



Energetic 50204 | deep sea

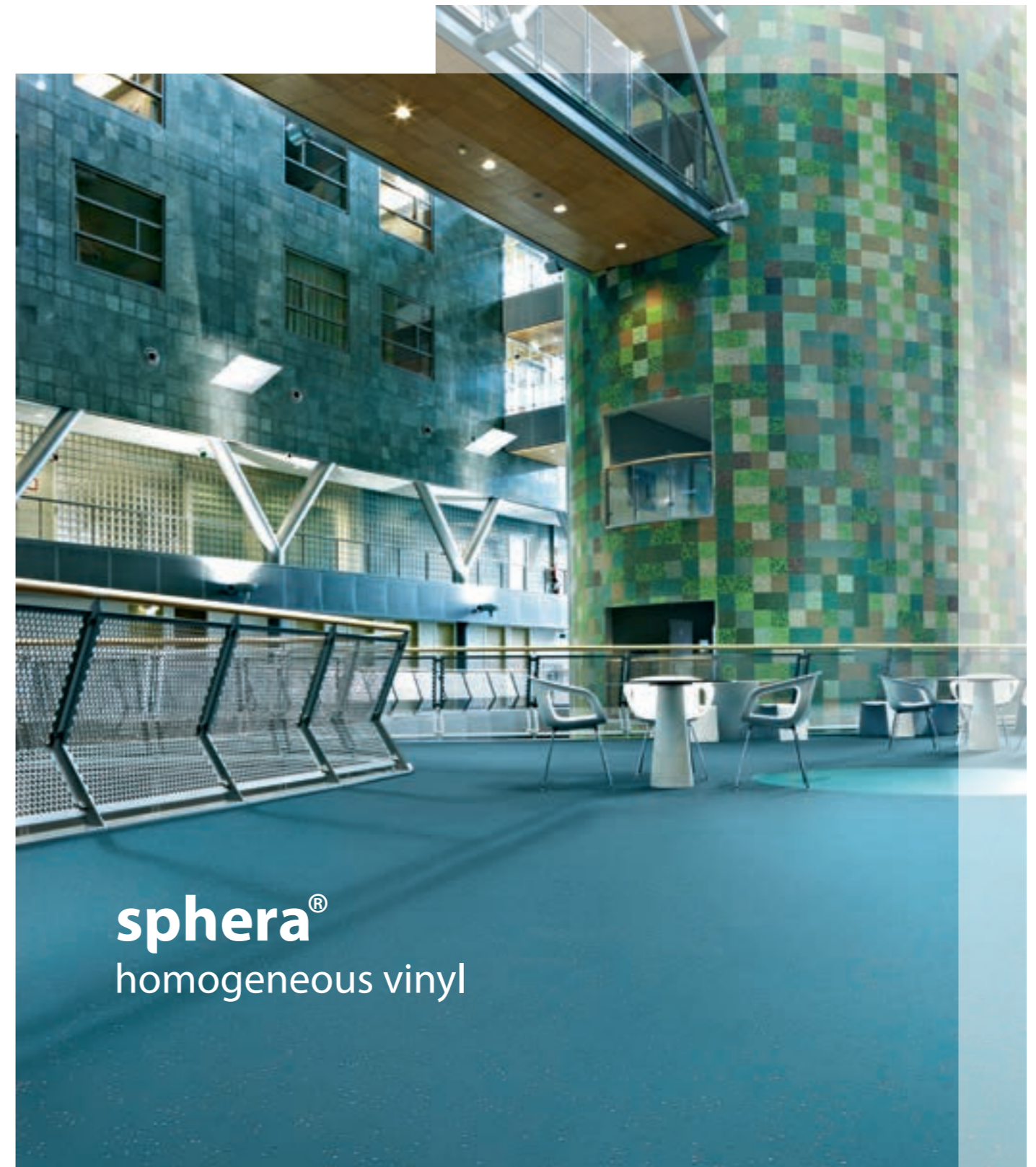
Forbo Flooring Systems is part of the Forbo Group, a global leader in flooring and movement systems, and offers a full range of flooring products for both commercial and residential markets. High quality linoleum, vinyl, textile, flocked and entrance flooring products combine functionality, colour and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



Other countries

Forbo Flooring B.V.
P.O. Box 13
1560 AA Krommenie
The Netherlands
Tel: +31 75 647 74 77
Fax: +31 75 647 77 01
contact@forbo.com
www.forbo-flooring.com

