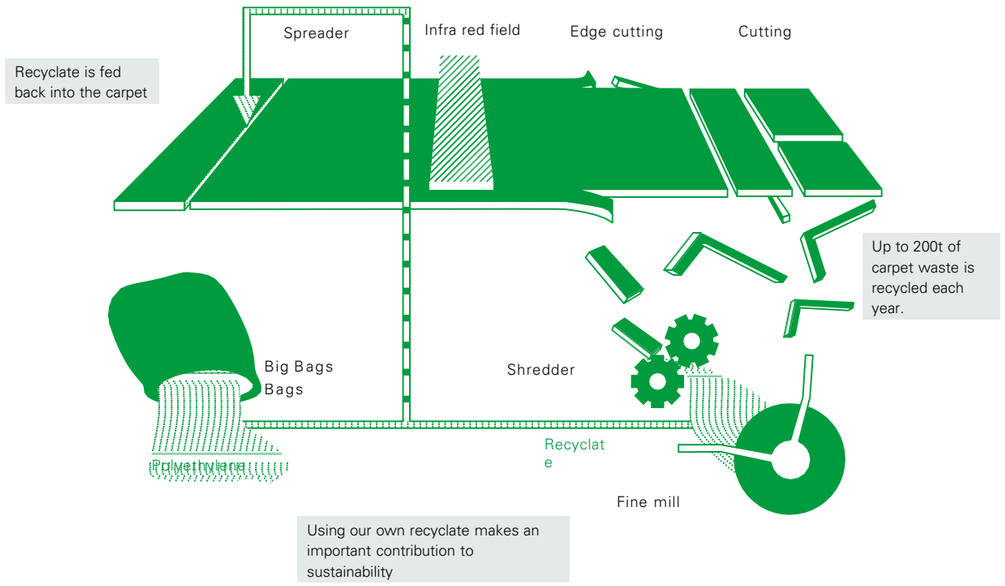
The finished PE/recyclate mixture is fed into the coating plant.

This way we are able to reprocess several hundred tonnes of textile remnants per year, amounts which had previously been incinerated as waste at the firm Enertec Hameln GmbH (refuse incineration plant), and feed them back into our internal production processes.

INTERNAL RECYCLING

Vorwerk flooring has operated its own recycling plant since as far back as the early 90s. 124t of carpet waste products were able to be recycled internally in 2021.

The use of own recyclate is a valuable contribution towards sustainability, because approximately 10 truckloads of latex are saved as a result.



RECYCLING CONCEPT SINCE THE 90`s

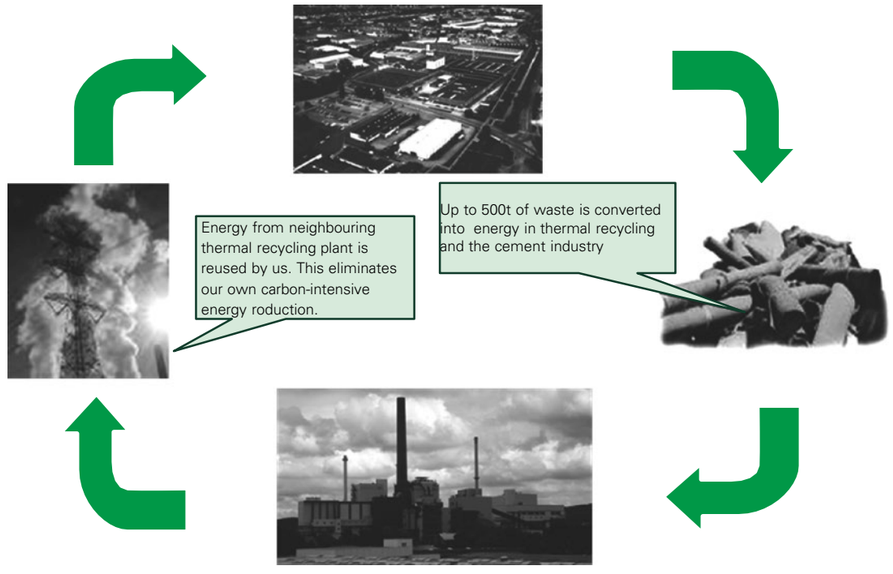
EXTERNAL RECYCLING

Vorwerk makes use of its locational advantage by bringing municipal solid wastes incurred to the neighbouring incineration plant. The quantities of steam generated there have a very low proportion of CO_2, merely 21.38 g/kWh, and, in turn, serve our processes as an energy supplier.

Another share of our production wastes serves the cement industry as a surrogate fuel.

This procedure contributes towards the reduction of CO_2 emissions because no additional resources such as oil, gas or other fossil fuels are required to generate the energy needed.

Furthermore, 91 tonnes/year of yarn remnants which are not processed further are fed to an external recycling process.



EXTERNAL RECYCLING PROCESS

REDUCTION OF FINE DUST PARTICLES DURING PRODUCTION

Vorwerk operates dust filter systems in which up to 18 tonnes/year of fibre dust and yarn fibres are filtered out of the air and fed to an external recycling process. The fibres are used there as filler in new synthetic articles.

