

healthy flooring



 **CLASSEN**®

CERAMIN®

What is CERAMIN?

CERAMIN is the natural, emission free material, for long-lasting health. That's makes the respective end products, such as polymer flooring, something special.

Healthy for living, 100 % recyclable, robust and dimensionally stable.

CERAMIN is a new type of PVC-free material and serves as a core board for high-performance floor and wall coverings.



SUSTAINABLE PRODUCTION

Why it's HEALTHY

?

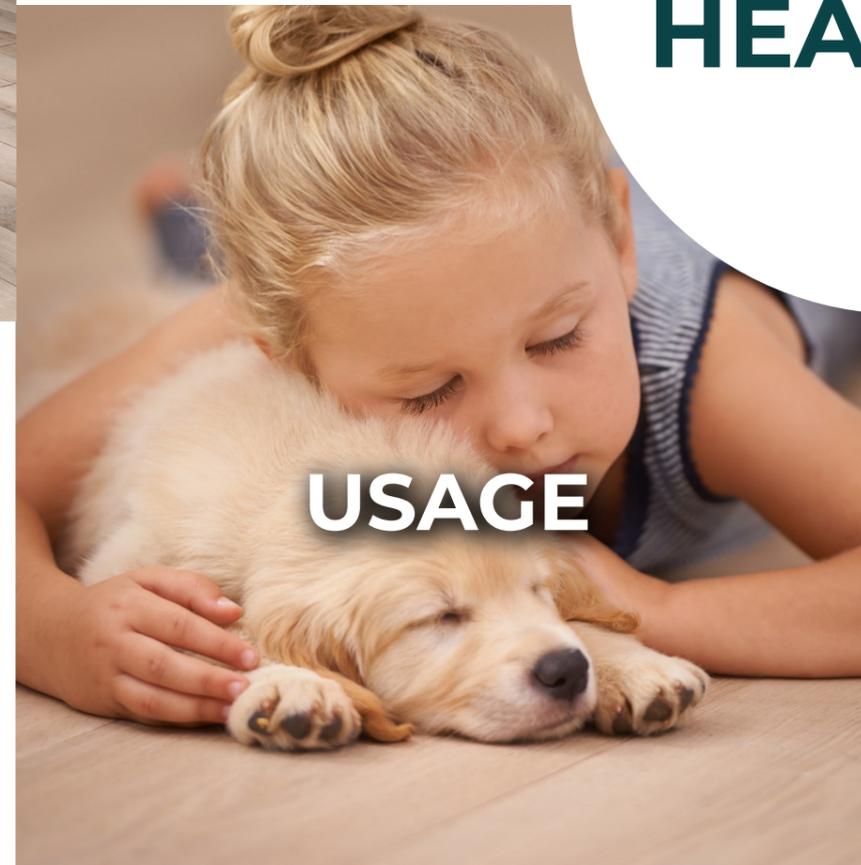


CERAMIN was developed for the future.

As the heart of robust, durable polymer products **without PVC**.

As a natural, pollutant-free material for long-lasting health.

As the only market-ready alternative „Made in Germany” that already makes, for example, 100 % recyclable polymer floors and does not burden the environment and the future of our children.



USAGE



POST LIFE

SUSTAINABLE PRODUCTION



CLASSEN has a unique know-how in the production of CERAMIN



As a medium-sized family business, we think in closed loops; the sustainable and responsible use of resources is a matter of course for us - from the procurement of raw materials to production and recycling. Our nearly 2,000 employees and our management team live this philosophy in appreciation of our planet. Since 1962, constant knowledge of what consumers want has brought the CLASSEN Group to where the company is today.

Our innovations include not only numerous patents as an expression of our innovative spirit, but above all continuous further development for a long-lasting and sustainable future.

Sustainability, conservation of resources and the protection of the environment are an obligation for the CLASSEN Group and its employees towards future generations.

The formulation and production of CERAMIN has been patented by CLASSEN Group. CLASSEN uses a self-developed formula that allows 100 % control over all ingredients.

Other manufacturers of plastic products such as flooring purchase the finished raw materials and have less control over modifications within the formulation and have to accept formulation variations.

