

SUSTAINABILITY – THE ORIGINAL CAN DO

Secure. Fast. Individual.





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What if ...

Most people dream of owning their own home. This could be a free-standing detached house in the country or a luxurious penthouse apartment in the city. What's the same everywhere is that the demands placed on the construction method have changed in recent years. With increasing ecological and economical consciousness, building owners, planners and architects are attaching more and more importance to sustainable construction.

But what does that mean for the building materials used?

First of all that the building materials used are long-lasting and save costs by remaining free from damage. A further aspect of sustainable construction is the use of recyclable and reusable building materials.

Two important reasons that speak for hard foam support elements from LUX ELEMENTS.

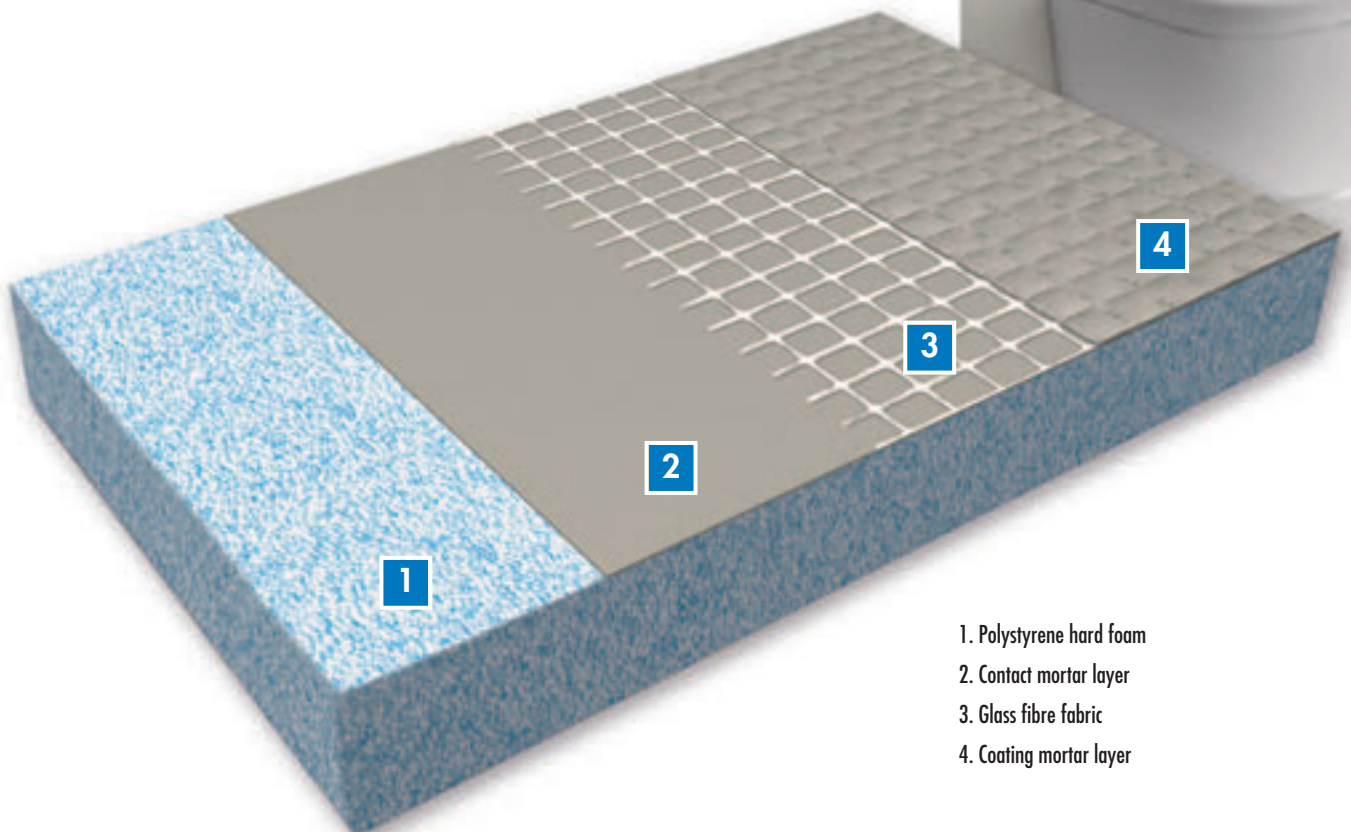
The ORIGINAL can do!

Hard foam support elements from **LUX ELEMENTS**

When building a new bathroom or renovating an existing one, the time has come at last to turn those long-held wishes into reality. The question that arises when thinking about your dream bathroom is not "what if", but "with what and how".

The answer is: Design your new bathroom with hard foam support elements from LUX ELEMENTS. This building material enables individual ideas to be put into practice and brings along all the properties that are advantageous in a wetroom.

But what are these properties?
We will explain that on the following pages.



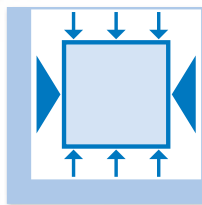
1. Polystyrene hard foam
2. Contact mortar layer
3. Glass fibre fabric
4. Coating mortar layer



environmentally friendly



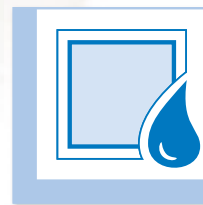
proven quality



pressure-stable and rigid



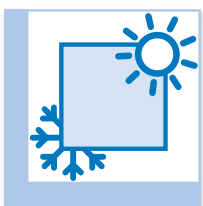
lightweight



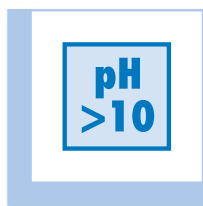
water-resistant



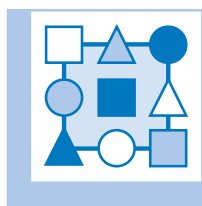
fire-retarding



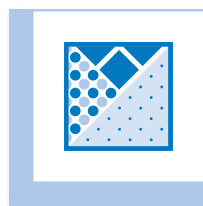
insulating



mould-resistant



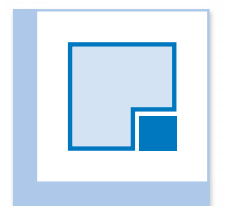
design variety



alternative surfaces



economical



system-oriented

Did you know...

... that there is a connection between our hard foam support element and a clothes hanger?

