

Energetic 50204 | deep sea

Forbo Flooring Systems is part of the Forbo Group, a global leader in flooring and movement systems, and offers a full range of flooring products for both commercial and residential markets. High quality linoleum, vinyl, textile, flocked and entrance flooring products combine functionality, colour and design, offering you total flooring solutions for any environment.



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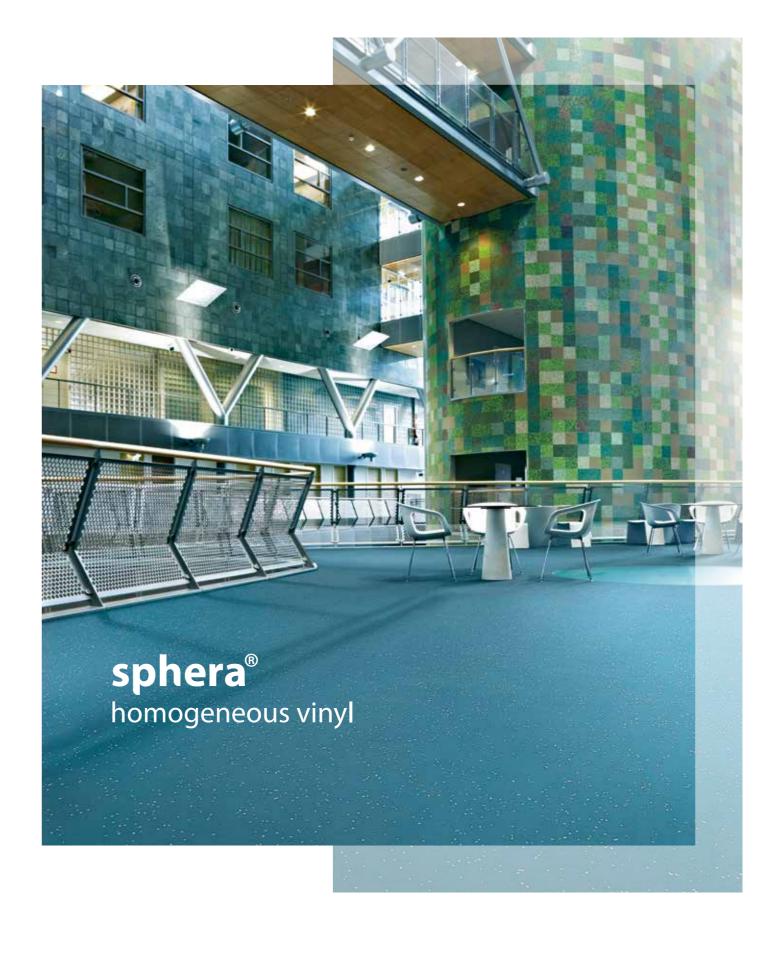