CLASSEN offers a high level of quality control on recycle ingredients. All recyclates are first checked for quality variations in order to keep CERAMIN at a consistently high standard. The specialists at CLASSEN have succeeded in making PP usable for CERAMIN as a material, e.g. for floor support panels, although PP is more semi-crystalline and thus more post-crosslinkable than other polymers such as PVC.



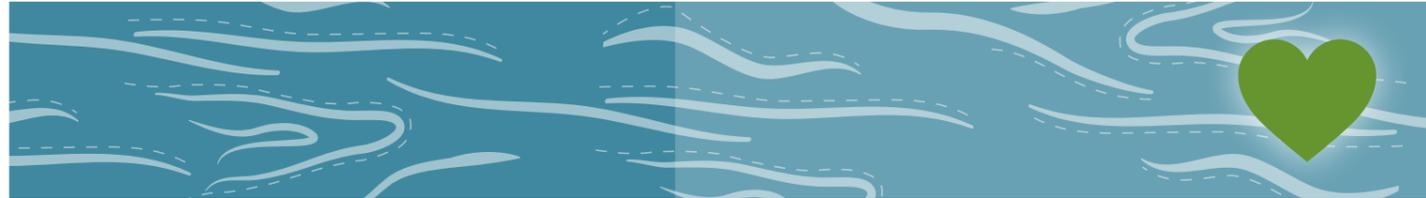
CLASSEN is a member of the EU's Circular Plastic Alliance:
The EU's goal is to use ten million tons of recyclates in plastic products or packaging by 2025.
CLASSEN currently uses 13,000 tons of PP recyclates per year. With the new production plant, this will increase to around 26,000 tons per year from mid-2022.



CERAMIN vs. PVC

this is how they differ the ingredients

CERAMIN



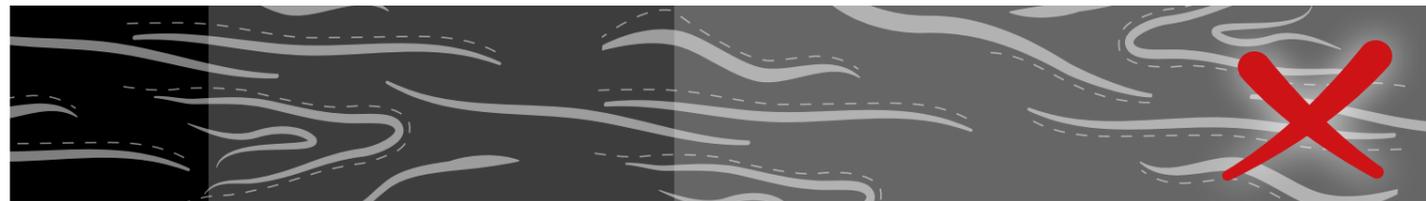
40 %

Polypropylen (PP)
mostly Recyclate

60 %

Mineral filler
(100 % naturally)

PVC



10 - 20 %

Plasticisers
& stabilisers

10 - 25 %

Polyvinyl chloride (PVC)
43 % Carbon and hydrogen
57 % Chlorine

60 - 70 %

Mineral filler
(100 % naturally)

PVC contains a latent health hazard due to a high chlorine content of up to 60 % and phthalates as well as other plasticisers. International studies provide extensive and unchallenged evidence of hormone and genetic damage in children. Health experts attribute breast and testicular cancer, diabetes, immune deficiency or learning and behavioral disorders such as ADHD to these pathogenic plasticisers. And of course, pets also suffer the consequences of the substances they ingest in their environment.

Plasticizers are absorbed, among other things, through exhalations from PVC floor coverings via breathing or direct skin contact. Young children, who like to put everything in their mouths, can absorb plasticizers when sucking on PVC products.

CERAMIN is manufactured without chlorine, plasticisers and heavy metals.

CERAMIN is odorless and does not contain substances that can evaporate and are harmful to health. One quarter consists of material that has already been recycled. PVC can emit harmful plasticisers and chlorine for many years.