The residual material arising from cutting our components is not simply disposed of, but is shredded and used for the production of new hard foam support elements.

Whatever then is still left over is recycled by other industrial companies and finds use, for example, as shoe soles or clothes hangers.



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**environmentally
friendly**

“The future comes
faster than you think...”

- **Hard foam production in our own factory**
Quality control from the beginning
- **Environmentally friendly production**
without CO₂, free from CFCs and HBCD
- **Hard foam made of EPS**
up to 100 % recyclable

EPS – for the environment

As opposed to panels containing wood or gypsum, the core of hard foam elements consists of humidity-resistant polystyrene. The manufacturing process differs here between extruded (XPS) and expanded (EPS) polystyrene. While XPS is mainly foamed with CO₂, EPS is the most environmentally friendly material, as it is produced without the foaming agents CFC, HCFC, HFC or CO₂.



Did you know...

... that we have a similar field of vision to owls?

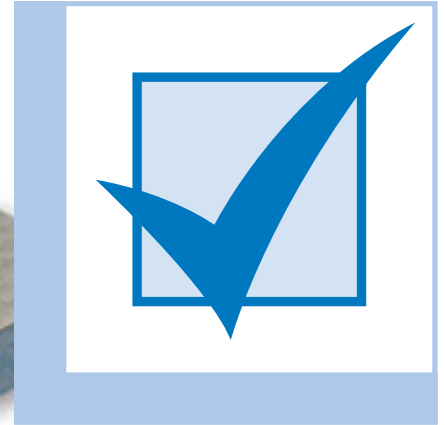
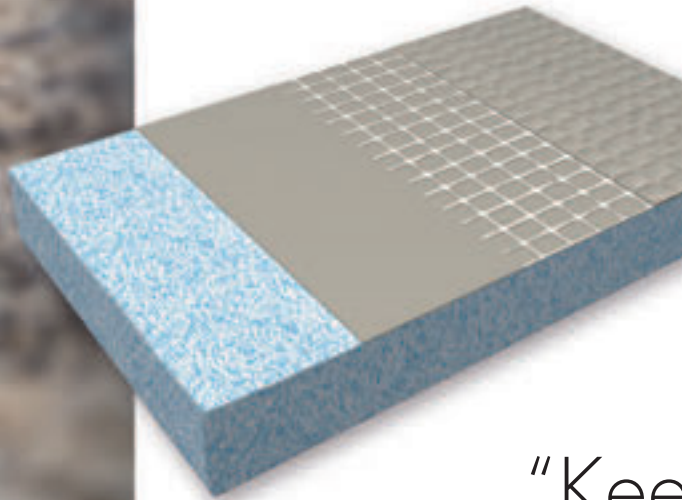
Owls can rotate their head by up to 270 degrees. That gives them **particularly good all-round vision**, even if their eyes are directed straight forward.

We view our products and their quality in the same way. We look forward, but don't forget to look in other directions, too. This way we not only focus on individual products, but also attach importance to tested systems in which all components are perfectly matched to one another.



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proven quality

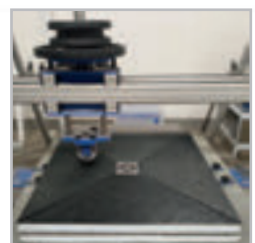
“Keeping an eye on it...”

- **Experienced manufacturer of hard foam support elements**
Patent application as far back as 1981
- **Safety tested**
in accordance with European standards
- **Certified sealing system**
- **Proven in practice worldwide**
even in extremely stressful application areas such as public wellness facilities



Certified by national testing institutes

LUX ELEMENTS has long-standing experience in the production of hard foam support elements. To document our quality, we have our products certified by national test institutes. The test certificates verify the durability and quality of the material in practical use and justifies the faith our customers have in us.





Did you know...

... that a spider's web and our hard foam support elements are similar?

A spider's web can withstand quite a lot, even if it is only spun from thin silk threads. Thanks to its special construction method, neither raindrops nor impacting insects can damage it.

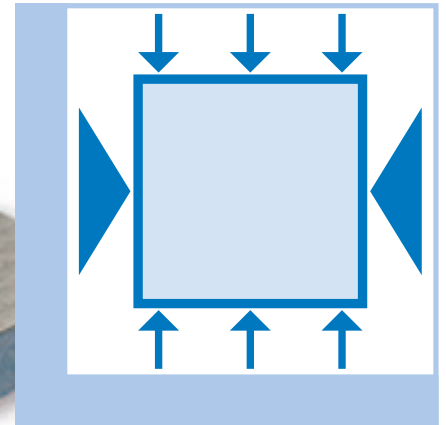
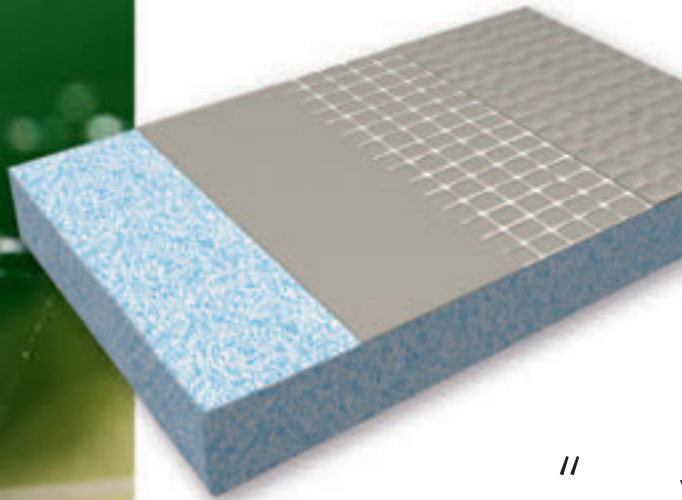
Hard foam support elements are also more stable than one might suppose in view of their light weight.

A stabilising glass fibre fabric — likewise a net-like structure — embedded in a double layer of mortar ensures that the elements can withstand even extreme loads.



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**pressure-stable
and rigid**

“... withstands a
great deal!”

- **Extremely stable and sturdy**
thanks to mortar coating with glass fibre fabric
- **Dimensionally stable**
no bending even under heavy loads
- **Suitable for wall and floor**
as a universal construction panel
- **Suitable for constructions**
e.g. self-supporting room constructions,
steps or seats



Register-Nr.
P1B036 und P1B037

Durable even under higher loads

Mosaic $\geq 20 \times 20 \times 4$ mm with front-mount adhesive film can be used as the lining for both low exposures and heavier loads (e.g. wheelchair use of up to 200 kg) as long as a reaction resin is used for gluing and joining.