Follow us on



sphera®
homogeneous vinyl

A NEW ERA OF PREMIUM HOMOGENEOUS VINYL FLOOR COVERING

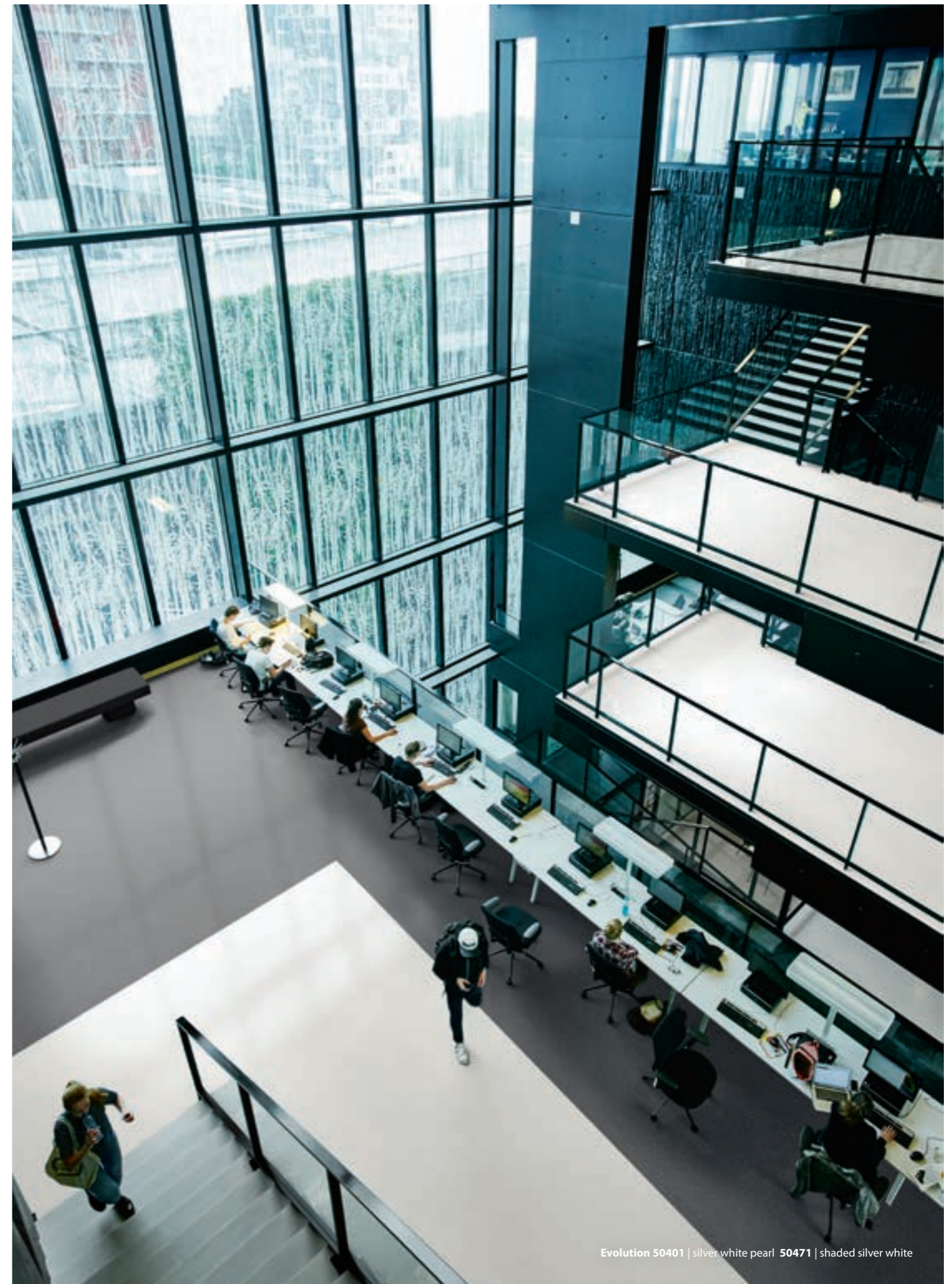
Contents

- 4 State-of-the-art Sphera
- 6 SMART solutions
- 8 Technology meets design
- 10 The colour dynamics of Sphera
- 14 **sphera**® element
- 18 **sphera**® energetic
- 22 **sphera**® evolution
- 26 Forbo combinations
- 27 More Forbo flooring
- 28 Aquajet and welding
- 29 Technical specifications
- 30 Sphera and the environment

Forbo Flooring. We are making floors since 1847 and are now entering a new product category. For the first time we 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.

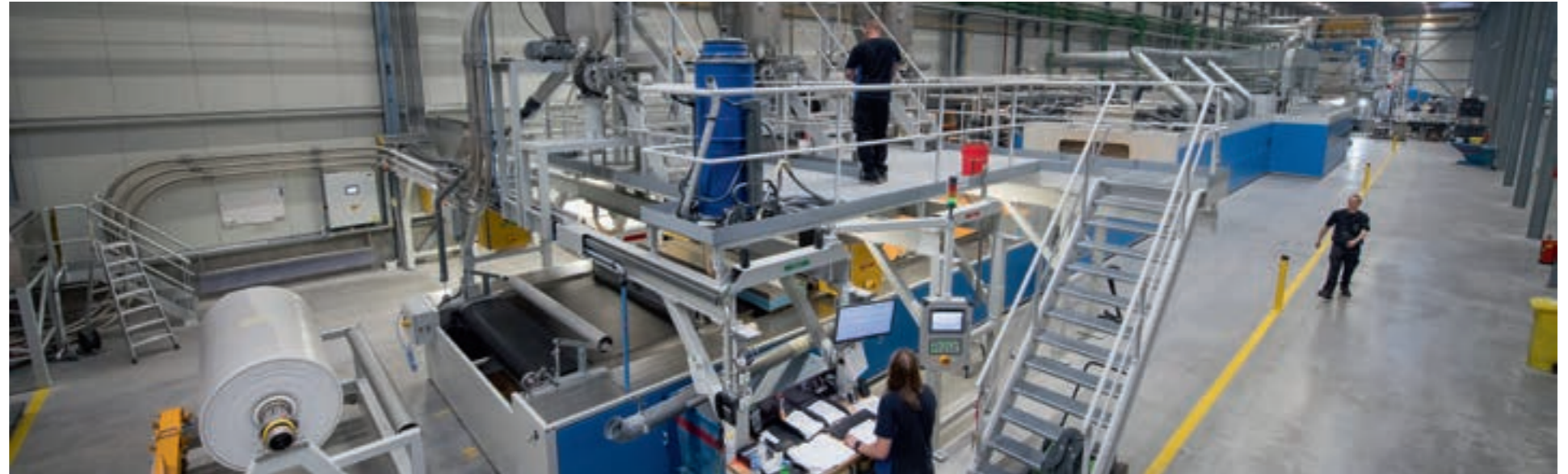
Sphera is Forbo's new premium, homogeneous vinyl collection. Styled by our European design team and using the latest production technology in an advanced purpose-built manufacturing plant, Sphera comprises three distinct ranges, Element, Energetic and Evolution. Each range offers differentiated aesthetics 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.