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A NEW ERA OF PREMIUM HOMOGENEOUS VINYL FLOOR COVERING

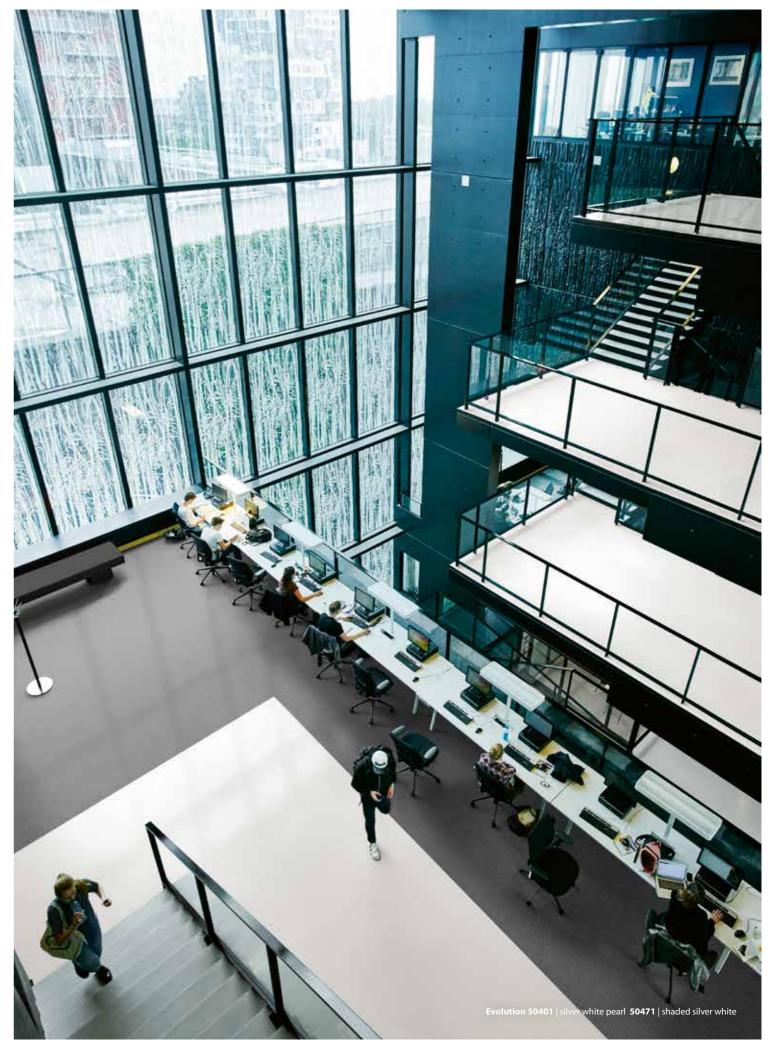


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Forbo Flooring. We have been making floors since 1847 and are now entering a new product category. For the first time we now make our own homogeneous vinyl sheet. It's part of our overall strategy of providing our customers all the products and solutions they need from our own factories. Forbo is already a leading player providing safety, acoustic and general purpose commercial vinyl, carpet tiles, LVT, cushioned vinyl, Flotex, entrance systems and of course linoleum.

Sphera is Forbo's new premium, homogeneous vinyl collection.
Styled by our European design team and using the latest production technology in an advanced purposebuilt manufacturing plant, Sphera comprises three distinct ranges, Element, Energetic and Evolution.
Each range offers differentiated aesthetics to ensure that Sphera adds interest and style to floor designs across a broad range of applications.

The Forbo Sphera collection is setting new standards in homogeneous vinyl due to its design, technology and performance. All the latest insights and technology have been used to create 'smart' and innovative solutions resulting in a premium collection.



STATE-OF-THE-ART **SPHERA**





Forbo Flooring has invested in a purpose-built, state of the art production facility signalling a true change in how homogeneous vinyl is designed and manufactured.

Now, for the first time, a further solution is joining the Forbo mix - a phthalate free homogeneous vinyl sheet product called Sphera.

Sphera heralds a new era in homogenous vinyl. SMART (Sustainable, Modern, Advanced, Robust Technology) and suitable for where a durable, bright and sustainable floor is required. Establishing our own production plant for homogeneous vinyl forms part of Forbo's overall strategy to provide customers with products and solutions from sources that are fully operated and controlled by Forbo employees.

In this way, constant and optimal quality can be ensured.

Homogeneous vinyl is currently most popular in healthcare and education segments. Forbo sees application not just here, but across a number of different segments. Part of the collection has been developed with the more luxurious look of retail and hospitality in mind, adding a touch of design to a durable, but conventional product category.

Making Sphera

Being able to build the facility from scratch has enabled Forbo to invest in the most up to date equipment and technology available, and to produce a product that offers unique opportunities for designers, as well as exceptional quality for end users and installers.

Within this production, there are three main processes that are unique to Forbo:

Forbo's new internal extrusion process enables the controlled creation of multiple chips sizes and shapes.

This results not only in a sophisticated chip design effect for Sphera Element, but other unique design options, with the ability to add special characteristics through the addition of highlight, glitter or transparent chips to the chip mix, like in Sphera Energetic and Sphera Evolution.