CERAMIN products from CLASSEN meet the requirements of the label of the eco Institut and the environmental seal "Blauer Engel" of the German Federal Government, which is awarded only to wall and floor coverings without PVC.



www.blauer-engel.de/uz120



Difference between PP and PVC

- Recycling code „05” stands for **polypropylene** (PP)
- stronger and more temperature resistant
- Most commonly used plastics in food packaging
- very light and versatile to shape
- easy to recycle
- Production with recycled plastic consumes less energy than the production of new plastic
- **PVC**, or polyvinyl chloride, is behind the recycling code „03“
- problematic, as toxic chlorine is needed for its production
- toxic substances are produced during combustion
- Hard and brittle in its original form
- Plasticisers make PVC malleable and elastic
- Added plasticisers are not firmly bound to the plastic and are released again

Why Polypropylene (PP)?

A more sustainable material for durable floor and wall coverings

- No harm to health
- No smell, no toxicity to human body
- 100 % recyclable
- 25 % lighter than PVC flooring

Scan me!

See how our factory works



USAGE

CERAMIN is healthy to live with and carefree to use



healthy for living



100 % waterproof material



PVC and pollutant free



robust



100 % recyclable



durable



made with recycled materials



UV-resistant



upcycling during production



floor heating friendly



kids and pets friendly



for wall, floor, new and renovation



no smell



quick installation



acoustic comfort



warm touch





100% waterproof material

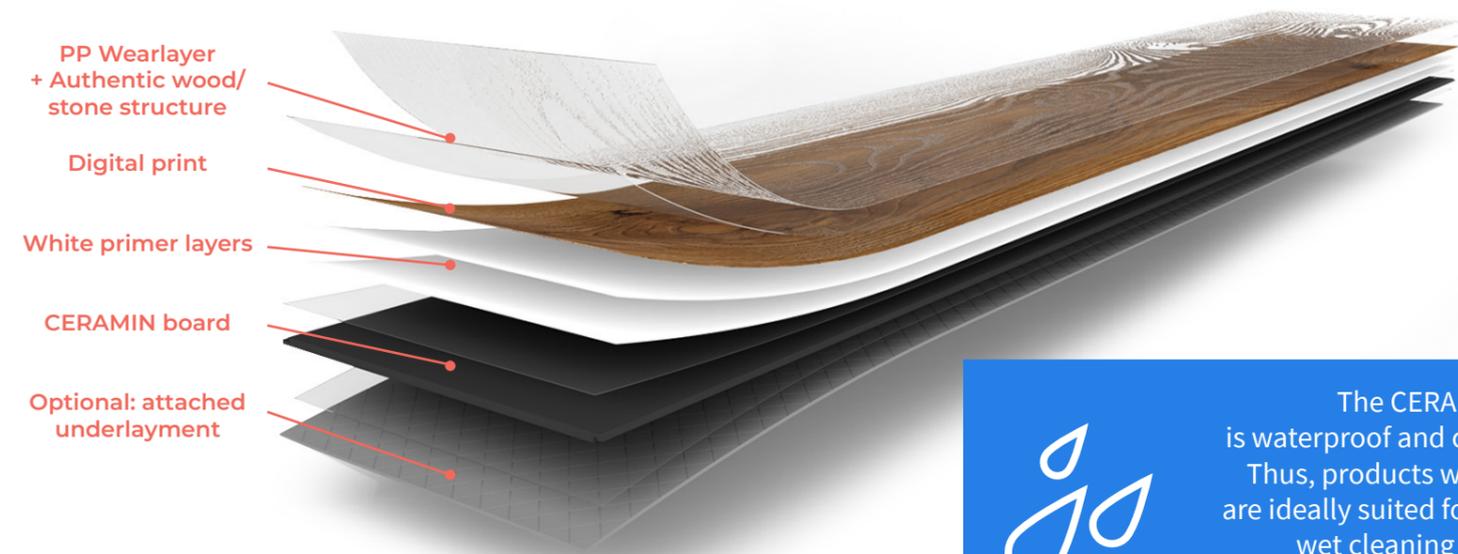
The alternative to natural stone or ceramic tiles

Whether for the renovation of walls or floors, whether for the design of a new floor: CERAMIN. Flexible application, quick and safe to use. The beautiful and functional alternative to natural stone and ceramics.