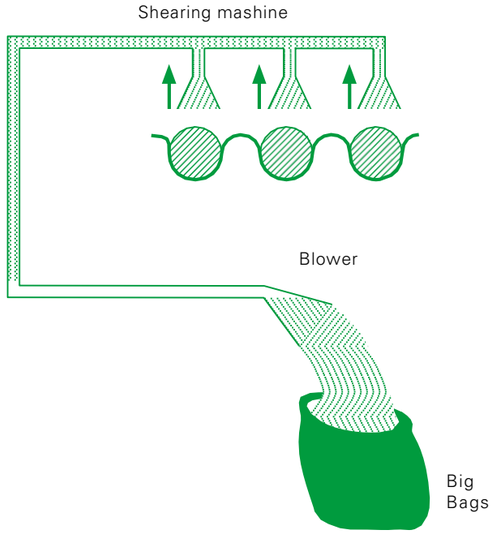


DIAGRAM OF DUST FILTRATION AT THE SHEARING MACHINE

RECYCLING WITHIN THE PRODUCT

For years now Vorwerk flooring has banked on recycled material in its products.

The target is to increase the proportion of recycling in products even further on a long-term scale. Depending on the construction design, these days it is possible to utilise materials in which up to 70% is recycled per product.

As a result, in the case of TEXtiles and the SL SONIC tile the backing consists of 100% recycled material. And by utilising a fibre specially procured from the firm Aquafil named Econyl® 100, large parts of which are manufactured from old fishing nets collected from the seas all over the world, the share of recycled material can be increased even further.

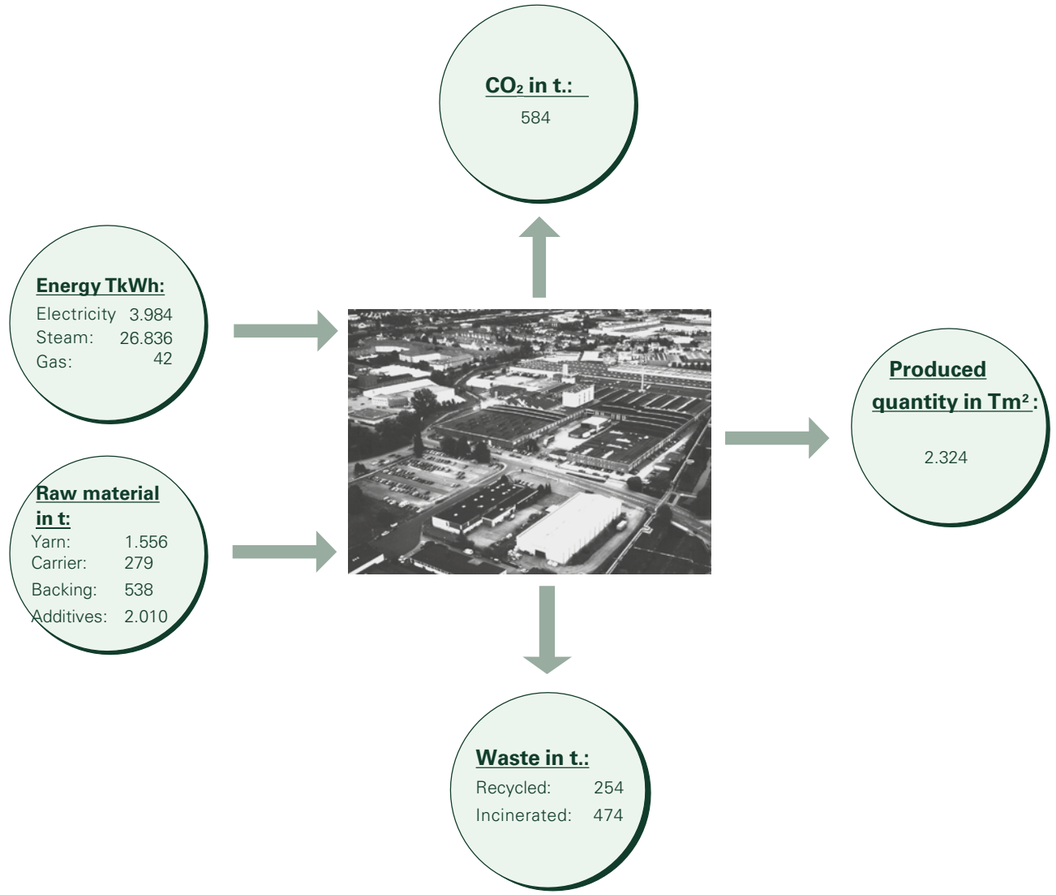
In 2021 we were able to enlarge the share of recycled fibres further by employing a backing variation which is 100% recycled. A total of 962 t of recycled material was utilised, that is 20,5% of the total use of material.

Our sustainability concept envisages a steady increase of this share.

INPUT / OUTPUT

Products from Vorwerk are manufactured from diverse raw materials. Attention is paid that these base materials have a high proportion of recycled materials and pose no danger to human beings and the environment. We shall continue to work on increasing the recycled proportion of our raw materials while lowering CO_2 pollutant emissions.

Since 2020, we have been using certified green electricity from hydropower and the remaining CO_2 pollution at the site is compensated by certified projects