The second unique process utilises a combipress for sheet making: a combination of pressure and temperature to achieve a perfectly in gauge (2.0mm) product every time.

Lastly, a relaxation zone without water cooling, which instead uses a controlled air temperature and air flow to achieve best in class dimensional stability.

The manufacturing process for Sphera includes four main steps:

STEP 1: Producing granulate

PVC granules are created by combining PVC dry blend and colour pigments. Three coloured PVC compositions are mixed together to create a vinyl mass, which is then pushed through a die plate which can create chips in any shape or form, depending on the design effect desired. This new chip technology is what gives Sphera its unique visual character and its bright and saturated hues.

STEP 2: Sheet making

The chips are then released by precision scatter units onto a conveyor belt. A steel-belt press forms a homogeneous sheet with a truly non-directional visual of the required thickness. Unlike conventional manufacturing, there is no need to back sand the product.

STEP 3: Lacquering & embossing

In-line, Sphera has a special UV-cured lacquer applied. After drying the lacquer, application of an embossing achieves a particularly matt finish, which diffuses light and conceals any minor sub-floor imperfections. The Forbo engineered process provides a film of lacquer with consistent thickness on both the peaks and in the valleys. Forbo calls this SMART-top, as it resist stains and matches the proven performance of Eternal sheet vinyl ranges. Resistance to betadine, commonly used in the healthcare sector, also sees Sphera outperform other homogeneous vinyls currently in the market place.

STEP 4: Relaxation

Homogeneous vinyls acquire tension during production. The tension in Sphera is removed by heating the material again and then slowly cooling to achieve the most dimensionally stable sheet product in this category.

SMART SOLUTIONS IN HOMOGENEOUS VINYL

Forbo's Sphera homogeneous vinyl is leading the product category by design, technology and performance. The greenfield production set-up allowed for the newest technologies and insights to be used, that's what we call: SMART



Sustainable Modern Advanced Robust Technology



DESIGN A COLOUR

- In-house design and colour development ensures the palette complements a broad range of commercial spaces
- A new technology delivers bright and saturated hues, resulting in striking colours and tones, many with high light reflection values
- A harmonious and balanced palette of 138 colours that coordinates well with Forbo's extended portfolio of vinyl, Marmoleum and textile floor coverings



TECHNOLOGY A SUSTAINABILITY

- State of the art steel-belt press and thermofix technology ensures consistent quality
- Green energy and zero waste technology ensures efficient and sustainable manufacturing
- Low emissions & phthalate free manufacturing ensures Sphera can contribute to a healthy indoor environment

PERFORMANCE DURABILITY



- Unique embossing process following lacquer application delivers durable performance
- In-line coating and subsequent embossing process for superior appearance
- Evenly distributed top-layer provides superior all over protection
- SMART-top surface finish ensures Sphera has a high resistance to chemicals, scratches and stains
- Achieves highest binder content type 1 according to EN-ISO 10581

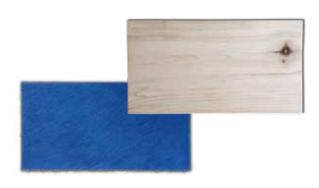






















The development of the Sphera collection was a joy for Forbo's entire European design team to work on. Faced with a day zero starting point, they took a dynamic approach to building colour palettes based on how people move through buildings.

"Instead of analyzing specific segments to define colour ranges for our new Sphera, we decided to approach colour in a more holistic way", said Dorothe Kessels, Head of Project Vinyl Design. "Today one building can contain many identities that refer to different segments. For example a hospital building contains also offices, shopping areas (and even sport facilities). And the reception area of a hospital becomes more and more like a hotel lobby.

Another example being the contemporary office where the focus is increasingly on the health and well-being of the employee. The office of today not only provides a huge variety of different workspace applications it also offers spaces to relax, to socialize or to eat out integrated into the building.