CERAMIN-based products are suitable for walls and floors in almost all interior areas, even for wet rooms without floor drainage.



The 100% waterproof core is a reliable and proven protection against the effects of water.




The CERAMIN material is waterproof and cannot swell. Thus, products with CERAMIN are ideally suited for daily wear, wet cleaning and even for installation in wet rooms.



Low maintenance – easy to clean

CERAMIN is suitable for contact with commercially available cleaning agents without any problems. The cleaning agents used should be PH-neutral and ideally free of re-greasing or layer-forming components and waxes. Abrasive or aggressive cleaners must not be used.

Scan me!

See how quickly renovate the bathroom



No limits in DESIGN

- CERAMIN products are 100 % digital printed
- Largest variety of planks
- Individual Design
- On-Demand-Print
- Wood and stone decors
- Own decor creation



Endless design possibilities with digital printing

100% dimensionally stable

DURABLE AND ROBUST – high stability + strength

CERAMIN is 100% dimensionally stable, UV-resistant, waterproof, easy to clean and simple and safe to install thanks to the quick installation system.

The matt surface with its high-quality low gloss level is convincing in every size variant and with all of the authentic wood or natural stone decors.

CERAMIN offers core boards with a few millimeters, which are particularly resilient and suitable for frequently used living spaces as well as for commercial and properties.



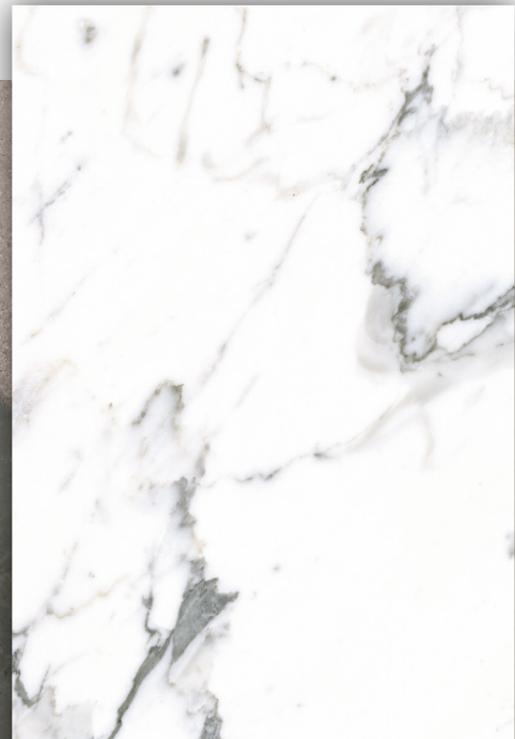
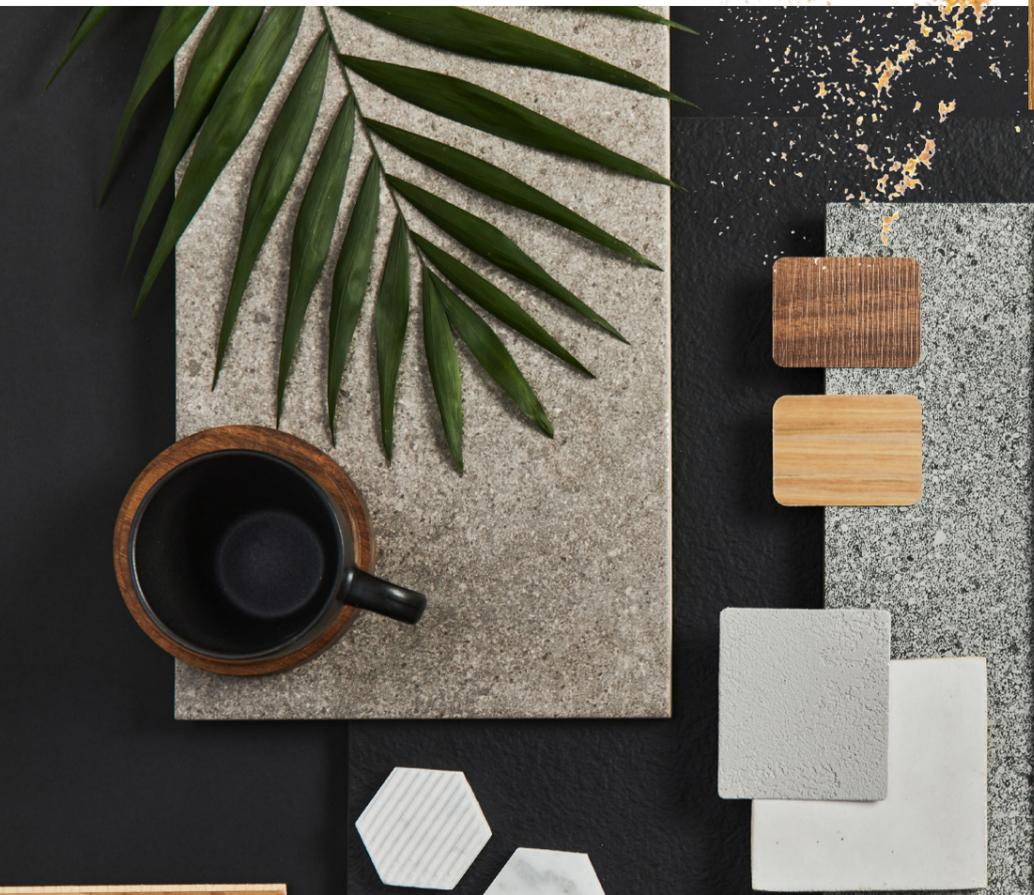
Different dimensions