Evolution 50401 | silver white pearl 50471 | shaded silver white

STATE-OF-THE-ART SPHERA



Forbo Flooring has invested in a purpose-built, state of the art production facility and it signals 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.

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.

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.

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 resists 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 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 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

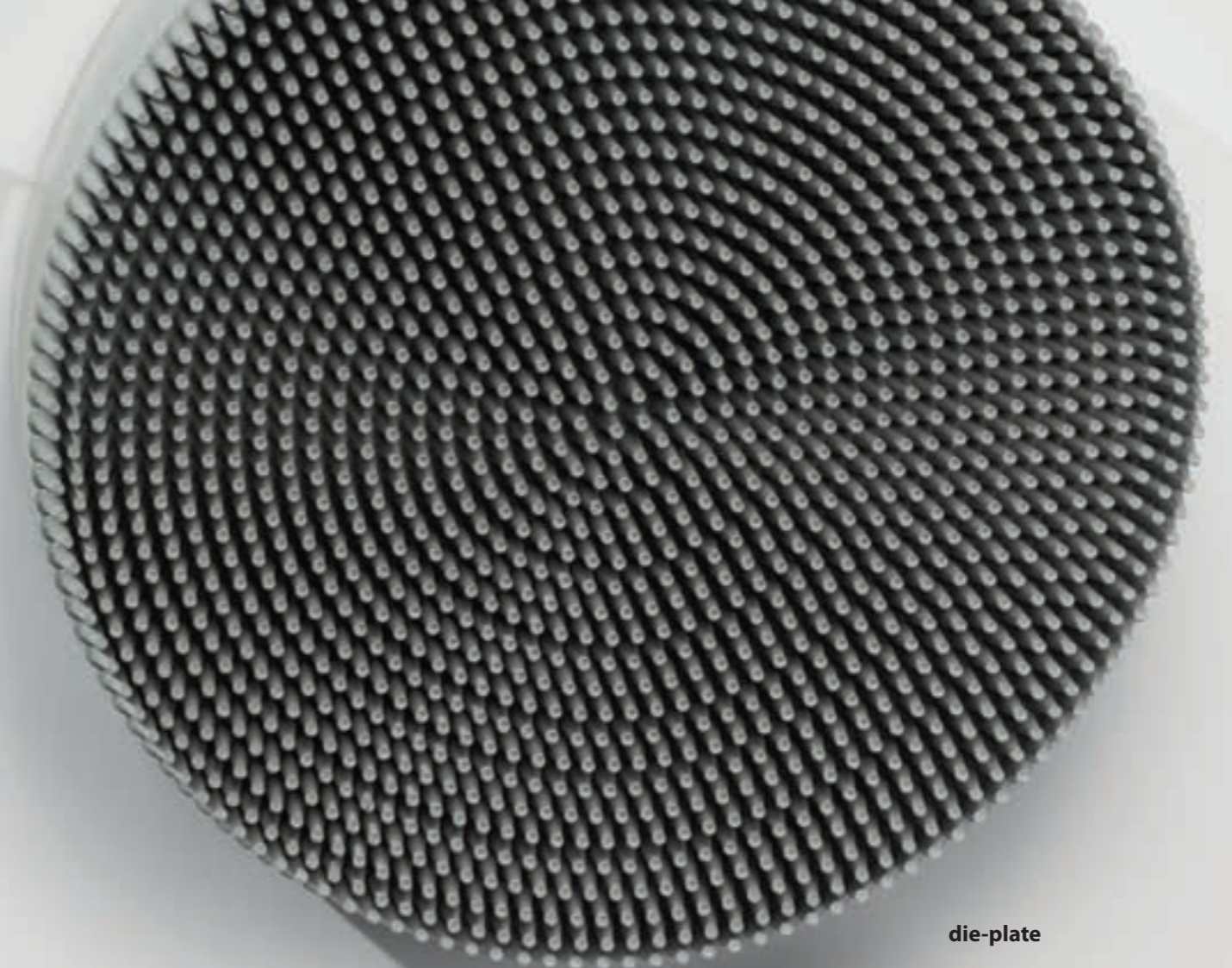




dryblend



glitter effects



die-plate

WHERE TECHNOLOGY MEETS DESIGN

Forbo has a long history in producing PVC flooring. Engineers and designers joined forces and combined their experience to innovate. The result: a premium homogeneous vinyl floor covering!



colour plates



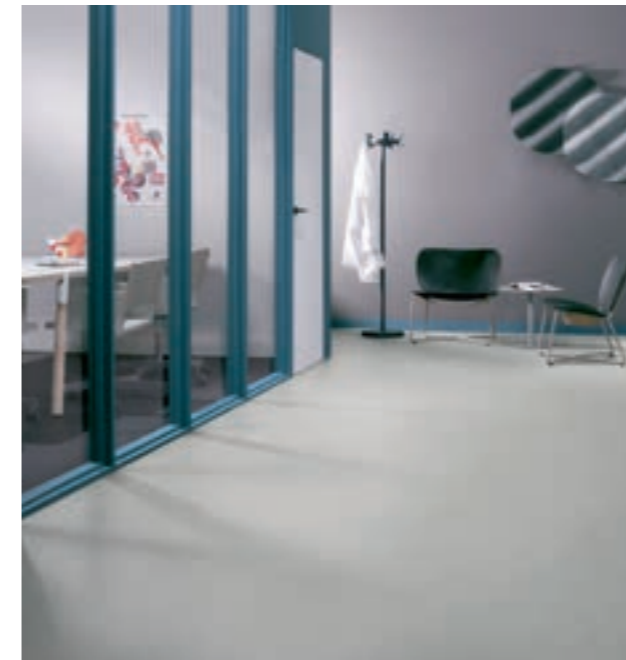
colour pigment granules



metallic effects



THE COLOUR DYNAMICS OF SPHERA



CONCENTRATING



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.