The team therefore decided to focus on the different dynamics taking place in a building. Depending on the different interactions there would be different user needs and priorities. Ranging for a secluded space for privacy, to a semi open space for dialogue or an open public space for spontaneous interaction and everything in between. Five keywords were defined together referring to the different identities a space can have.





















RECEIVING Starting with entrances to buildings such as schools, universities and hospitals the colour development work was based around 'RECEIVING' and how to create positive first impressions for building users. There needed to be a very strong connection between the outside and the first few steps into a building where it was felt a positive, open atmosphere should be created with lots of light. Therefore the new Sphera Element neutral & natural colours were designed to leave visitors with the feeling that these buildings are highly accessible and welcoming (with almost half of the entire collection delivering LRV's higher than 40% and the new white reaching 72%).

MOVING Making your way through a building is all about having easy to navigate transitional spaces. 'MOVING' is what inspired the bright, primary colours in the Sphera Energetic range and are helping building different departments, access points and understand directions to move around easily. This sort of zoning/ wayfinding has to not only be noticeable, with lots of stand out, but quick to visually interpret.

CONNECTING is about those places where you meet,

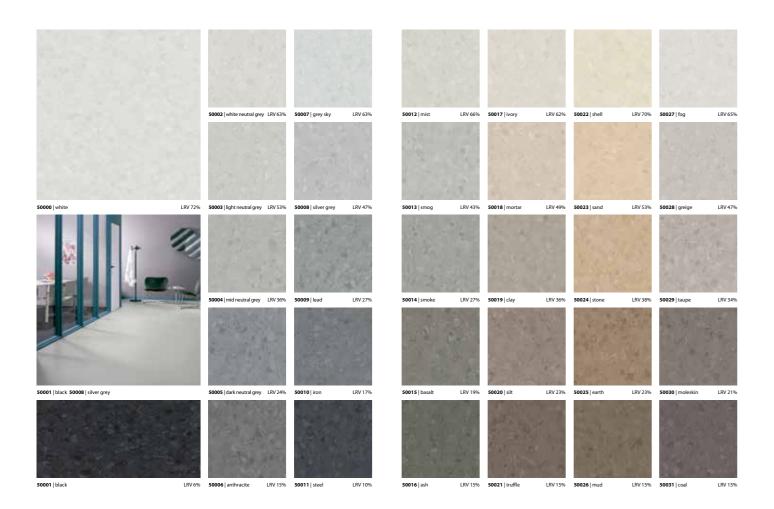
interact, exchange ideas or just talk. They need to be dynamic, inspiring and often see colours combined which create a degree of friction or intensity. Sphera Evolution and Energetic are designed to energise building users and help generate creative sparks in areas such a break out areas or open plan meeting spaces.

CONCENTRATING Every person at some point benefits from having access to an area where there is no distraction from sound or light. 'CONCENTRATING' colours are designed to create a very calm and relaxing atmosphere which helps with focus and output. The pale pastel colours are included in the Sphera Element and Energetic range for that very reason.

RECHARGING Your batteries can be recharged in different ways depending on what your mind, body and soul need. Some like to be able to switch off and read a book whilst others like to play sport or run to clear their heads. All these different expressions can be achieved by selection in the offer of the whole Sphera collections, from light to dark, from neutral to colourful.



sphera® element





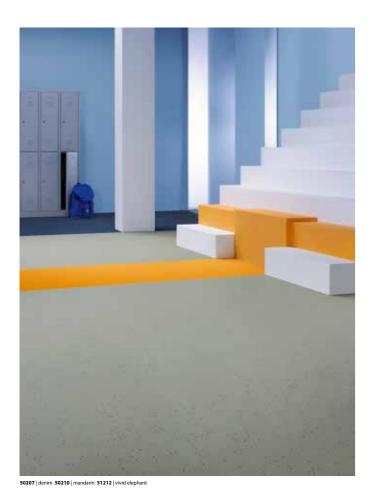
SPHERA ELEMENT; THE WIDEST AND MOST COMPLETE COLOUR OFFER IN THE HOMOGENEOUS MARKET.