We offer beautiful wood and stone patterns and many sizes of our planks and tiles. Colours and textures are the best inspiration for new and interesting designs.

- 173 x 1290 mm
- 203 x 1290 mm
- 246 x 1290 mm
- 392 x 1180 mm
- 387 x 776 mm
- 392 x 780 mm
- 310 x 638 mm
- 315 x 641 mm
- 1202 x 2550 mm



Reducing the thickness of the boards while maintaining the same quality!





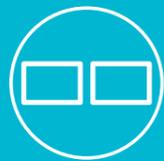
megaloc
click connect



easyloc
click connect



seal joint
glue mounting



square edge
glue mounting

Scan me!



See
installation
instructions

Easy and quick installation

Thanks to locking system, CERAMIN is guaranteed to be easy to position during installation. The four-sided micro-bevel ensures a perfect finish on floor and wall. You can CERAMIN by clicking on it or gluing it to the screed floor.



Base

You install the CERAMIN with use underlay by clicking on it or gluing it to the screed floor or wall.

Underfloor heating

Friendly to warm water and electric underfloor heating systems. The surface temperature must not exceed 29°C.

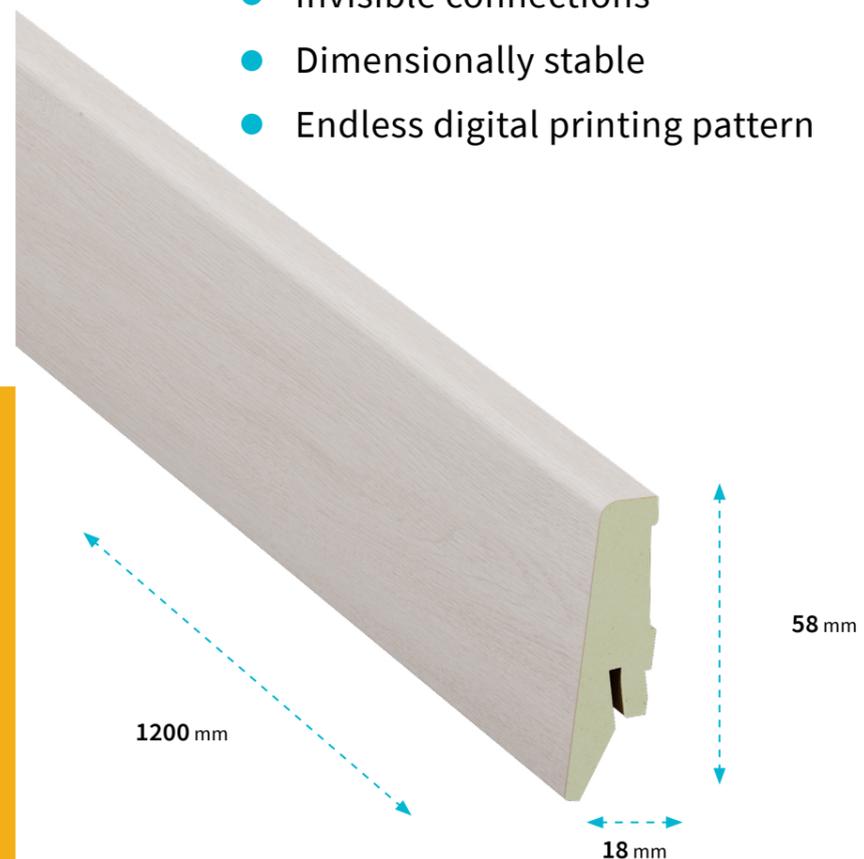
Easy cut

Need to cut the plank? Use a cutter knife!
Need to make a hole? Use a compass!
Quickly and without dust.

NAUTIC skirting

Complex solution for whole home

- Fully waterproof
- Perfectly matched
- 100% PVC free
- 100% Recyclable
- Easy assembling
- Comfort in transport
- Invisible connections
- Dimensionally stable
- Endless digital printing pattern