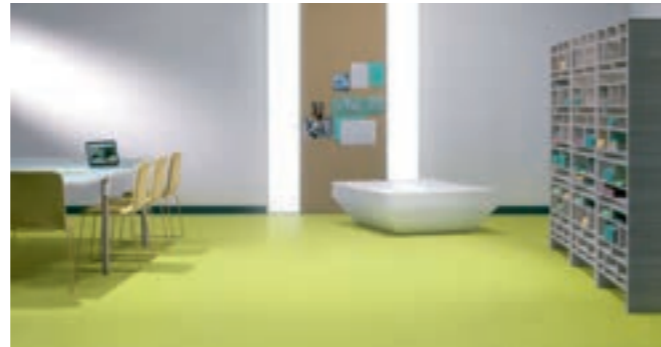
Another example being the contemporary office where the focus is increasingly on the health and well-being of the employee. The office of today not only provides a huge variety of different workspace applications it also offers spaces to relax, to socialize or to eat out integrated into the building.

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



CONNECTING



RECHARGING



MOVING



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.

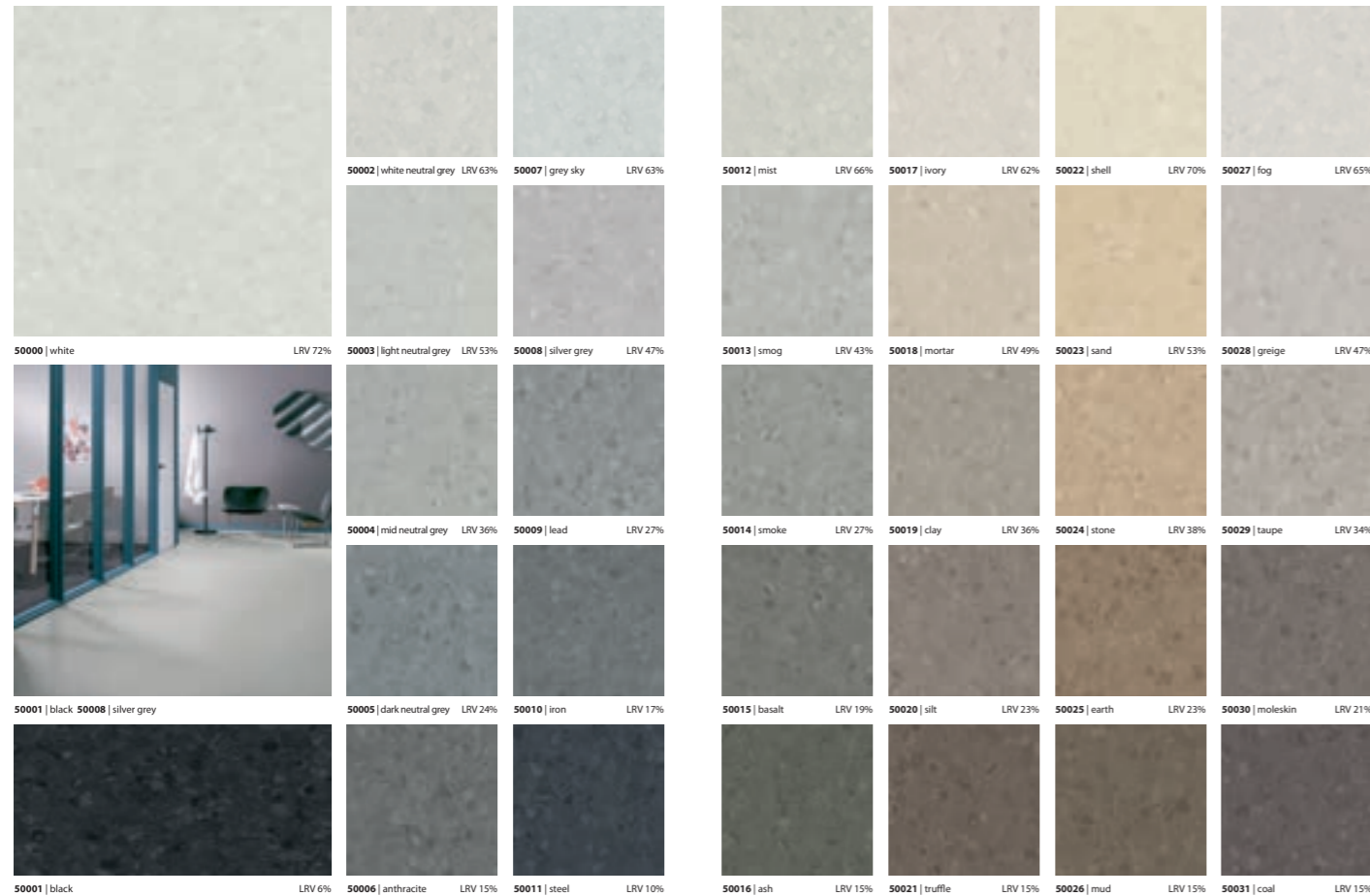
sphera® element

A NEW ERA OF PREMIUM HOMOGENEOUS VINYL FLOOR COVERING

Sphera Element adds character and style to floors across numerous applications. Whether in demanding, hygienic healthcare environments, in flexible, multi-purpose modern public buildings or in education facilities and offices where durability and colour are key.