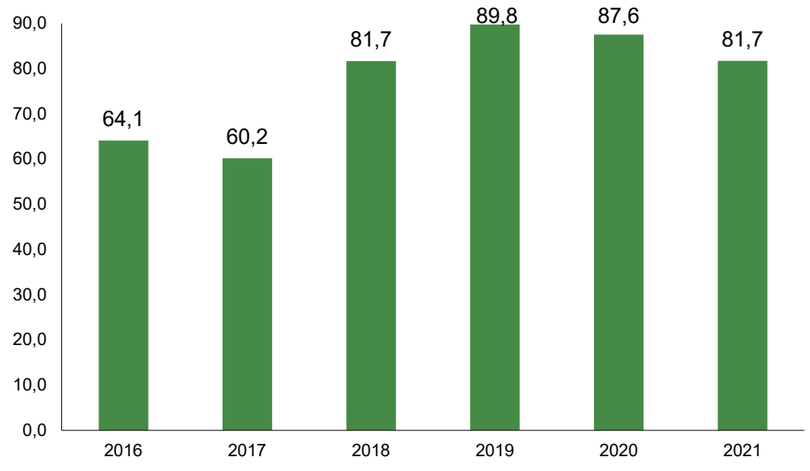


ENERGY DATA

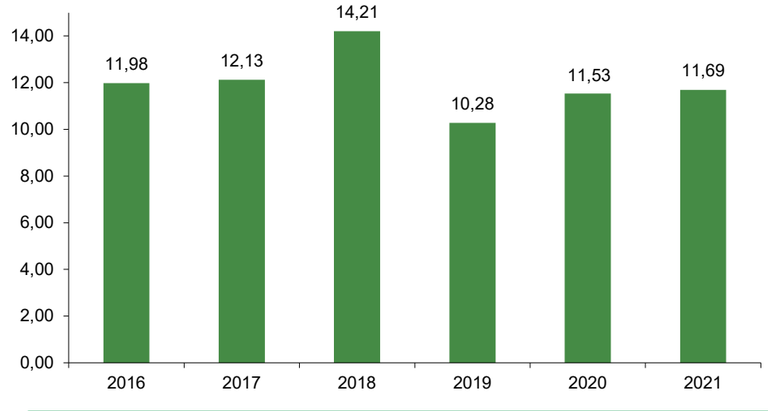
Vorwerk flooring established an energy management system in accordance with DIN ISO 50001 in 2015. The aim of this management system was to provide support in better analyzing and evaluating the energy quantities and energy flows used during the production so that measures can be derived to reduce energy consumption in the long term.

In 2021, we have decided to implement Energy Management 50001 through the SpEfv (regulations on energy saving), as this is adapted for SMEs.

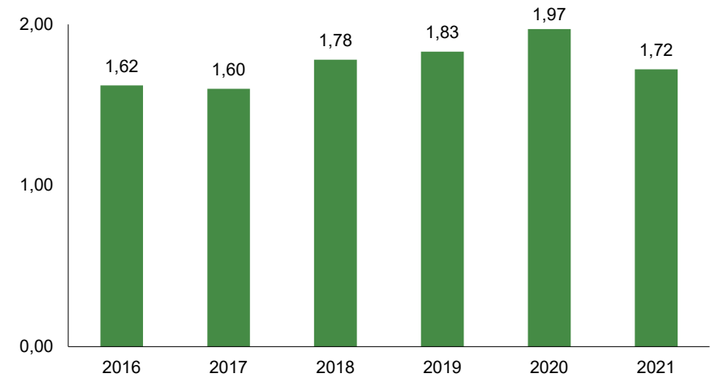
Due to the investment in three new dyeing vats and the dismantling of the cold dyeing plant, the energy consumption per m² of carpet increased from 2017 to 2019; in 2020 and 2021
the water consumption could be reduced again by improving the rework rate.



WATER CONSUMPTION in L/m²



STEAM CONSUMPTION in kWh/m²



ELECTRICITY CONSUMPTION in kWh/m²

WORK SAFETY &
SAFEGUARDING HEALTH

Wherever a lot of people work together, the danger exists that accidents can occur, too. It is therefore only natural for Vorwerk flooring to be actively involved in the field of health protection and safety at work to the benefit of the men and women on staff.

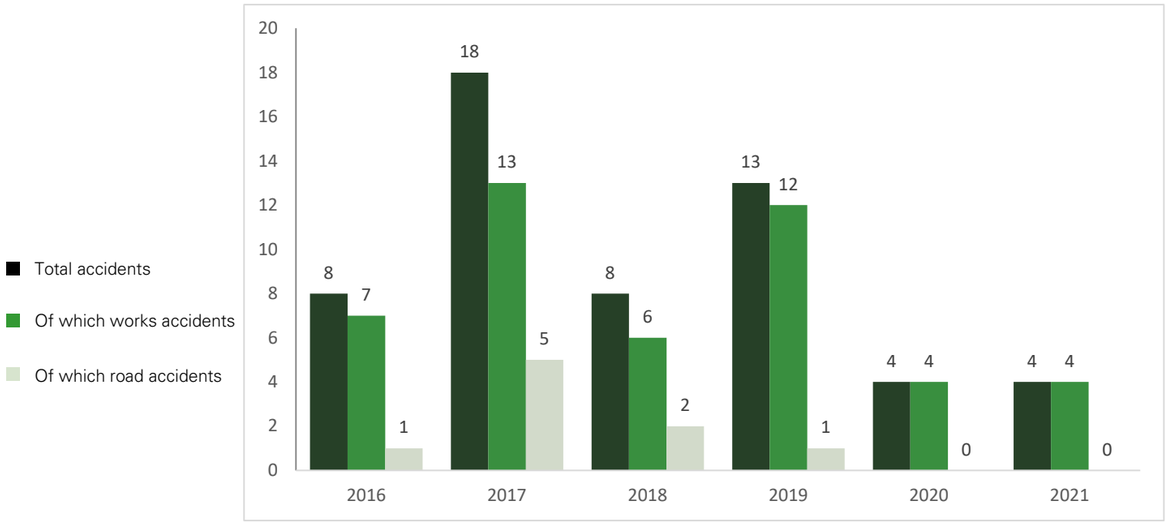
A considerable portion of those efforts is taken up with prevention. The greatest weight is placed on regularly schooling the men and women on staff on the topics of "work safety", "working with hazardous substances", as well as "fire prevention".

Representatives for safety, first-aid attendants and factory paramedics acquired from staff receive continued training on a regular basis to ensure the acceptance of safety measures. This, in turn, assures that the awareness for conduct in alignment with safety is being taken into account on each and every level of the work processes involved.