If the size of the tiles is $\geq 50 \times 50$ mm, tile adhesive of quality grade C2 can be used for gluing and a cementitious grout material for joining. Please take note of our General Building Authority Approved Test Certificate No. P-AB/20802/05-2008 from tBU GmbH and/or our European Technical Approval according to ETAG 022-3 when covering our shower base elements with surface materials.

Ensure that the tiles/mosaic pieces have a sufficient breaking strength. The shower base element should not be subjected to loads greater than 0.1 N/mm^2 .

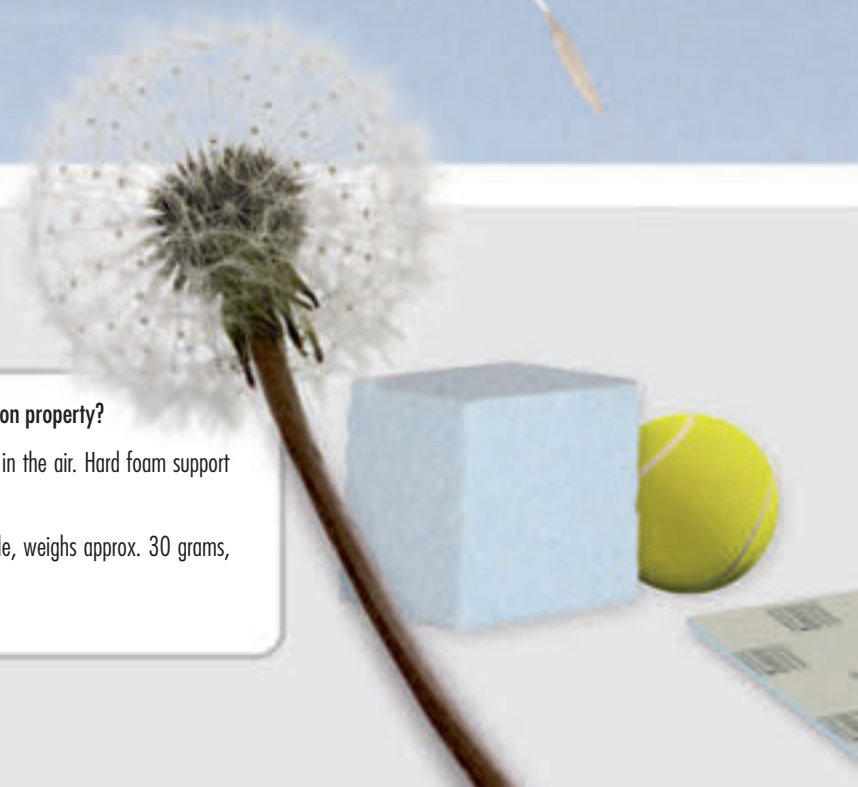


Did you know...

... that dandelions and our hard foam support elements have a common property?

All of us have at some time seen the light dandelion seeds floating along in the air. Hard foam support elements may not fly about, but they are still extremely lightweight.

A hard foam cube with a size of 10 x 10 cm without coating, for example, weighs approx. 30 grams, about half as much as a tennis ball.



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lightweight

“I like it as easy as possible!”

- **Low static load**
thanks to low weight
- **Effortless transport**
even to higher storeys
- **Simple handling on the building site**
also possible for one person

| | Panel weight | Weight per unit area |
|---|----------------|------------------------------|
| 12 mm plasterboard "damp room" green | 14,42 kg | 9,24 kg/m ² |
| ELEMENT-EL 12 600 x 2500 mm | 4,68 kg | 3,12 kg/m² |

Bonus for planners and installers

The low weight of the hard foam support elements from LUX ELEMENTS is an advantage for static calculation and thus an important plus for planners. At the same time the installer benefits from the lightweight, because working on site is much more convenient – not only for the transport of the products, but also for the assembly.





Did you know...

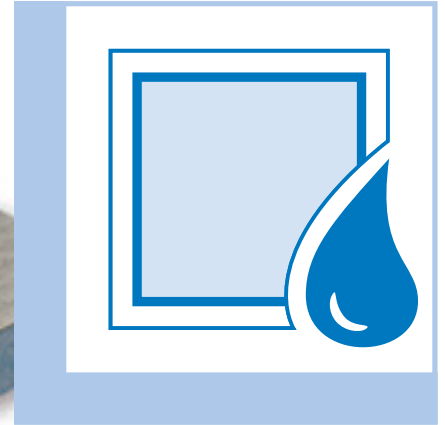
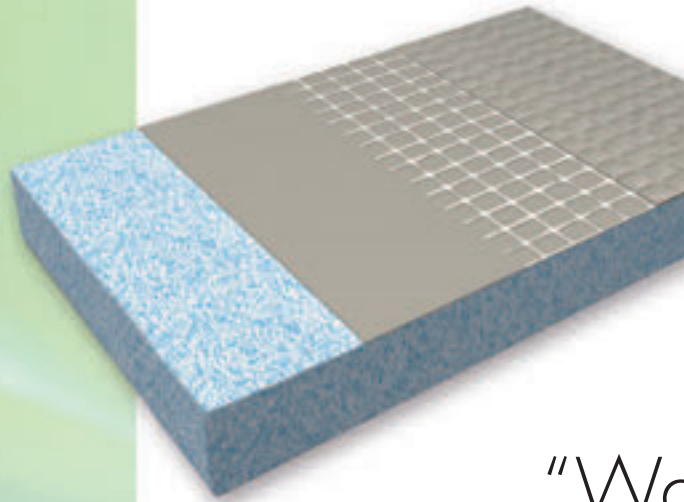
... that there is a parallel between a hard foam support element and a lotus leaf?

Both are at home in water and water doesn't harm either of them. In the same way that the leaves of the lotus plant are protected against droplets by virtue of the fact that they simply run off, the hard foam support element also absorbs no moisture.



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water-resistant

“Water? Doesn't
make me wet ...”