50032 | soft lilac 50033 | dimgray 50037 | china blue

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.



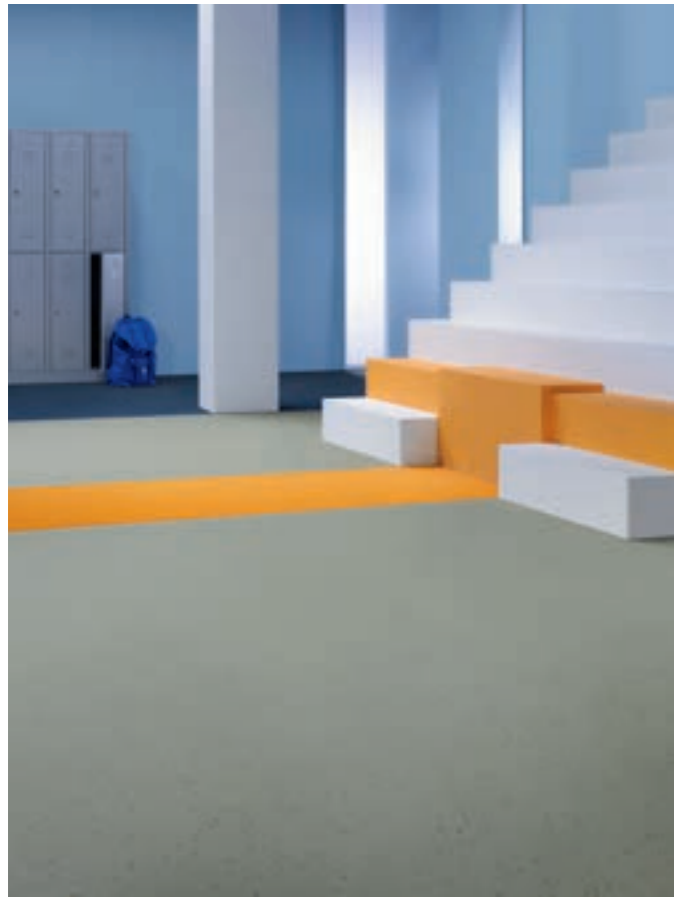
sphera[®] energetic

A DIFFERENT PERSPECTIVE ON PREMIUM HOMOGENEOUS VINYL

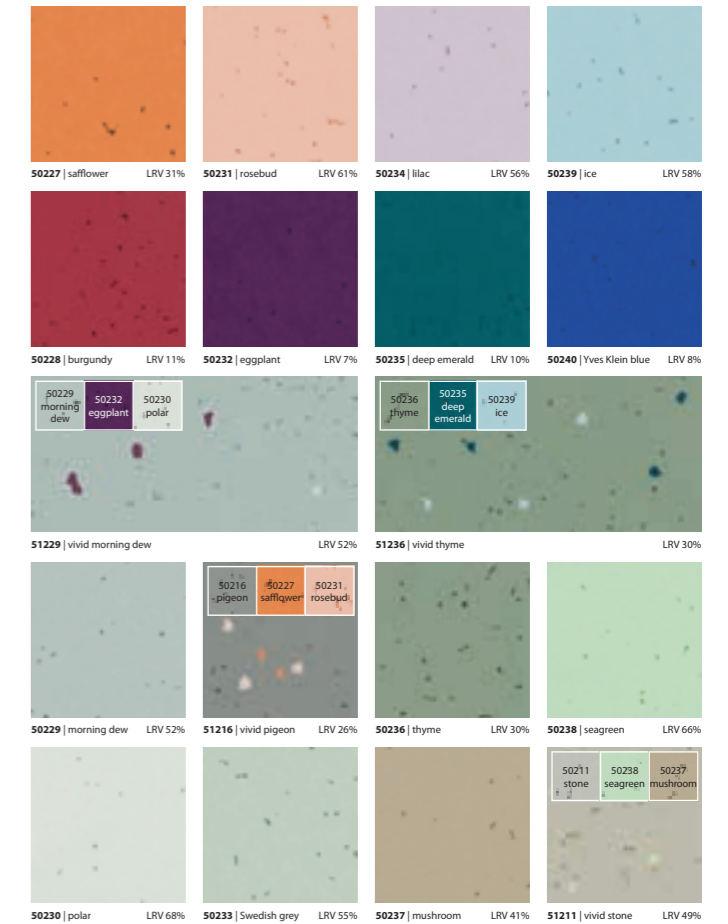
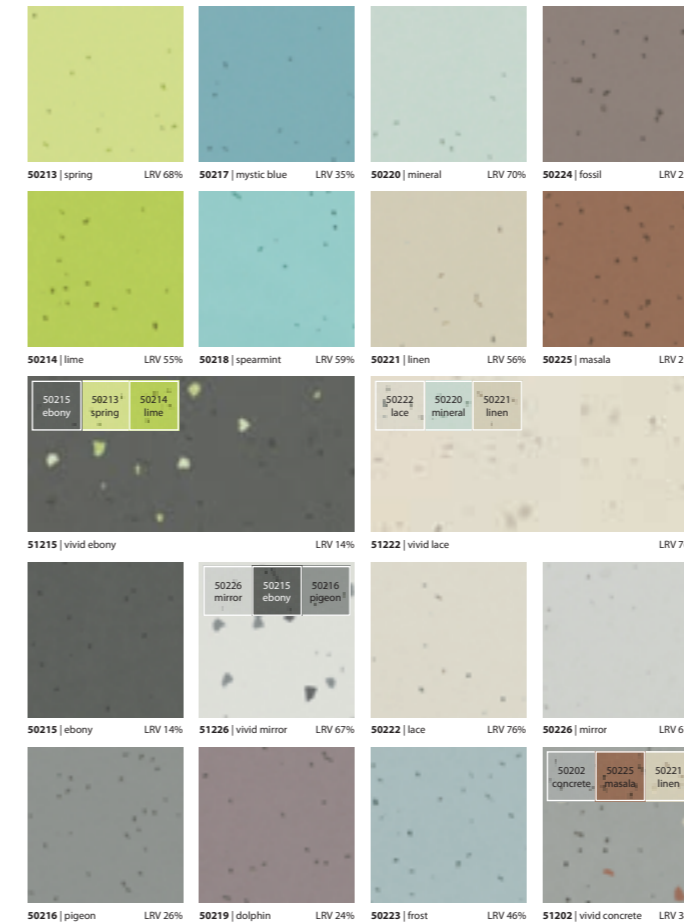
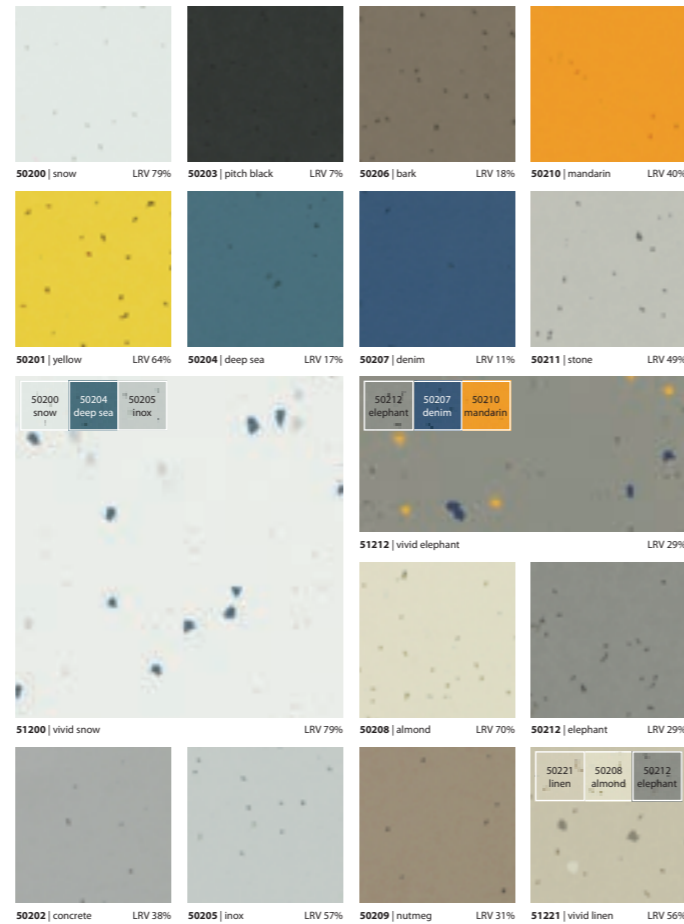
The intricate mix of spheres, granules and colour pigments create a fantastic vibrant visual, making homogeneous vinyl look different. Energetic offers an inspiring pallet of semi plain and larger particle mix colours that are made up from the semi-plain colour base. Transparent granules provide depth and dirt hiding properties. Energetic is created for modern spaces in contemporary as well as classic applications.

50238 | seagreen 51211 | vivid stone

sphera® energetic

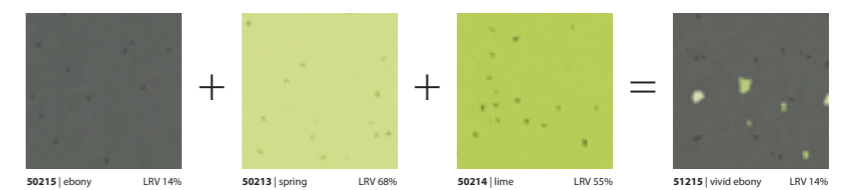


50207 | denim 50210 | mandarin 51212 | vivid elephant



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 PRESENTS A THRILLING DESIGN INNOVATION IN HOMOGENEOUS VINYL

Sphera Evolution has the thrilling sensation of crossing design boundaries, that until now has not been experienced in homogeneous floor coverings. All items presented in the Evolution range are colour coordinated and as such can cater for consistent multi story floor plans that radiate a similar atmosphere and design quality. Sphera Evolution can also be used as highlight combined with other Sphera collections and is designed with retail, public spaces and higher end healthcare environments in mind.

50435 | viridian 50402 | sage pearl 50434 | sage

sphera[®] evolution



50432 | silver white 50471 | shaded silver white 50401 | silver white pearl



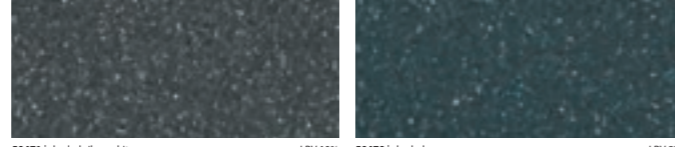
50431 | lapis 50430 | aqua 50470 | shaded aqua