Regularly scheduled health check-ups for staff such as precautions against cancer, dietary consulting, hearing and see tests, blood tests in co-operation with actimonda, a health insurer, and vaccinations against flu round out the programme.

In light of residential development in the immediate vicinity, protecting the neighbourhood is naturally a fundamental objective of safety and environmental policy, too. For instance, we have our technical facilities inspected regularly by TÜV and VdS (German technical certification organisations).

In addition, measures taken towards preventive maintenance and upkeep for machinery and plant systems assure a safe workflow. Our factory-wide sprinkler system furthermore makes sure that smoke development does not become excessive in the event of a fire. It is consequently ensured that a burden on neighbours can be ruled out almost completely.



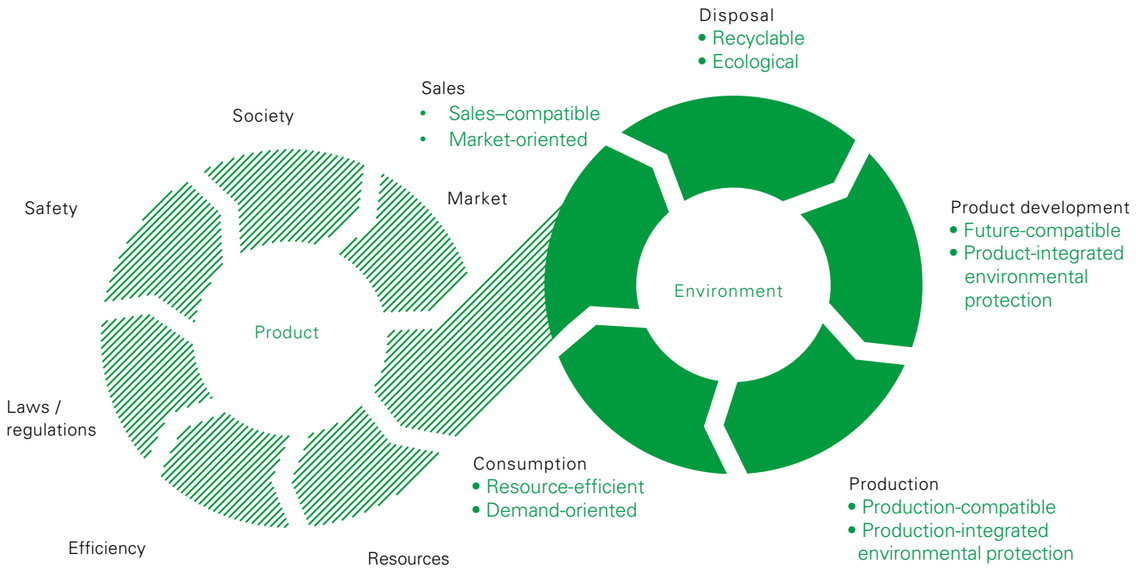
ACCIDENTS DIVIDED BETWEEN ROAD AND WORKS ACCIDENTS

DEMANDS PLACED ON THE PRODUCT

The products from Vorwerk flooring must meet the widest variety of standards. As early as the development phase for a new item, the impacts a given product might have later on must be considered and weighed in advance while taking risks and opportunities into account.

The highest good is quality and health safety, so the product is extremely durable, contributing to the issue of sustainability.

All of the criteria listed above are reviewed by multiple specialised departments regarding relevancy. The product itself goes through a variety of internal release approval processes before it is delivered to the customer.



CRITERIA FOR DEVELOPING A SUSTAINABLE PRODUCT

Source:
Institut für ökologisches Wirtschaften

INFORMATION ABOUT REACh

REACh stands for Registration, Evaluation, Authorisation and Restriction of Chemicals. This EU regulation has been in force since 2007 and obligates manufacturers and importers in the EU to have not only their chemicals registered with ECHA in Helsinki but the substances involved and how they are prepared as well.

All manufacturers or importers of substances involving > 1 tonne per year are affected by REACh.

TIMELINE:

• Since December 1st, 2010, substances involving more than 1,000 tonnes per year must be registered with ECHA. This equally applies to CMR substances involving > 1 tonne per year and environmentally hazardous substances > 100 tonnes per year.

• Since June 1st, 2013, substances involving quantities of > 100 tonnes per year must be registered.

• Substances involving quantities of > 1 tonne per year must have been registered by June 1st, 2018.

With REACh, differentiation is omitted between approximately 100,000 old substances – substances which came on to the market before 1981 and about which only little is known – and roughly 4,000 new substances which are already being studied today in terms of their hazardous potential.

One fundamental factor within REACh is that there is a so-called list of candidates on which all substances of very high concern (SVHC) are listed.

As a substance or downstream user, pursuant to Article 33 of the REACh regulation Vorwerk flooring is obligated to pass on information to its customers regarding all CMR substances (carcinogenic, mutagenic or toxic to reproduction) and/or substances of very high concern (SVHC) involving more than 0.1 mass per cent.

This is the reason why all of the chemicals we utilise are administrated in a database and are not procured until the data sheet pertaining to safety has been checked and release approval issued. We furthermore ensure that a regular comparison is conducted between our substances and those on the ECHA list of candidates.

Our REACh Representative, Mr Kunze, is gladly available for further information.

CONTACT DATA:
Andreas Kunze
Kuhlmannstraße 11
31785 Hameln
Tel.: +49 (0) 05151 / 103-406
andreas.kunze@vorwerk-teppich.de

GREEN BUILDING –
ECOLOGICAL CONSTRUCTION

Green buildings are edifices in which great weight is already placed on the efficiency of resources from the very beginning. The impacts on the environment and health are taken into consideration in the planning phase, and a construction design is aspired to which reduces harmful impacts during the construction, usage and post-usage phases.