- **Insensitive to moisture**
- **Tested according to ETAG**
(European Technical Approval Guideline)
- **Sealing according to DIN 18534**
usable for all water load classes



Dimensionally stable even when wet

The moisture-resistant hard foam support elements from LUX ELEMENTS are ideally suitable for use in **bathrooms, indoor swimming pools and wellness facilities.**

Due to the nature of the material, it does not swell when exposed to moisture and maintains its shape. **Wherever water or moisture is present, our products are in the right place!**



Did you know...

... that it feels like your skin is burning when you chop and touch chillies due to the ingredient capsaicin. It's almost as if you've reached into a flame, even if there's no flame to be seen.

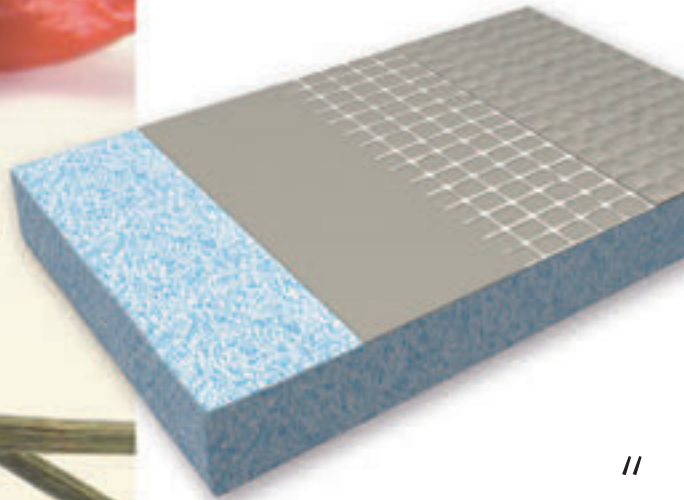
A hard foam support element also doesn't burn so easily. As an additional barrier to open flames you will find fire protection accessories in our product range.

Be on fire for our elements!



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fire-retarding

“... no quarter for hot stuff!”

- **Self-extinguishing, flame-retardant**
- **No flaming droplets**
- **Flame-retardant polymer FR HBCD-free**



Fire protection at LUX ELEMENTS

LUX ELEMENTS hard foam support elements are flame resistant. Therefore, we fulfil the national and international standards in a high fire protection class.

For flame protection we use polymer FR, an organic medium that is classified as uncritical and harmless.



Did you know...

... that a bird's nest can be compared to our hard foam support element?

Not without cause do we speak of warmth in conjunction with the feeling of family security, for example. A nest imparts a feeling of protective security and warmth. A bird's nest is built such that it has insulation properties and keeps the temperature of the brood at a constant level. Only then can the young birds develop in a healthy way.

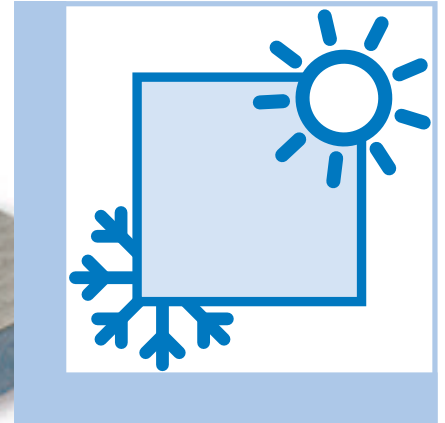
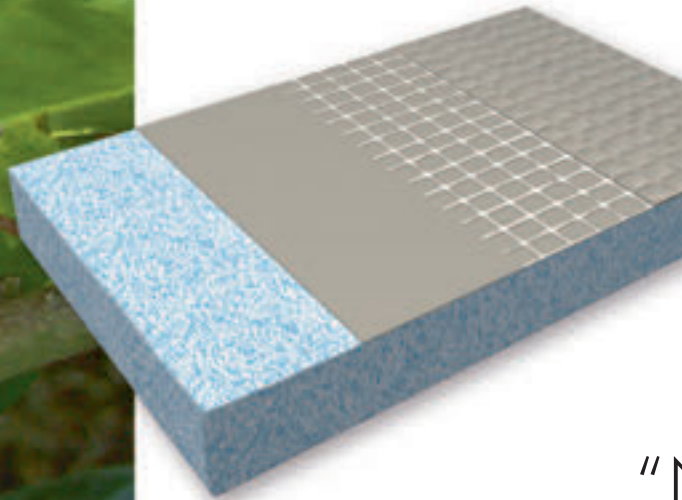
Likewise the hard foam support elements store warmth and therefore protect the environment. Future generations also benefit from this.





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insulating

“No heat loss here ...”

- **Heat remains in the room**
- **Short heating time**
- **Lower energy requirement**
- **Very good thermal conductivity:**
 $\lambda=0,0336 \text{ W}/(\text{m} \cdot \text{k})$

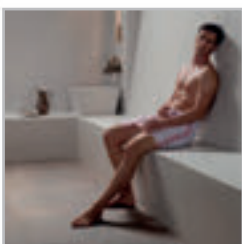


Photo: Sommerhuber

Atmosphere of wellbeing

Due to the heat-insulating properties of LUX ELEMENTS hard foam support elements, the warmth remains in the room and does not escape to the outside. Warmth generally has a positive effect on the maintenance of health, as it contributes to an atmosphere of wellbeing.

In times where environmental protection, energy saving and health are becoming increasingly important, we are particularly proud that our products can make a contribution to all three categories.



Did you know...

... that mould in buildings can cause significant and in some cases chronic illnesses?

These include, for example, respiratory infections, bronchitis or allergic asthma.

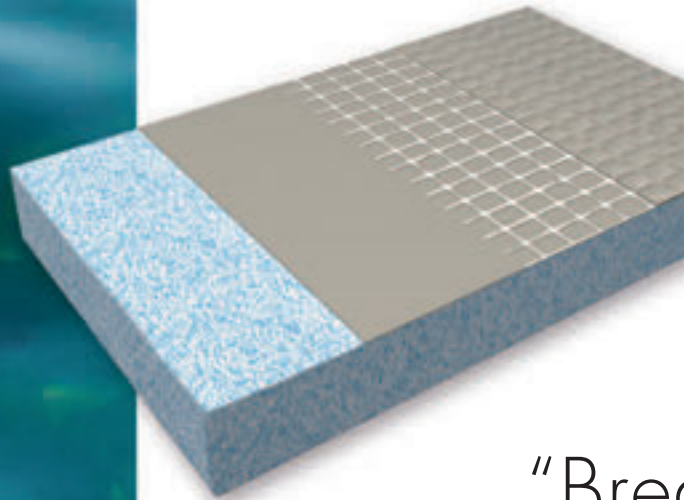
The formation of mould is prevented with hard foam support elements.