50432 | silver white LRV 79% 50430 | aqua LRV 25%



50433 | peacock LRV 15% 50431 | lapis LRV 8%



50471 | shaded silver white LRV 10% 50470 | shaded aqua LRV 8%



50401 | silver white pearl LRV 71% 50400 | aqua pearl LRV 59%



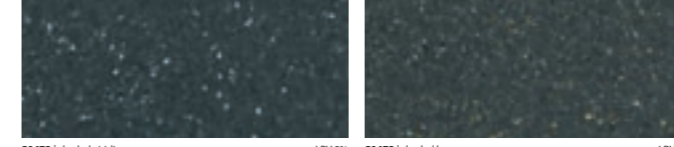
50435 | viridian 50402 | sage pearl 50434 | sage



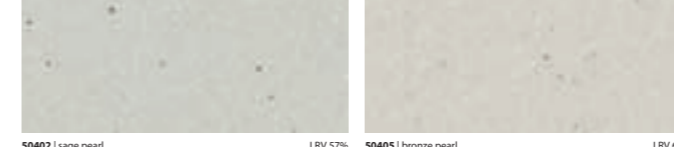
50434 | sage LRV 36% 50436 | lemon LRV 73%



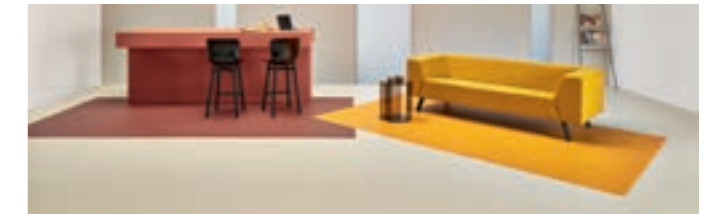
50435 | viridian LRV 16% 50437 | volcano LRV 23%



50472 | shaded viridian LRV 8% 50473 | shaded lemon LRV 8%



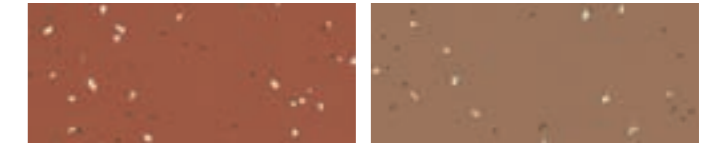
50402 | sage pearl LRV 57% 50405 | bronze pearl LRV 60%



50404 | copper pearl 50439 | copper 50438 | marigold



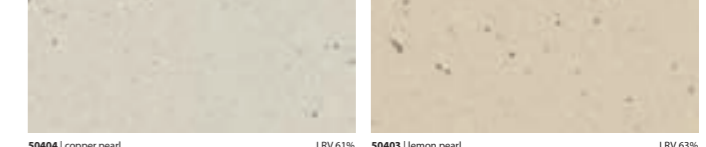
50438 | marigold LRV 41% 50440 | satin LRV 58%



50439 | copper LRV 15% 50441 | bronze LRV 22%



50474 | shaded copper LRV 8% 50475 | shaded bronze LRV 8%



50404 | copper pearl LRV 61% 50403 | lemon pearl LRV 63%

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

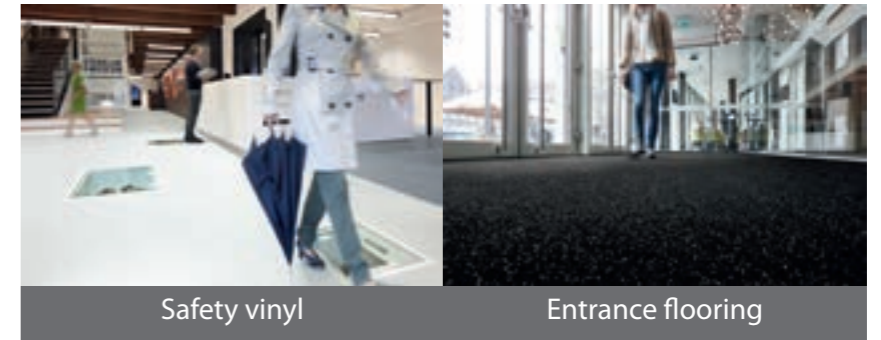
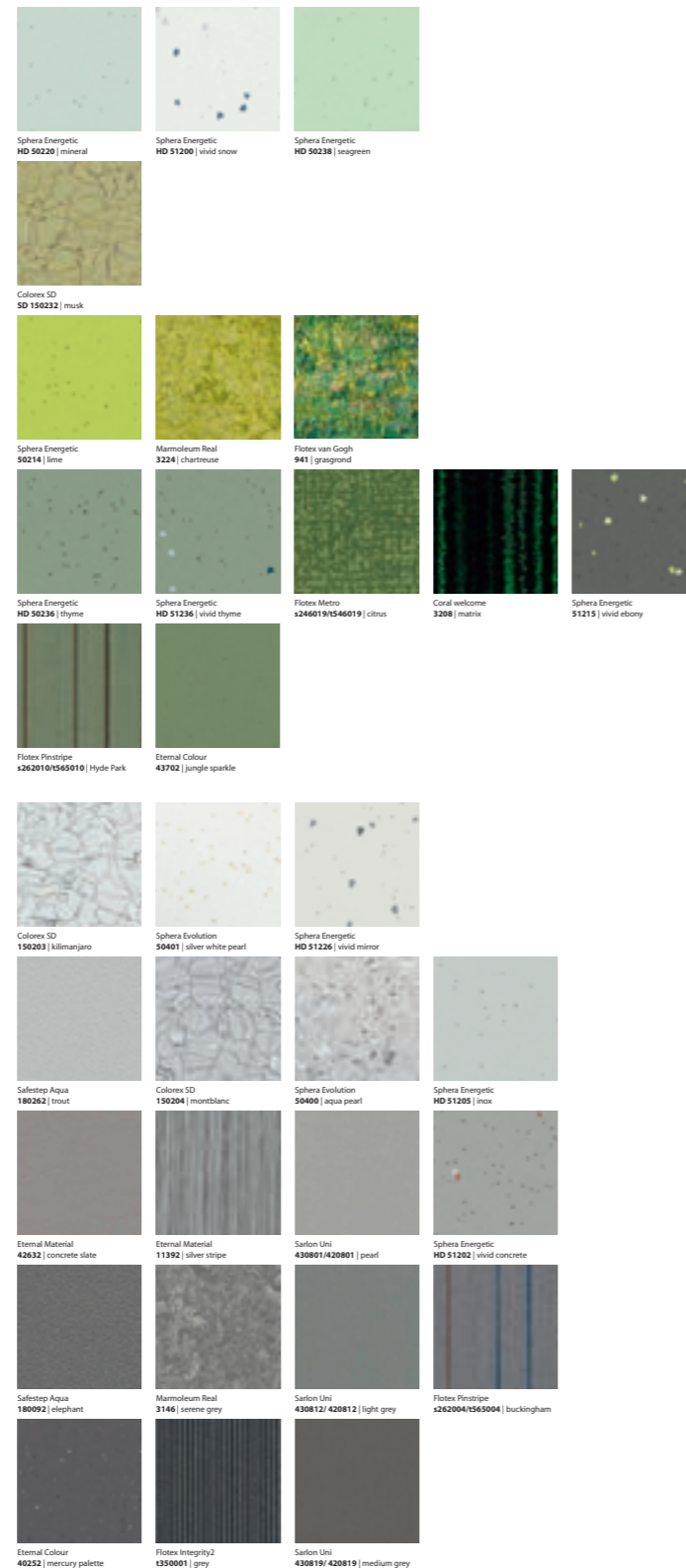
When it comes to flooring in commercial buildings, there is often more than just the general office space to consider. Whether you are looking to refurbish communal areas or are in need of something unique to give an area the “wow” factor, Forbo offers total flooring solutions from one supplier.