All building and construction products are analysed during this ecological deliberation in terms of their harmful impact on human beings and the environment. This equally applies to carpets, carpet tiles and RE/COVER green hard flooring, all of which are governed by the construction product guideline.

LEED

More and more buildings are being built worldwide in compliance with the so-called LEED (Leadership in Energy and Environmental Design) criteria. LEED is a US standard for assessing buildings' sustainability. One aim is to guarantee optimum energy savings for the building as early as the construction phase, as well as during the post-usage phase.

To accomplish this LEED assesses buildings in 6 categories, including the quality of their interiors, and issues points which lead to an award.

40-49 pts = Certified,
50-59 pts = Silver,
60-79 pts = Gold

Buildings with more than 80 points receive the Platinum Award.

Platin **Gold** **Silver** **Certified**

SCS INDOOR AIR QUALITY IN GOLD

All building products in the building must be manufactured according to ecological aspects. Vorwerk flooring has received the Advantage Gold award for this from the US SCS Global Institute. The emissions are tested annually in regular audits by the SCS under the CDPH standard.

The SCS Advantage Gold certifies our carpets and carpet tiles as being particularly low in emissions. When using Vorwerk carpeting, it is possible to achieve the highest possible certification level, the Platinum award, for a building.

SCS Global Services *does hereby certify that an independent assessment has been conducted on behalf of:*

Vorwerk & Co. Teppichwerke GmbH & Co. KG

Kuhlmannstraße 11, D-31785 Hameln, Germany

For the following product(s):

Flooring: Carpet:
Polyamide 6.0 or 6.6 Yarn Broadloom Carpets,
Polyamide 6.0 or 6.6 Yarn Carpet Tiles

The product(s) meet(s) all of the necessary qualifications to be certified for the following claim(s):

Indoor Advantage™ Gold
Indoor Air Quality Certified to SCS-EC10.3-2014 v4.0
Conforms to the CDPH/EHLB Standard Method (CA 01350) v1.2-2017 for the private office, school classroom, and single-family residence parameters.[1]
[1] Modeled as Flooring
Measured Concentration of Total Volatile Organic Compounds (TVOC): Less than/equal to 0.5 mg/m3 (in compliance with CDPH/EHLB Standard Method v1.2-2017)

Registration # SCS-IAQ-06541
Valid from: April 1, 2021 to March 30, 2022

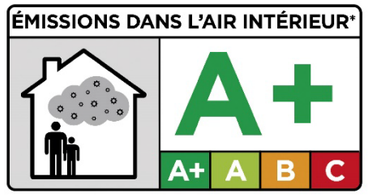
SCSglobal SERVICES

Stanley Mathuram, PE, Vice President
SCS Global Services
2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA

A+

Evaluating construction products in terms of their emissions and labelling such products appropriately has been compulsory in France since 2012. Due to our products'

low emissions we were able to attain the highest designation awarded, A+, for our carpets, carpet tiles and RE/COVER green hard flooring.



GUT

On 4 December 1990, leading European carpet manufacturers, including Vorwerk Carpets, founded the Gemeinschaft umweltfreundlicher Teppichboden e.V. – GUT for short - in Aachen.

GUT aims to continuously optimize environmental and consumer protection throughout the entire life cycle of a textile floor covering - from production to installation, from use to recycling.

In cooperation with officially recognized testing institutes throughout Europe, regular product tests are carried out based on strict criteria.

In addition, GUT promotes environmentally friendly solutions for carpet installation and provides objective information on all carpet-related issues.

Intensive product testing for chemicals and emissions is the basis for consumer protection.

DGNB

Deutsche Gesellschaft für Nachhaltiges Bauen e.V., DGNB for short, a registered association known as the German Sustainable Building Council, was founded in 2007 by 16 initiators stemming from different areas of specialisation in the construction and real-estate industries. Their objective was to give stronger support to and promote sustainable construction in the future.

The reaction to the creation of DGNB was extremely positive: By the beginning of 2008 121 organisations had already affiliated themselves with DGNB. Today the association has over 1,200 members from all over the world.

As a supporting member, Vorwerk flooring has supported DGNB in its endeavours since 2012.

Vorwerk flooring has set up several product groups within the DGNB Navigator based on an EPD (Environmental Product Declaration) so that the planner of a building obtains direct access to data on our products bearing an environmental relevance.

SUSTAINABILITY AS DGNB UNDERSTANDS IT.

Sustainability is more than just a word for DGNB: The association understands sustainability as the obligation on the part of society as a whole to shoulder responsibility for current problems such as climatic change and resource depletion instead of merely leaving them for future generations to deal with.

Sustainable building can make a crucial contribution towards achieving this: According to the German Ministry for the Environment, buildings account for roughly one third of the resources consumed in Germany and a similar proportion of waste generation or carbon emissions.

The DGNB sustainability concept extends beyond the well-known three-pillar model because alongside ecology, economy and user comfort there is also a focus on the functional aspects, technology, processes and on the site itself in the planning and enactment of sustainable buildings and urban districts.
(Paraphrased from a statement by DGNB)

In its capacity as a contributing member, Vorwerk flooring has supported DGNB in its endeavours since 2012.

DGNB
Deutsche Gesellschaft für Nachhaltiges Bauen
German Sustainable Building Council

EPD

Environmental Product Declarations, abbreviated to EPD, form the data basis for ecological building assessment according to the DIN EN 15978 standard, “Sustainability of construction works - Assessment of environmental performance of buildings - Calculation method”.