So you can continue to breathe easily and protect your health.



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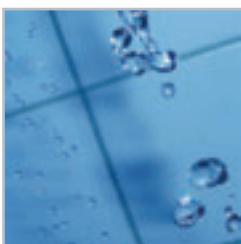


**pH
> 10**

mould-resistant

“Breathing easily
at last ...”

- **Anti-bacterial substrate**
- **No breeding ground for mites and pathogens**
- **Hygienic**
- **Suitable for allergy sufferers**



Importance of alkalinity in the bathroom

On account of their alkaline properties, hard foam support elements from LUX ELEMENTS prevent the formation of mould and thus the infestation of mites and pathogens.

For allergy sufferers this makes an important contribution to a healthy life!



Did you know...

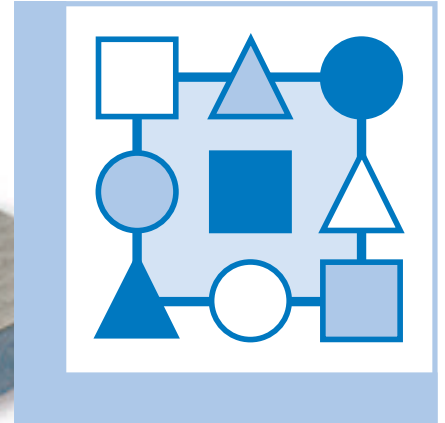
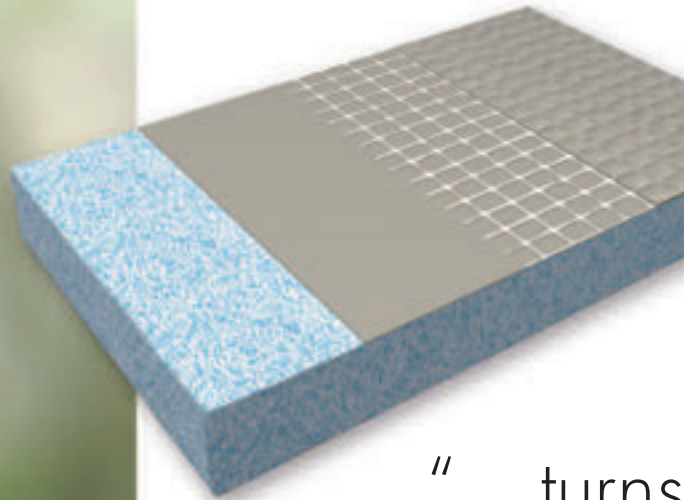
... that a butterfly and our hard foam support element have something in common?

A butterfly isn't beautiful right from the beginning. The glaring, brilliant colours and the elegant shape of its wings only emerge after the cocoon phase.

Hard foam support elements may be used to design versatile shapes, but their decorative effect only results from the surface finish with ceramics or plaster.

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design variety

“...turns out to be an all-rounder in design!”

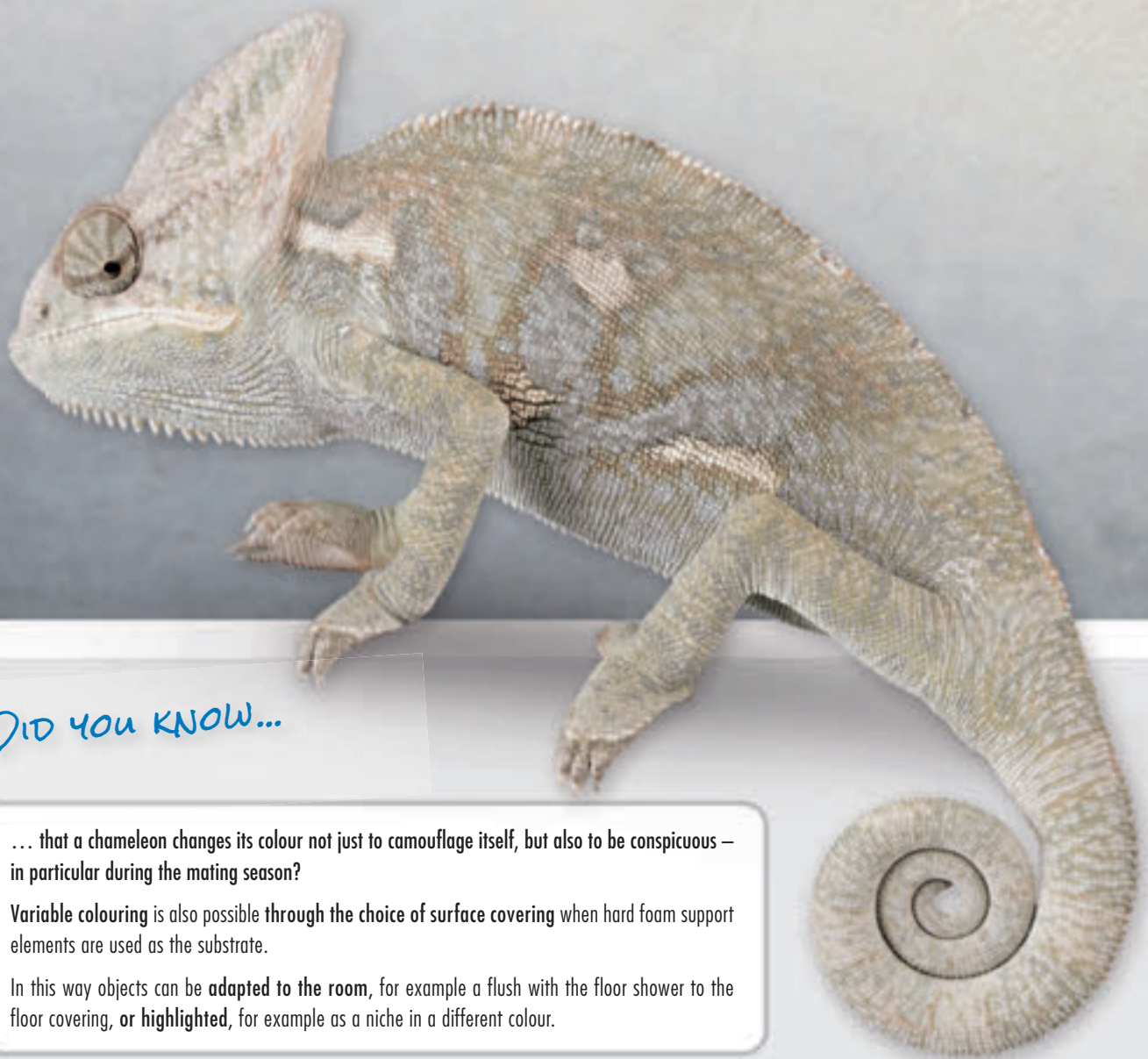
- **No design limits**
Straight, angular or round shapes
- **Individually made to measure at the customer's request**
e.g. for adaptation to the room situation
- **Large selection of standard products**
e.g. as a construction panel, shower base or shaped part