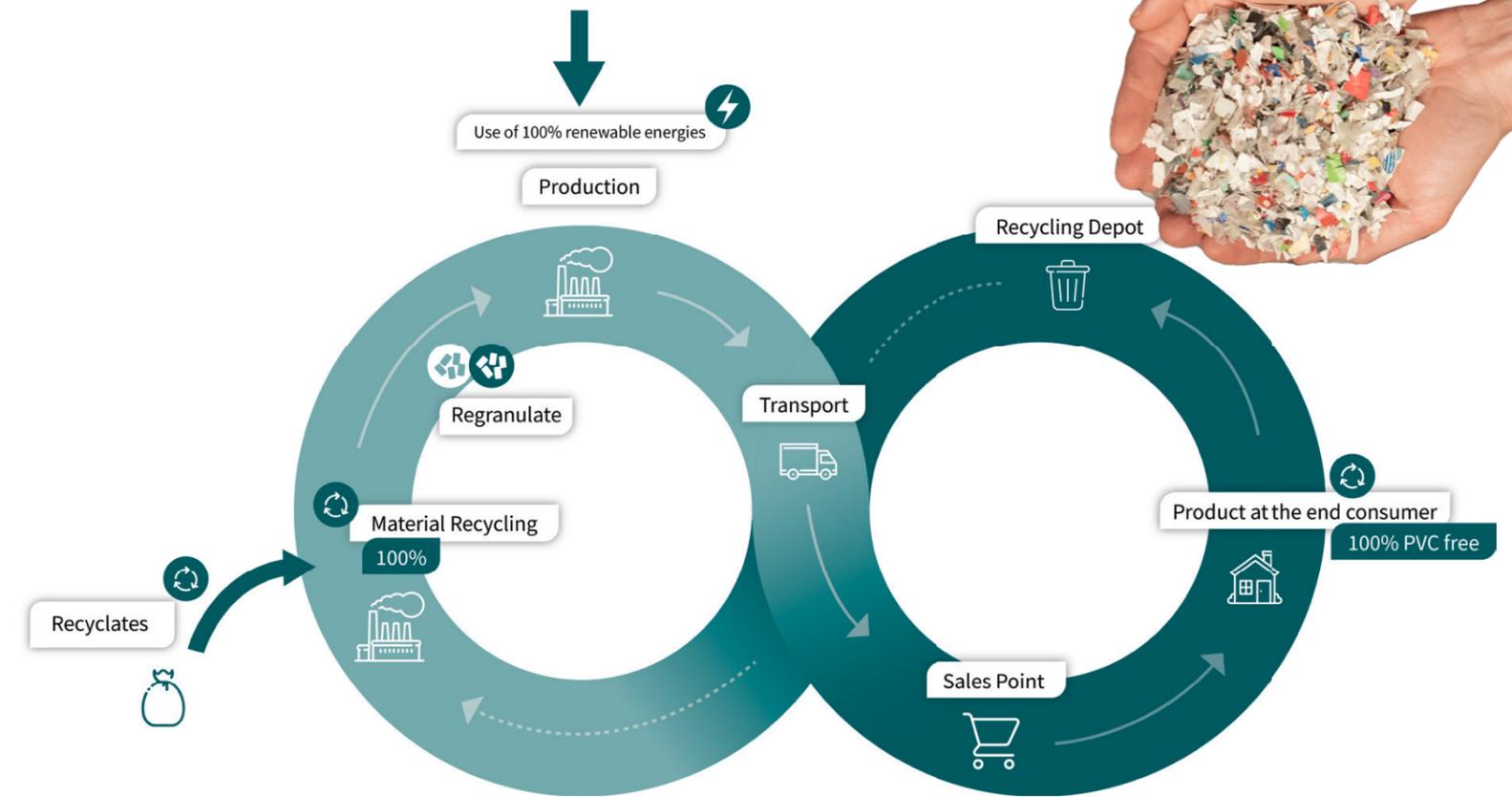
POST LIFE



CERAMIN is
100% recyclable

As a pioneer in innovative flooring, CLASSEN has fascinated people for decades with high-quality designs and unique technologies. At the same time, the company has always been aware of its responsibility to develop products that do not harm people's health and the future of our planet. More than ten years ago, CLASSEN therefore developed the unique material CERAMIN, which makes sustainable polymer-based floor coverings possible entirely without PVC, and thus entirely without chlorine, stabilizers, phthalates or other harmful plasticizers. Products with CERAMIN therefore bear, among others, the environmental awards „Blue Angel”, from the Eco Institute and other international testing facilities.

Lifecycle of CERAMIN



Our strategy: **Today's components are tomorrow's raw materials**

CERAMIN is PVC-free and healthy to live with

Those who choose healthy building materials such as CERAMIN remain permanently free of harmful emissions.

CERAMIN is the alternative solution

Where raw materials such as wood and natural stone are scarce, CERAMIN is today more than „just” a good alternative.

CERAMIN is part of the circular economy

Consequent „Design for Recycling”: Use of recycled material in production (62.5 % in PP content) & obtain a product that is 100 % recyclable.

RECYCLING STRATEGY



Scan me!

Circular economy at CLASSEN

CLASSEN actively participates in the circular economy of plastic products in the respective regions and continuously expands cooperations with various partners.

Example Germany: CLASSEN has entered into a cooperation agreement with Hündgen Entsorgungs GmbH & Co. KG, an operator of recyclables sorting facilities, to form the joint venture HC Plastics GmbH.

Rejects can be reused in production at a rate of 98.5 %. Only 1.5 % are varnishes, primers and paint, which are filtered out.

The independent plastics recycling network plastship GmbH has tested CERAMIN for recyclability and certifies it as highly recyclable.

CERAMIN is also recyclable after its life cycle. In addition to recycling in a new flooring product, this also means that the raw material can be reused outside the flooring industry.