Environmental Product Declarations are based on international norms (ISO 14025; ISO 14040ff) along with the European DIN EN 15804 standard, and are therefore agreed on an international scale. They are suitable as verification of environmental requirements in public procurement.

Furthermore, Environmental Product Declarations provide the relevant data basis to depict a product’s environmental attributes within marketing or sales.

In 2014 Vorwerk flooring began posting appropriate EPDs for its floor coverings on the website of Institut Bauen und Umwelt (IBU), a German association involved with construction and the environment, and shall continue to do so.

These EPDs can be accessed at the internet address listed below.

http://ibu-epd.com/epd-programm/veroeffentlichte-epds/

Institut Bauen und Umwelt e.V.

LIFE BALANCE

OUTSTANDING QUALITY

Well-being and health in one's own home have always been close to Vorwerk's heart. The company has made the production of environmentally and health-conscious products a key part of its corporate: High-quality carpeting and tiles for a plus in quality of life. For many years, the ecological quality of Vorwerk carpeting has been repeatedly confirmed by German and international environmental labels - including GUT and SCS Indoor Air Quality as well as SCS Sustainability NSF 140.

BEST RATINGS FOR FINE DUST

As far back as 2005, a study performed by GUI (German Society for the Environment and Interior Analysis) which had been commissioned by DAAB (German Allergy and Asthma Association) regarding the burden posed by fine dust particles indoors readily confirmed the fact: carpeting reduces the number of fine dust particles by 50%.
Whereas the figure for particulate pollution was measured at 62.9 µg/m3 when a smooth flooring is used – a rating above the statutory threshold for fine dust particles in the air outdoors – a wall-to-wall carpet measured particulate pollution of 30.4 µg/m3 and achieved a “Best” rating!

That’s why carpets and carpet tiles from Vorwerk flooring are recommended on the whole for people specific with dust allergies.

THE VORWERK LIFE BALANCE LABEL

The Vorwerk Life Balance label is a seal of quality that marks the outstanding quality of all carpets and carpet tiles from Vorwerk flooring for you. It stands for the wide-ranging approach to offer sustainable, health-conscious and environmentally aware products along the entire value chain while producing under optimum social conditions.

That’s the reason why the label is a synonym for the special advantages displayed by articles from Vorwerk. Carpets and carpet tiles absorb noise and help to save on energy. They bind harmful fine dust particles stemming from the air indoors to a particularly high degree, dust that poses a burden, especially for people with allergies.

THE BENEFITS OF LIFE BALANCE AT A GLANCE:

- tested for harmful substances, energy-saving, and recommended for people with allergies
- high-quality standards and extensive testing criteria
- applies to all carpet and carpet tile products from Vorwerk

Schadstoffgeprüft Feinstaubbindend
Tested for harmful substances Binding fine dust
life balance
Für Allergiker empfohlen Recommended for people with allergies

NSF/ANSI 140 CERTIFICATION

To meet international requirements for sustainable flooring manufacturing, we have chosen to be certified to the NSF 140 sustainability standard by SCS Global.
Certification to this industry-leading standard provides a market-driven definition and pathway to more sustainable carpeting through performance requirements for the individual product, manufacturer and associated supply chains. Products with this certification can contribute to sustainable building programs, such as LEED.

NSF/ANSI 140 CERTIFICATE IN GOLD

***SCS Global Services** does hereby certify that an independent assessment has been conducted on behalf of:*

Vorwerk & Co. Teppichwerke GmbH & Co. KG

Kuhlmannstraße 11, D-31785 Hameln, Germany

For the following product(s):

Polyamide 6.0 or 6.6 Yarn Broadloom Carpets

The product(s) meet(s) all of the necessary qualifications to be certified for the following claim(s):

NSF/ANSI 140 Carpet - Gold
Conforms to the NSF/ANSI 140 - 2019 Sustainability Assessment for Carpet

Registration # SCS-SCC-07160
Valid from: June 24, 2021 to June 30, 2024

Stanley Mathuram, PE, Vice President
SCS Global Services
2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA

***SCS Global Services** does hereby certify that an independent assessment has been conducted on behalf of:*

Vorwerk & Co. Teppichwerke GmbH & Co. KG

Kuhlmannstraße 11, D-31785 Hameln, Germany

For the following product(s):

Polyamide 6.0 or 6.6 Yarn Carpet Tiles

The product(s) meet(s) all of the necessary qualifications to be certified for the following claim(s):

NSF/ANSI 140 Carpet - Gold
Conforms to the NSF/ANSI 140 - 2019 Sustainability Assessment for Carpet

Registration # SCS-SCC-07161
Valid from: June 24, 2021 to June 30, 2024

SCSglobal SERVICES

Stanley Mathuram, PE, Vice President
SCS Global Services
2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA

VORWERK FLOORING - PRODUCTS FOR ECOLOGICAL BUILDING

Our goal is to manufacture products that do justice to modern ecological construction. Our floor coverings fulfil the emission criteria for all significant labels in Europe and the USA. As a result, they are a valuable contribution towards a healthy, ecological working environment.

TEXTILES – THE ECOLOGICAL CARPET TILE

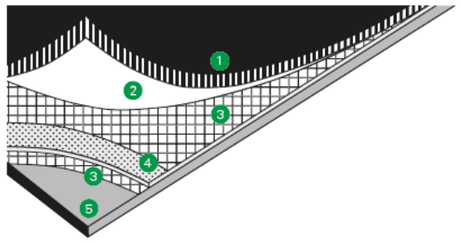
Vorwerk flooring shall continue to remain active in the field of ecological innovations in order to support sustainable building.