Shaping without limits

Hard foam support elements are **all-rounders when it comes to design**. From straight construction panels for wall and floor over a large range of standardised products through to individual components, they cover **innumerable design options**. Round shapes can also be realised.

Whether straight steps, round bath tub surrounds, shower building kits or whole steam baths – **LUX ELEMENTS** hard foam support elements know no limits in shape or design.



Did you know...

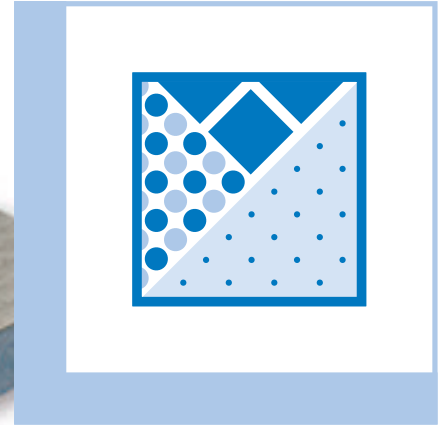
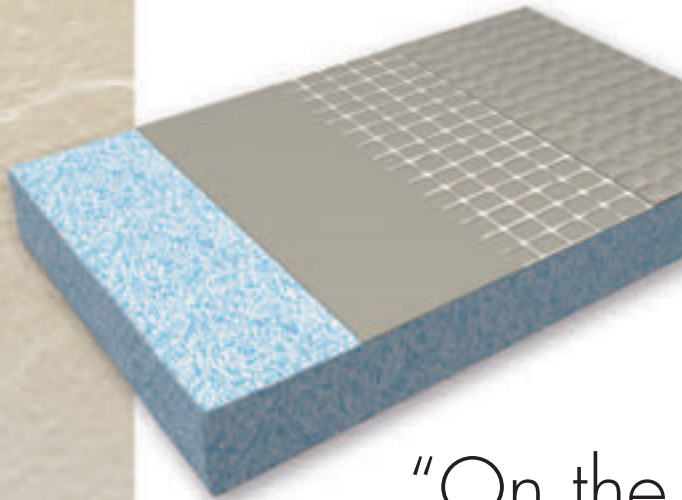
... that a chameleon changes its colour not just to camouflage itself, but also to be conspicuous – in particular during the mating season?

Variable colouring is also possible through the choice of surface covering when hard foam support elements are used as the substrate.

In this way objects can be adapted to the room, for example a flush with the floor shower to the floor covering, or highlighted, for example as a niche in a different colour.

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alternative surfaces

“On the surface there are always alternatives ...”

- **Ideal substrate for ceramics**
from mosaic to natural or artificial stone
- **Ideal substrate for plasters and fillers**
- **Endless design possibilities**
through a combination of covering materials



Ideal substrate

An object made of LUX ELEMENTS hard foam support elements is only finished after the surface design. It is important that all processing components are compatible and tested for use together.

With their mortar coating, our products form **an ideal base not only for ceramics but also for plasters**. According to the motto: “Birds of a feather flock together” cement-based tile adhesives and plasters are optimally made to adhere to the hard foam support element material.



Did you know...

... that there is a parallel between grapes and hard foam support elements?

Before the profit-yielding grape harvest can be brought in, the winegrower needs to invest in his vines. The cuttings and the high level of care required at the start are rewarded by a multitude of sweet grapes and excellent wines at the end of the maturing period.

The investment in hard foam support elements pay off by costs being saved in many ways during installation and later use. The difference is, the effort required is lower than that required for wine growing.





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economical

“Good value for money
in the true sense
of the word!”

- **Fast and easy to process**
- **Low transport expenditure**
- **Short drying times**
- **Short assembly times**
thanks to prefabricated components



Time saving = cost saving

Hard foam support elements contribute to cost saving in various ways. Not only the end users benefit from this, but also installers and trade. Shorter assembly times due to pre-fabricated components and fast drying times are an important aspect as well as the low disposal costs due to much less waste being created.

Finally, heating costs are also saved in the long term, thanks to the heat-insulating properties of the material.



Did you know...

... that the processing of hard foam support elements and the performance of acrobats are subject to the same conditions?

Where acrobats are concerned it is obvious: each one has to be able to rely on the others. The daredevil manoeuvres in the air succeed and nobody gets hurt only because the acrobats mutually catch and hold each other tight.

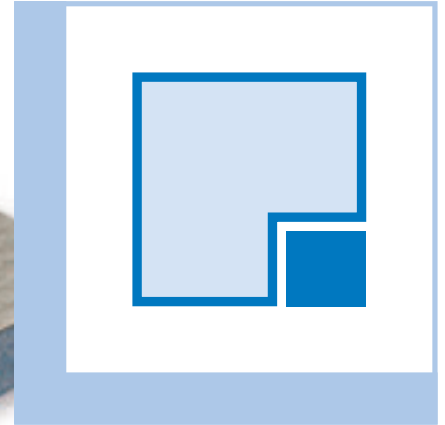
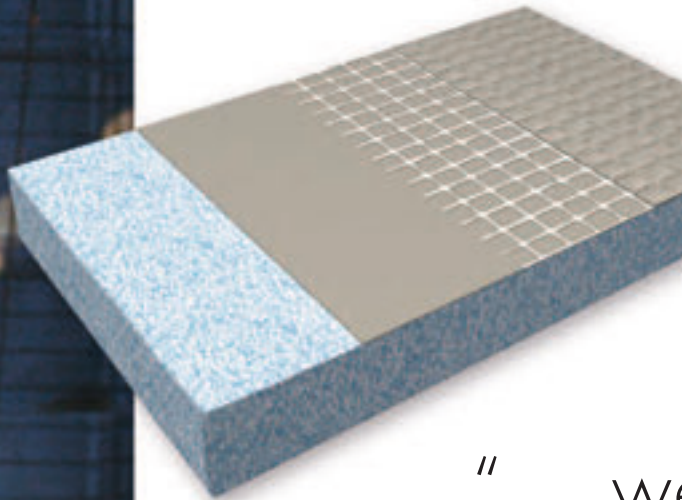
The installation of a wetroom is not quite so dangerous, but if the system components do not all interact perfectly, this can lead to costly damage later on.





