

VitroA

Life Solutions

The design raised with functionality



VitrA



It's all about inspiration

It all begins with questions posed by the design discipline to understand needs, desires and choices. Designed by VitrA, an extraordinary wealth of attractive combinations help satisfy these needs and desires.



Improved personal hygiene

VitrA's continuous research into human health introduces new technologies for improved hygiene in the bathroom. These solutions raise the personal hygiene experience to a new level.



Collaboration with designers

VitrA works with acclaimed industrial designers from around the world. Not only does the collaboration with these top talents improve product functionality, but it also introduces an entirely original range.



The complete bathroom

Exploring physical and emotional needs, VitrA invests in design to produce every essential element in the bathroom.



High powered perfection

Seven cutting-edge factories and plants in Turkey and Russia create sophisticated designs and maintain extremely high standards whilst progressively reducing VitrA's ecological footprint.



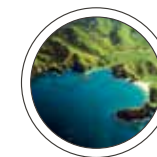
Technology lights up the future

The VitrA Innovation Centre serves as the headquarters of the brand's R&D activities with a strong engineering team, leading the bathroom industry with new solutions and technologies.



VitrA across the world

Bathroom designs greet customers around the world through 2000 sales points in over 75 countries, including 150 exclusive VitrA showrooms in Istanbul, London, Cologne, Moscow, Dubai, Mumbai, Delhi, and other major cities.



A pledge to the future

VitrA embraces Blue Life, a set of guidelines devised to mitigate our impact on the environment, and is held as a production, design and management philosophy.

VitrA Life Solutions

The design raised with functionality

We bring the innovative solutions that we have developed by the inspiration we get from you and from the life itself into our designs so that you can feel safe and comfortable at every new step and create pleasant living spaces.

Life is now more comfortable and joyful with **VitrA V-Safe, V-Hygiene, V-Shape and VitrA Solid** Technologies.

- V-Safe:** Guaranteed safety with anti-slip surface technology
- V-Hygiene:** Smart surface technologies for hygienic living spaces
- V-Shape:** New digital technology shaper application creating a three-dimensional effect
- VitrA Solid:** Long-lasting quality and performance



VitrA Life Solutions

The design raised with functionality



V-Safe

Guaranteed safety with anti-slip surface technology



V-Safe Wet

Anti-slip, easy to clean and hygienic surface technology for wet areas



V-Safe Outdoors

High anti-slip performance with wear resistant and weatherproof technology designed for outdoor areas



V-Safe Industrial

High level of slip resistance for industrial areas



V-Hygiene

Smart surface technologies for hygienic living spaces



VitrA Shield

Self-cleaning technology that inhibits the growth of harmful bacteria



VitrA Clean 2.0

Ultra-easy to clean floor and wall tiles



V-Shape

New digital technology shaper application creating a three-dimensional effect

The pioneering V-Shape technology is capable of creating more natural digital reliefs.

It enables precision and realism in each tile design, creating a three-dimensional effect with a sense of volume, depth, and realism on tiles.

As well as ensuring slip resistance, V-Shape offers surface softness and a natural feel.



VitrA Solid

Long-lasting performance and quality



V-Coat

Innovative surface protection technology



VitrA Block

Like the first day: Protection against yellowing



VitrA Professional

Fullbody and colorbody tiles that are extra resistant to harsh conditions in industrial and commercial areas

Brochures



V-Safe





Enjoy moving around safely with Vitra V-Safe Technology.

You can enjoy every moment in all living spaces thanks to Vitra V-Safe anti-slip surface technology.





What is Vitra V-Safe Technology?

V-Safe is a surface technology that provides slip-resistant and easy-to-clean surfaces. It also provides soft touch surfaces for V-Safe Wet.

V-Safe is suitable for both indoor and outdoor areas, especially for all kinds of living spaces that require extra safety, hygiene and durability such as baby and children rooms, bathrooms, kitchens, swimming pools and SPAs and industrial areas.

Thanks to its non-slip surface, Vitra V-Safe allows you to step without worry across all ceramic surfaces.





V-Safe Wet Technology for safe and enjoyable moments in the water

V-Safe Wet provides a safe and comfortable environment in wet spaces thanks to its non-slip, hygienic and easy-to-clean technology.

* Please refer to our main catalogues to see our R10B tiles:
<https://www.vitraglobal.com/brochures/tile-brochures/generalbrochures/>





V-Safe Outdoors Technology for joyful moments in outdoor areas

V-Safe Out allows you to spend joyful moments in outdoor areas thanks to its high anti-slip performance and wear resistant and weatherproof technology.