The construction of our own tile lamination plant shows that we are not merely paying Lip service to statements like this. For the first time, it is now possible to manufacture our own carpet tiles independent of other manufacturers, without a large number of transport routes, and free of PVCs and bitumen.

In terms of construction ecology, the TEXtiles tile not only reduces the number of fine dust particles in rooms: Thanks to a backing free of PVCs and bitumen, it does not develop any harmful emissions.

As a result, unlike PVC coatings there are no harmful plasticisers. Polycyclic aromatic hydrocarbons, so-called PAHs, which are found in bitumen coatings, are equally not present in TEXtiles tiles

Due to its ecological structure, the tile contains over 70% recycled materials in combination with the use of Econyl yarn. That the tile can be recycled after use goes without saying.



(1) PILE MATERIAL Polyamide e.g. made of ECONYL® yarn with 100% recycled content
(2) TUFT CARRIER for dimensional stability
(3) COATEX HEAVY COATING with 70% recycled chalk content
(4) SOUNDABSORBING FLEECE made from 100% recycled PET material
(5) COMFORT BACKING made of 100% recycled PET material

STRUCTURE OF TEXTILE BACKING

RE/COVER GREEN

Polyurethane made from renewable raw materials: RE/COVER green, the eco-design flooring from Vorwerk flooring, represents a completely new generation of sustainable elastic floor coverings:

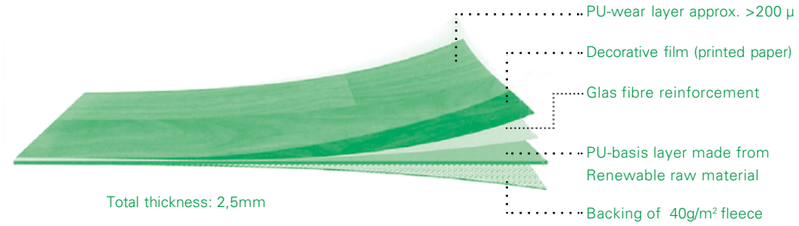
- Rapeseed and castor oils (organic polyols) replace the petrochemical raw materials in polyurethane.
- Chalk is used as a natural filler.
- The eco-design flooring from Vorwerk is comprised to the greatest degree out of renewable raw materials.
- The flooring is very durable, and thus long-lasting (Life Cycle Cost Analysis).
- The flooring is recyclable.

This floor covering bears all the seals for testing and approval with a relevance to sustainable building. As a result it fulfils the requirements set by the German “Blauer Engel” (‘Blue Angel’), the US “GREENGUARD for Children and Schools”, the French “A+”, and the Finnish “M1” standards.

RE/COVER green is naturally also approved as a building product by DIBt, the German Institute for Construction Technology, and contains no PVCs whatsoever.

With this product, Vorwerk flooring is demonstrating responsibility towards dealing with our habitat in an accountable and resource-conserving manner.

PRODUCT STRUCTURE



THE LABEL:
This label is the guarantee that RE/COVER green complies with all European limits for emissions and includes the limits of GUT, Blue Angel and Green Label plus for Europe.

VORWERK

EINZIGARTIGE BODENBELÄGE *seit 1883.*
UNIQUE FLOOR COVERINGS *since 1883.*

CORPORATE
SOCIAL RESPONSIBILITY

Independent of the Eco Balance Program, Vorwerk flooring has long demonstrated both external and internal social commitment.

Tradition, sustainability and social awareness - Vorwerk flooring is committed to special values. That is why Vorwerk is committed to society and the environment worldwide.
This begins with the development of ecological products and ends with CO_2-free production at the Hamelin site.

To minimize the impact of our actions on our environment, we purchase over 95% of our consumables locally or within Europe.
Furthermore, we ask our suppliers to comply with the BSCI Code within their supply chain.

THEY INCLUDE THE FOLLOWING STIPULATIONS:

- Compliance with national laws in force
- Freedom of assembly and the right to collective bargaining
- Ban on any form of discrimination
- Compliance with statutory minimum wages and safeguarding of a livelihood
- Establishment of a maximum working time of 48 hours a week and restriction to a maximum of 12 hours of overtime
- Clear-cut rules and procedures for health and safety at the workplace
- Prohibition of child labour
- Ban on forced labour and disciplinary Measures

In company meetings held several times a year, all employees are informed about current business and can give their own feedback to the management.

The staff at Vorwerk flooring has the opportunity to join in shaping the work process via the continuous improvement process (CIP), via the operational entity for idea management, and in project groups.

CO2 EMISSIONS

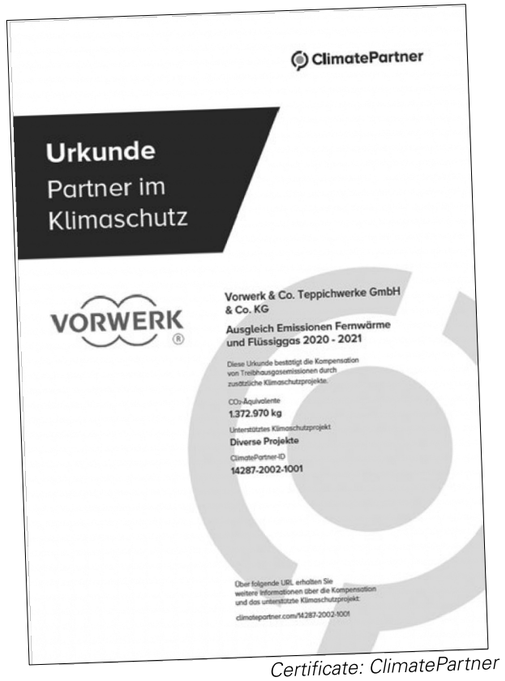
We address the ever-increasing challenge of slowing global warming by offsetting CO_2 emissions generated at our site either directly or indirectly.