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system-oriented

“ ... well-rehearsed
team ”

- **Competence in the system**
matched product range
- **Perfect interaction**
of hard foam support elements and system components
- **Tested quality in the system**
international testing institutes/test certificates



Tested and proven interaction – LUX ELEMENTS®-SYSTEM COMPONENTS

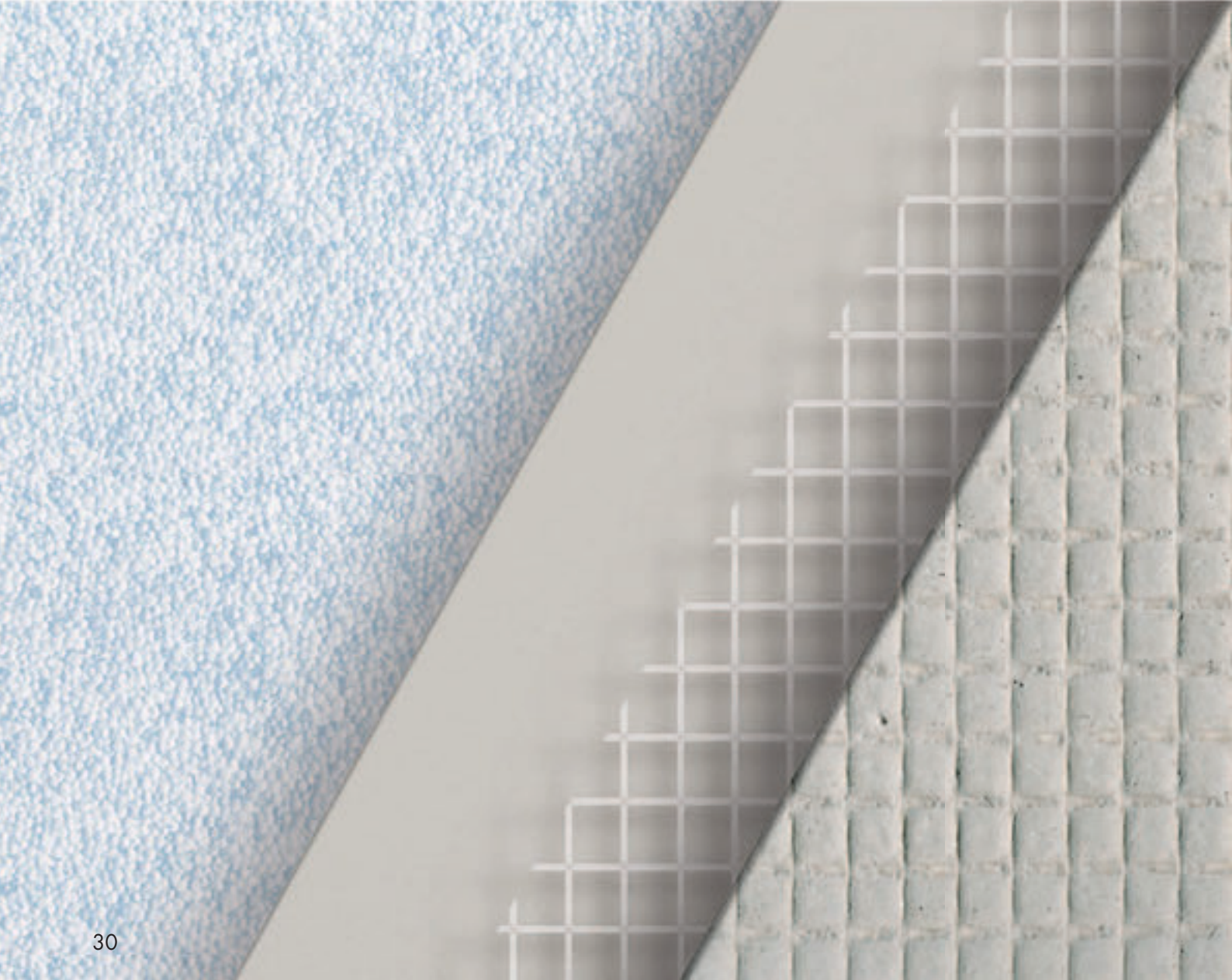
LUX ELEMENTS sees its hard foam support elements as part of an overall system. This includes all processing components as well as the recommended ceramic or plaster surface materials. In order to ensure processing without any problems, we offer specially-developed adhesives, mortars, sealing tapes, dowels and assembly aids.

These proven and tested system components are fully adapted to the installation of LUX ELEMENTS hard foam support elements. We continuously complement tests and resulting certificates for the system.

One building material – many possibilities

High material quality and environmentally friendly production

The new generation of **environmentally friendly hard foam support elements** represents more than simply a construction panel available in different thicknesses. This has been designed as a modern building material, which, in view of its excellent physical properties, will provide, along with very good machinability, plenty of scope for planners, designers, craftsmen and industry, who are not happy to accept the limits imposed by conventional methods.