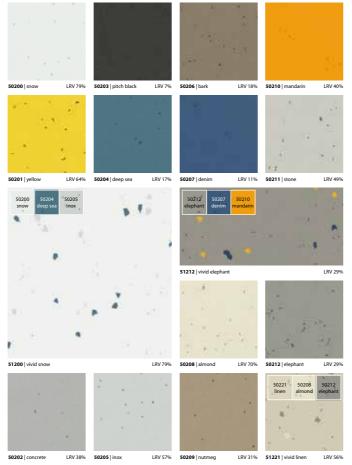
Sphera Element offers a fresh, light and contemporary colour palette which adds a sophistication to floor design.

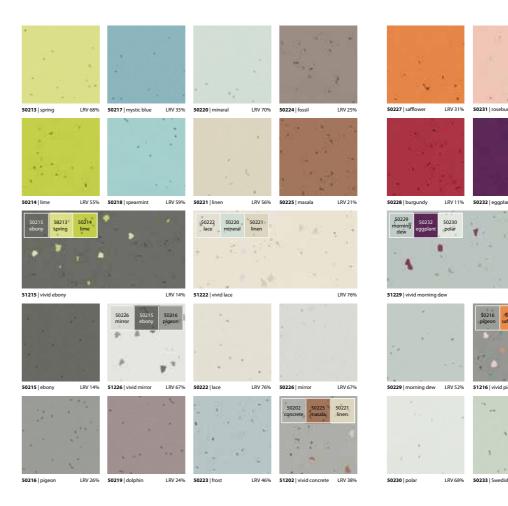
The collection includes a wide range of warm and cool neutrals which complement interior finishes such as wood and stone along with pastels and bright accent colours for areas requiring applications or zoning.



sphera® energetic

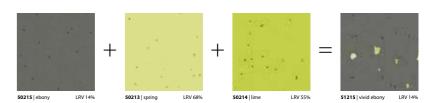






SPHERA ENERGETIC; A BOLD AND CONTEMPORARY, FRESH AND COLOURFUL PALETTE.

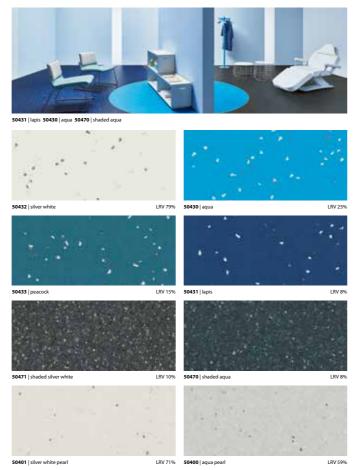
The aesthetic of Energetic reflects that of rubber, concrete and resin flooring with 11 Vivid colourways featuring chips of two accent colours. The Vivid colourways are complemented by 41 flecked tones to inspire creative floor designs. By exploiting the colour and design connections across the collection, the full potential of Energetic can be realised.





sphera® evolution







SPHERA EVOLUTION; A NEW AND INNOVATIVE DESIGN PERSPECTIVE ON HOMOGENEOUS VINYL.

The look of this product is innovative and new in homogeneous vinyl. The visual enrichment, created by adding effects and / or transparency, adds depth and a 3rd dimension. It's expressive and outspoken, it demands observation and sparks curiosity. The unique identity of this range is drawing attention to Forbo as a homogeneous vinyl manufacturer and to the Sphera collection in particular. It can be used in a very wide variety of applications.

The Evolution consists of three different design directions:

Plain: 12 items with a plain background and pearlescent, silver or gold glitter highlights.

Shaded: 6 dark coloured items with silver or gold glitter effects, and silver or gold metallic highlights.

Pearl: 6 light coloured items with pearlescent effects and a 3D look which is created by adding a transparent component.