In the direct method, we have chosen to purchase certified green electricity generated from hydropower.

In the indirect method, this is the compensation of CO_2 emissions generated by our steam and gas consumption, we have chosen to participate in an environmental protection project supported by the company Climate Partner.

All CO_2 emissions caused by our travel activities are directly compensated.

In 2021, approx. 584t. CO_2 was compensated.


ClimatePartner

Urkunde
Partner im Klimaschutz

VORWERK

Vorwerk & Co. Teppichwerke GmbH & Co. KG

Ausgleich Emissionen Fernwärme und Flüssiggas 2020 - 2021

Diese Urkunde bestätigt die Kompensation von Treibhausgasemissionen durch zusätzliche Klimaschutzprojekte.

CO_2-Äquivalente
1.372.970 kg

Unterstütztes Klimaschutzprojekt
Diverse Projekte

ClimatePartner-ID
14287-2002-1001

Über folgende URL erhalten Sie weitere Informationen über die Kompensation und das unterstützte Klimaschutzprojekt:
climatepartner.com/14287-2002-1001

Certificate: ClimatePartner

ClimatePartner
ClimatePartner-ID:
14287-2002-1001


Bestätigung

Vorwerk & Co. Teppichwerke GmbH & Co. KG
Kuhlmannstr. 11
31785 Hameln

bezieht vom 1. Januar 2021 bis zum 31. Dezember 2021 an seinem Standort in Hameln

unser Ökostrom-Produkt WSW Strom Grün Premium

Der gesamte Stromjahresbedarf wird durch Ökostrom abgedeckt.

Die Vorwerk & Co. Teppichwerke GmbH & Co. KG trägt damit zum Klimaschutz und zum Ausbau der regenerativen Stromerzeugung bei, denn WSW Strom Grün Premium entsteht CO_2-frei größtenteils in neuen und neueren Wasserkraftanlagen in Norwegen und/oder Schweden.

Die Richtigkeit der zugesicherten Eigenschaften wird jährlich durch den TÜV Rheinland überprüft und mit dem hochwertigen Gütesiegel RenewablePLUS ausgezeichnet.

Wuppertal, 26. Januar 2021

Markus Hilkenbach
Vorstandsvorsitzender

ppa. Kai-Uwe Seiberg
Leiter Markt und Handel

WSW Energie & Wasser AG

WSW

Certificate „Grüner Strom"

100% Ökostrom

ENVIRONMENTAL TARGETS
2019 TO 2021

Vorwerk flooring sets itself targets which are continuously reviewed in terms of their sustainability aspect. Pursuing goals which, for example, do not appear to be economically sensible are reconsidered and reassessed to the same extent as goals which do not fulfil the standards posed by ecology or social aspects

ENVIRONMENTAL TARGETS	ENVIRONMENTAL PROGRAMME	RESPONSIBLE
Further development of the Environmental Management System	1.1 We want to minimise the environmental risk of polluting a river in the event of an accident through continuous training in working with our culvert system. Due to the installation of mechanical gates in 2017, the culverts can be sealed without opening them. Pursuance of target: By 2021	Process owner Specialist for work safety
	1.2 We want to improve preventive protection against fire through regularly scheduled fire–prevention drills. Pursuance of target: Continuous	Process owner Specialist for work safety
Reduction of harmful emissions	2.1 We want to increase the number of EPDs to obtain a better carbon footprint accounting for our products. Pursuance of target: By 2020	Environmental management/ Sales management
	2.2 We want to reduce the CO_2 pollution that originates due to our energy consumption to 0 emissions through the purchase of green electricity and by compensating for energy from district steam generation. Pursuance of target: By 2020	
Further development Of our cyclical system	3.1 We want to increase the share of recycled substances in our tile items to a minimum of 50% Pursuance of target: By 2021	Development/Production Environmental management
Eco Balance Report	4.1 Preparation of a Eco Balance Report Pursuance of target: Continuous	Environmental management

ENERGY MANAGEMENT /
PROGRAMME 2016 TO 2021

ACTIVITY	STARTS	COSTS €/yr	PLANNED SAVINGS €/yr	kWh/yr	CO_2/yr (t)	STATUS
Upgrading of chart recorder system	2016	30,000	not quantifiable			60% enacted
New lighting concept in the outdoor area using LED technology; replacement of old mercury vapour lighting as a result	2016	7,500	3,500	560	0.146	95% enacted
New lighting concept in indoor areas using LED via rented lighting	2018	2,000	1,572	9T	2,3	100%
	2019	1,842	2,484	14,5T	3,7	100%
	2020	10.828	21,906	115T	0,0	100%
	2021	60,609	50,238	239T	0,0	100%

Source: Electricity CO_2 = 0g/kWh (Eco electricity by Waterpower since 2020)

PUBLICATION DETAILS

For further information or in the event of questions and suggestions, please contact our delegated Environmental and Energy Management Representative:

Herrn Andreas Kunze
Telephone: +49 (0) 5151 / 103 – 406
E-Mail: andreas.kunze@vorwerk-teppich.de

VORWERK FLOORING ON INTERNET
www.vorwerk-flooring.com

COMPANY ADDRESS

Vorwerk & Co, Teppichwerke
GmbH & Co. KG
Kuhlmannstraße 11
31785 Hameln
Germany

(since February 2022)
Hamelner Teppichwerke
GmbH & Co. KG
Kuhlmannstraße 11
31785 Hameln
Germany

EINZIGARTIGE BODENBELÄGE *seit 1883.*
UNIQUE FLOOR COVERINGS *since 1883.*