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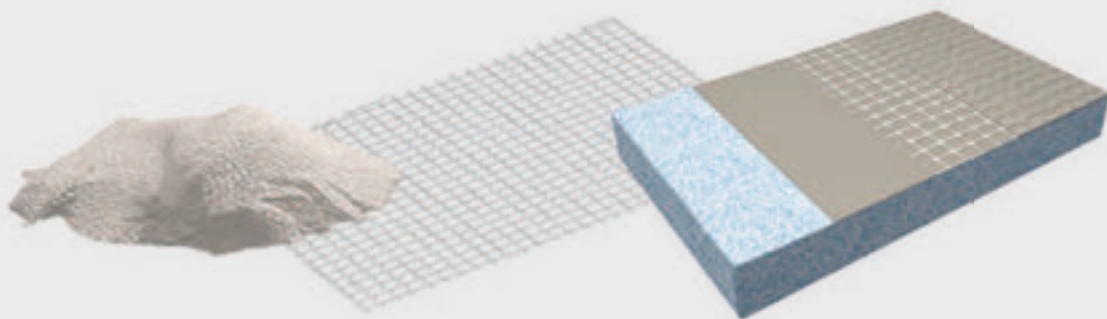
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The production

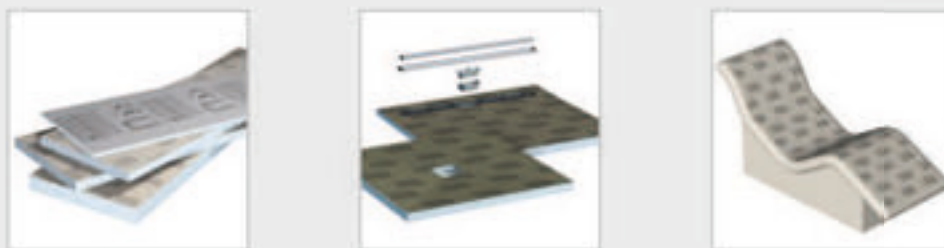
The **basic material** for the products of LUX ELEMENTS is LUX ELEMENTS®-FOAM, a very high-quality, blue coloured, expanded polystyrene hard foam. The foam blocks are produced in our own production facility in an environmentally friendly process without foaming agents which are harmful to the climate.



During further processing, the **hard foam becomes a hard foam support element** with a special mortar coating on both sides. For increased rigidity values a glass-fibre fabric is additionally embedded in the mortar coating.



A broad range of prefabricated **shaped parts and system building kits** are manufactured from the coated **basic material**, both as **standard products** and as **individual made to measure products** to suit customers' requests.



The ORIGINAL can do!

Competence in the system

Your specialist for wetroom solutions

Be it a panel, blank, ready-made product or a complete component, the possibilities offered by the hard foam support element are virtually unlimited.

Our production facilities manufacture complete spa, sauna and bathing complexes segmented into components as well as products for the design and renovation of bathrooms – from wall cladding to shower base.

- **Substrates for walls and floors**
- **Partition walls**
- **Installation cladding**
- **Bath surrounds**
- **Washstands**
- **Shower bases**
- **Benches**
- **Niches**
- **Individual concepts**
such as steam baths and room constructions

In addition to standard products, also individually made to measure products are available under the designation 'PLUS'.

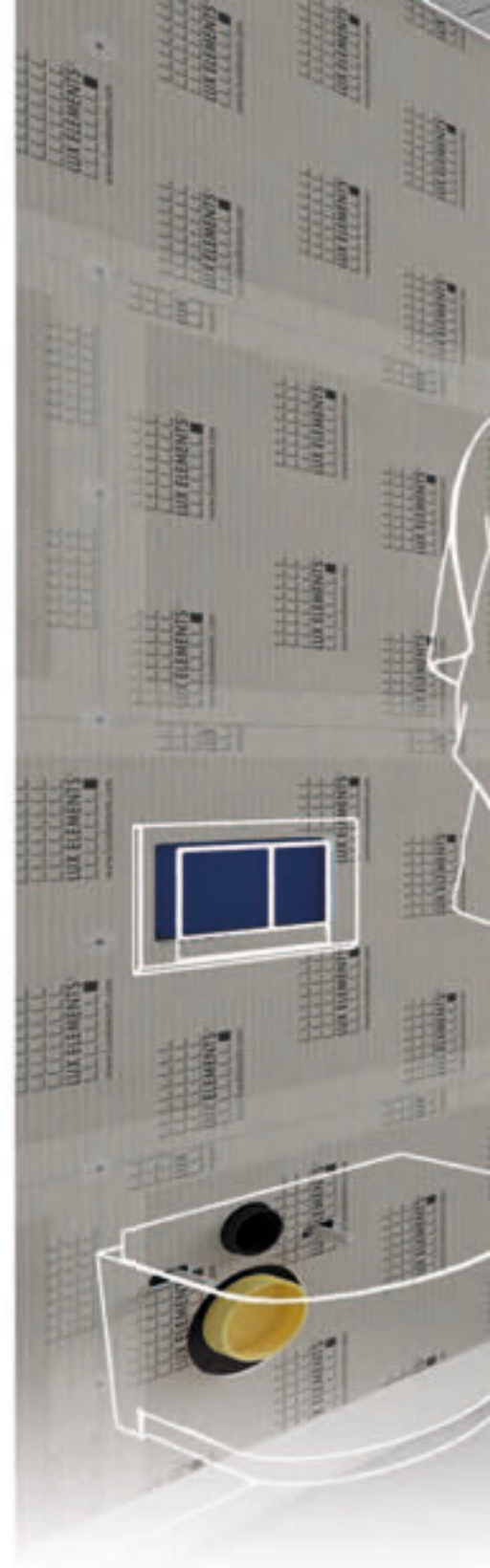


■ LUX ELEMENTS[®]-SYSTEM COMPONENTS



We offer tested and proven system components for the fast and safe processing of the hard foam support elements.

Specially developed adhesives and mortar, sealing tapes, mounting brackets, wall plugs and technical accessories ensure trouble-free working.





For further information
visit www.luxelements.com.

The consideration of **total quality assurance** determines the way we work at every stage in the process, starting with the choice of suitable raw materials and the individual production stages through to the reliable processing of our products using the agreed system components – something we have been doing for quite some time...

So that our products can be installed professionally at their place of use, we hold regular **training courses for customers and installers** in which we provide theoretical and practical training on the use of the hard foam support material.

This allows us to keep in touch with the actual users and to use this experience for our research and product development, because our utmost goal is to have **satisfied customers who trust the quality and benefits of our products.**



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LUX ELEMENTS as partner

Our competence for your project

- **Decades of experience**
in the manufacture and processing of hard foam support elements
- **Modern flexible production methods**
in our own production plants
- **Individual production**
of your components as individual or series products
- **High level of technical expertise**
owing to our own development department
- **International team**
with multilingual contacts
- **Professional advice**
by experienced employees
- **Quality control from the start**
through entirely in-house production
- **Certified quality management**





My LUX ELEMENTS partner dealer:

Sustainability – dOK · EN-10/2019 · PROSS312 · We reserve the right to make technical changes.

(D)

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