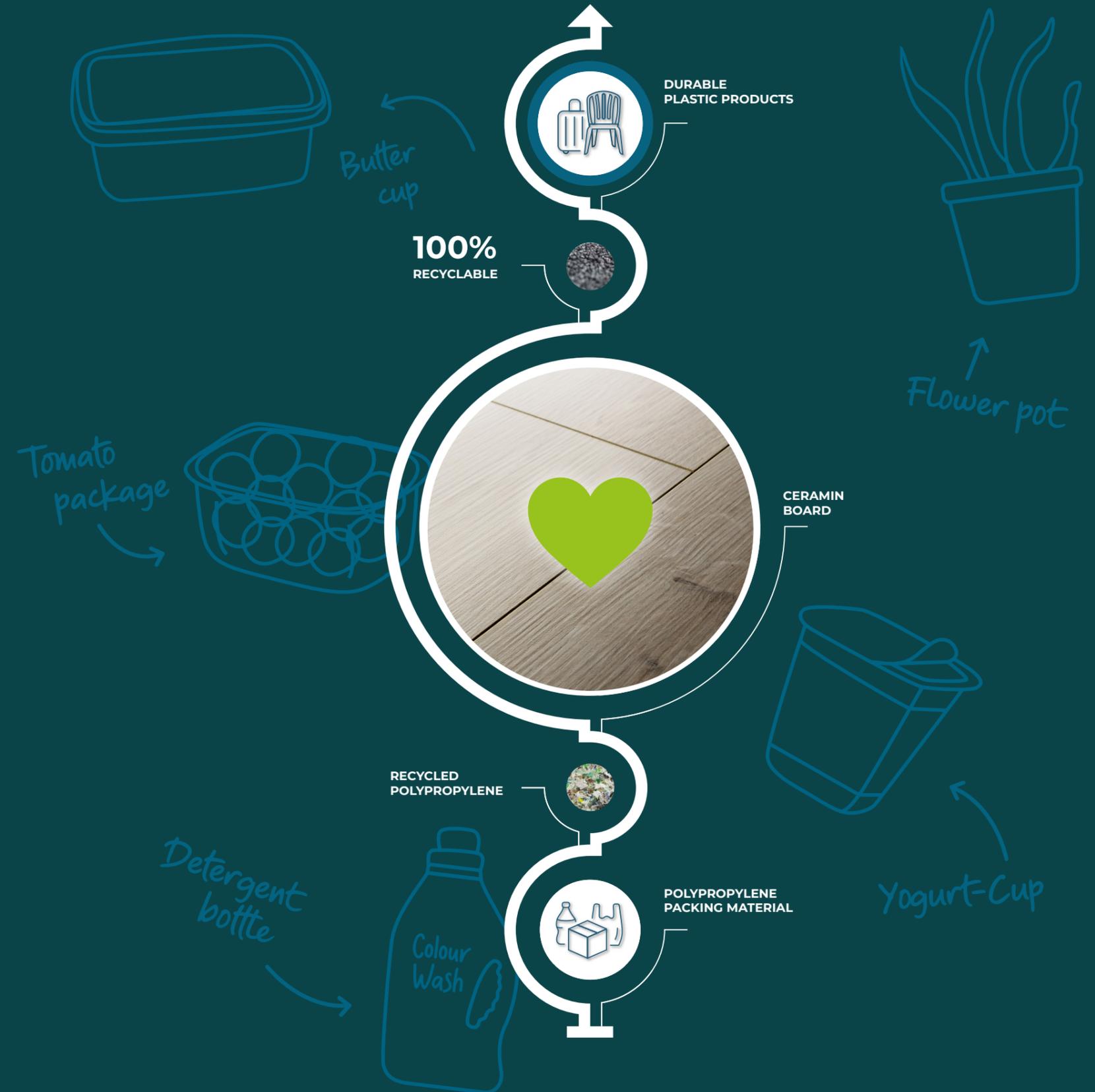


- 25 % recycled material of the total product
- by using recyclates in CERAMIN, a so-called upcycling of the recyclates into a high quality product with a long service life takes place.
- by using PP recyclates in CERAMIN, 25 000 tons less crude oil are consumed per year for the production of polymers.



CERAMIN® is not only 100 % recyclable, but there is already 25% recycled Material. Certified with the „Blue Angel“ the Federal government and the environmental seal „EU Ecolabel“!

CERAMIN is odorless and does not contain substances that can evaporate and are harmful to health. One quarter consists of material that has already been recycled. PVC can emit harmful plasticizers and chlorine for many years.





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ClassenFloor



Classen Cloud
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Classen Competence Centre
Showroom and advice for our customers



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www.ceramin.de