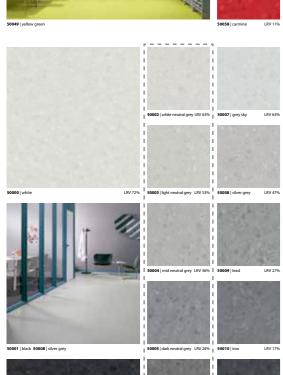
COMBINATIONS FORBO PORTFOLIO

When it comes to flooring in commercial buildings, there is often more than just the general office space to consider. Whether you are looking to refurbish communal areas or are in need of something unique to give an area the "wow" factor, Forbo offers total flooring solutions from one supplier.

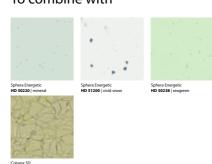
In below overview some inspiring combination possibilities with Sphera Element and other flooring solutions. For more possibilities and information contact your local Forbo Flooring systems contact.

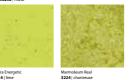
sphera® element





To combine with





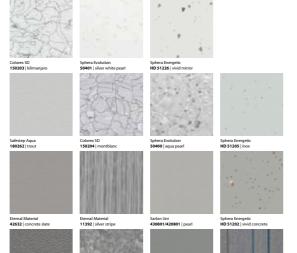
















Linoleum

MORE **FORBO FLOORING**

Why deal with multiple suppliers when you can deal with one? Forbo Flooring Systems is a global producer of flooring solutions. Our flooring solutions offer includes:

- Environmentally friendly, functional and design-oriented linoleum
- · An extensive range of sheet project vinyls, acoustic vinyls and safety vinyls.
- Static control flooring for areas with sensitive electronic equipment.
- High quality European manufactured Luxury Vinyl Tiles.
- Carpet tiles for both public and commercial environments.
- Flocked sheet and tiles for areas that need the benefits of both textile and resilient floor coverings.
- Cushioned vinyls for the home.
- · Entrance flooring systems that keep interior floors clean, dry and safe.

Please visit our website www.forbo-flooring.com to see our extensive range of flooring products.



FORBO AQUAJET & WELDING

Beautiful as well as functional

Decorative flooring can be beautiful and functional at the same time. Think about routing on the floor in for example hospitals or museums, or zoning to identify different areas of a building.



With our Aquajet cutting technique we can create the most refined and detailed floor designs. The very precise water cutting technology offers a sophisticated detailing in the designs. Perfect to create your own identity on your floor; a logo, a piece of art, or even a portrait.







Let the floor stand out

Forbo Flooring offers over 300 welding rods to choose from. Heat welding provides a strong, watertight and hygienic seam. A subtle uni coloured match is available for every Sphera item. Use contrast colours as an accessible and effective way to create an authentic look.

A multi coloured solution is also available in Vinylweld. This tone-in-tone welding rod is blending into the visual of the floor, matching the three colour tones and following the movement of the visual.

Technical specifications

Sphera meets the requirements of EN-ISO 10581



| | Binder content | EN-ISO 10581 | type 1 |
|--------------|---|-------------------|--|
| × | Total thickness | EN-ISO 24346 | 2.0 mm |
| | Surface finish | | SMART-top |
| | Collection size | | Element 62 Energetic 52 Evolution 24 |
| | Commercial use | EN-ISO 10874 | 34 very heavy |
| ; | Industrial use | EN-ISO 10874 | 43 heavy |
| , | Roll width | EN-ISO 24341 | 2 m |
| - ∮) | Roll length | EN-ISO 24341 | ≤ 27 m ~ 26 m |
| 2 | Total weight | EN-ISO 23997 | 2.9 kg/m² |
| K 7 | Dimensional stability | EN-ISO 23999 | ≤ 0.2 % |
| TI. | Residual indentation Typical value | EN-ISO 24343-1 | ≤ 0.10 mm - 0.03 mm |
| ا ا | Abrasion resistance | EN 660-2 | group T |
| J) | Castor chair continuous use | ISO 4918 / EN 425 | pass |
| R | Light fastness | ISO 105-B02 | ≥7 |
| 9 | Flexibility | EN-ISO 24344 | Ø 10 mm |
| Ó | Resistance to chemicals | EN-ISO 26987 | very good |
| (F) | Slip resistance | DIN 51130 | R9 |
| R | Wetroom application | EN 13553 | yes |
| 7 | Bacteria resistance | EN 846 | Does not support growth |
| | TVOC after 28 days | ISO 16000-6 | ≤ 10 µg/m³ |
| | Sphera evolution meets the requirements of EN 14041 | | EN 1404 C C 0200301- DoF |
| (M) Best | Reaction to fire | EN 13501-1 | B _n -s1 |
| 18 N | Slip resistance | EN 13893 | DS - µ ≥ 0.30 |
| Â | Body voltage | EN 1815 | ≤ 2 kV |
| = | Thermal conductivity | EN 12524 | 0.25 W/m·K |