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



Static control flooring



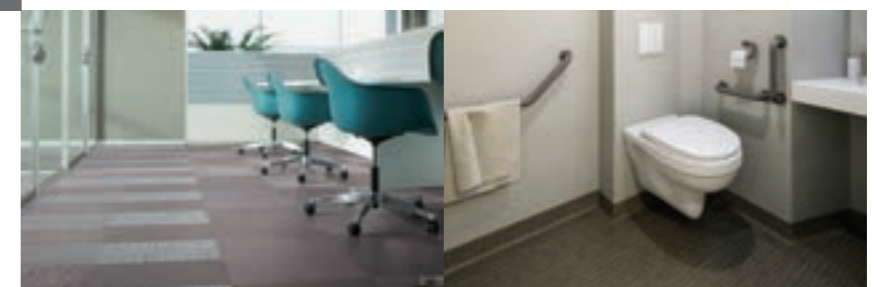
Heterogeneous project vinyl



Luxury Vinyl Tiles



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.

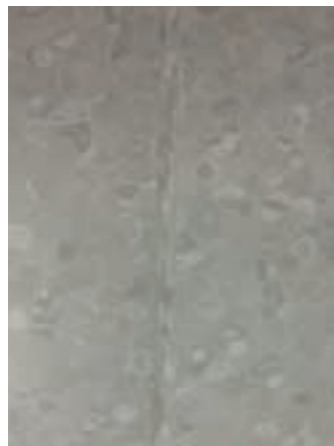
FORBO AQUAJET & WELDING

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



COMMITTED
TO THE HEALTH
OF ONE
WWW.FORBO-FLOORING.COM/CHO

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
Total weight	EN-ISO 23997	2.9 kg/m ²
Dimensional stability	EN-ISO 23999	≤ 0.2 %
Residual indentation Typical value	EN-ISO 24343-1	≤ 0.10 mm - 0.03 mm
Abrasion resistance	EN 660-2	group T
Castor chair continuous use	ISO 4918 / EN 425	pass
Light fastness	ISO 105-B02	≥ 7
Flexibility	EN-ISO 24344	Ø 10 mm
Resistance to chemicals	EN-ISO 26987	very good
Slip resistance	DIN 51130	R9
Wetroom application	EN 13553	yes
Bacteria resistance	EN 846	Does not support growth
TVOC after 28 days	ISO 16000-6	≤ 10 µg/m ³

Sphera evolution meets the requirements of EN 14041

Reaction to fire	EN 13501-1	B _n -s1
Slip resistance	EN 13893	DS - µ ≥ 0.30
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.



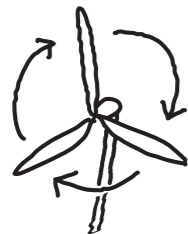
SPHERA, COMMITTED TO THE HEALTH OF ONE



With our portfolio covering we have the ambition to make a positive contribution to the quality of the indoor environment. We do this by offering environmentally responsible products and by paying special attention to safety, hygiene and well being.

Forbo Sphera has very low emissions of $<10\mu\text{g}/\text{m}^2$ 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

 Uniquely embossed surface for optimal performance
Easy to clean and maintain.

 **SMART top**
Chemical resistance
SMART-top PUR surface finish ensures Sphera has a high resistance to chemicals, scratches and stains.
Contributing to a longer lifetime and cost reduction.

 Low emitting and 100% phthalate free
Phthalate free > contributes to a healthy indoor environment.

 Produced in a zero waste environment
Zero landfill is achieved by the Sphera manufacturing plant

 High LRV values and bright, saturated hues
Studies show that a light indoor environment has a positive effect on the well being of the people.