All Forbo Flooring Systems' sales organisations worldwide have a certified Quality Management System in accordance with ISO 9001.

All Forbo Flooring Systems' manufacturing operations have a certified Environmental Management System in accordance with ISO 14001.

The Life Cycle Assessment (LCA) of Forbo Flooring Systems' products is documented in individual Environmental Product Declarations (EPD's) which can be found on all of our websites.



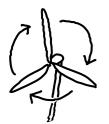
SPHERA, COMMITTED TO THE HEALTH OF ONE



This programme expresses our ambition to design and manufacture floor coverings that benefit every individual by helping to provide safe, hygienic and comfortable living and working environments.

Forbo Sphera has very low emissions of $<10\mu g/m^2$ after 28 days, is phthalate free and also offers colourways with high Light Reflectance Values ensuring that it can contribute to a healthy indoor environment. Its SMART-top surface treatment resists stains and is easy to clean ensuring safe and hygienic floors.

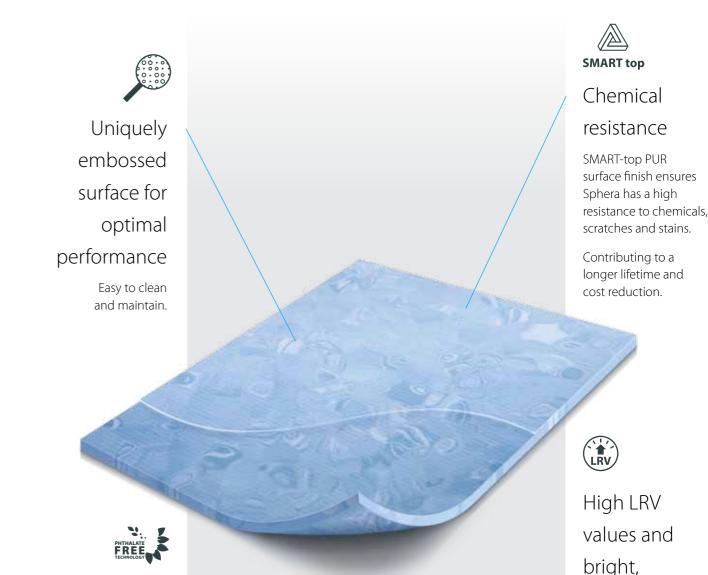
PRODUCED USING 100% GREEN ELECTRICITY FROM RENEWABLE RESOURCES



Our Sphera production site is part of an effective environmental management system and has achieved ISO14001 certification. All of the electricity we buy, comes from 100% renewable resources. Meeting present demands without compromising future needs.

Reducing, instead of reusing or recycling. Saves energy.

FORBO'S HOMOGENEOUS FLOORING TECHNOLOGY



Low emitting and 100% phthalate free

Phthalate free > contributes to a healthy indoor environment.

ZERO

Produced in a zero waste environment

Zero landfill is achieved by the Sphera manufacturing plant saturated
hues
Studies show that a light indoor environment has a

positive effect on the

well being of the

people.