* Please refer to our main catalogues and 20mm catalogue to see our R11 tiles:
<https://www.vitrageglobal.com/brochures/tile-brochures/general-brochures/>
<https://www.vitrageglobal.com/brochures/tile-brochures/collection-brochures/>

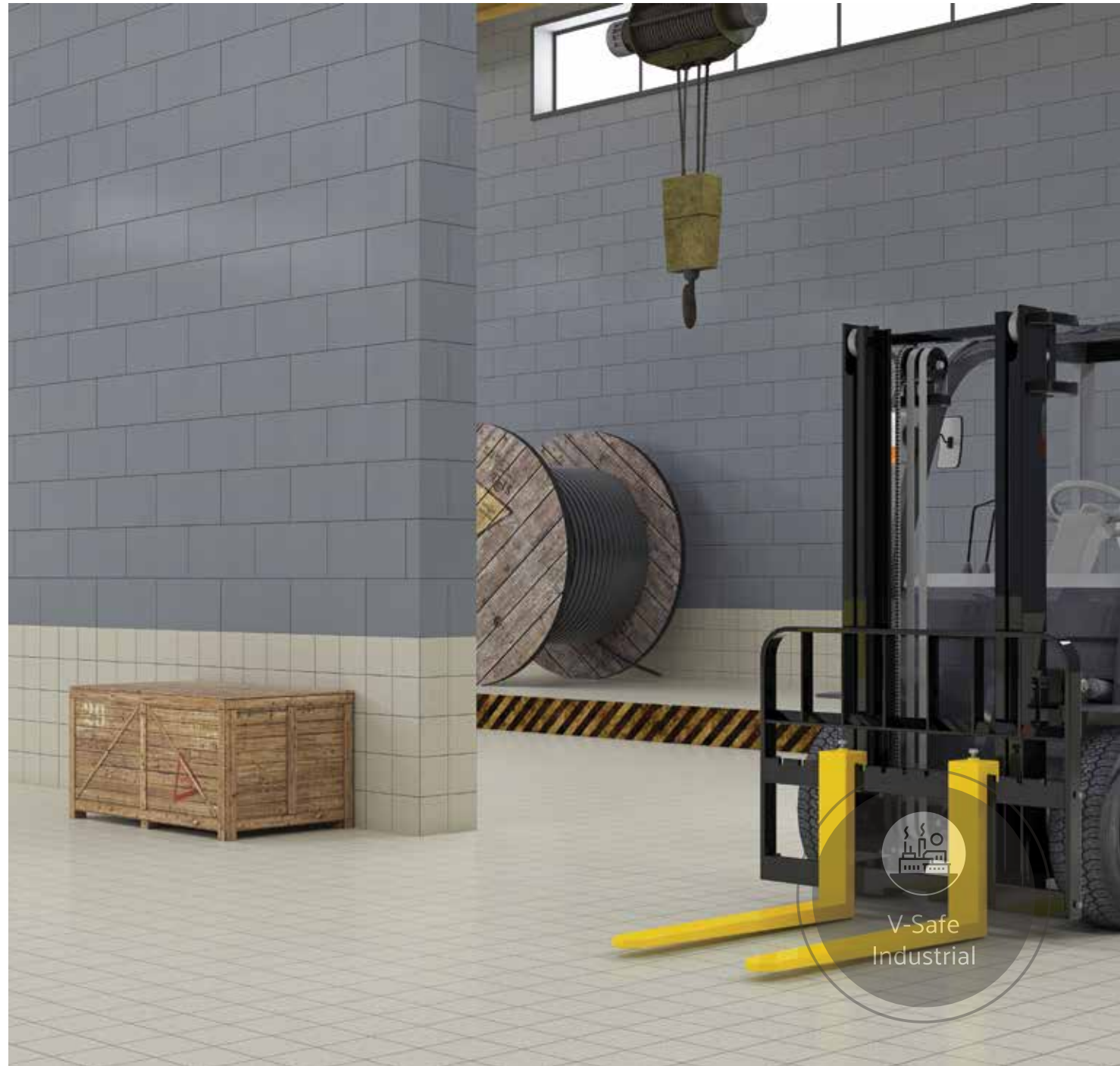




V-Safe Industrial Technology for industrial areas

V-Safe Industrial provides a very high level of slip resistance, designed specifically for industrial area surfaces. V-Safe Industrial can also be used in outdoor areas for extra slip resistance.

* Please refer to our PRO Technic catalogue to see our R11& R12 tiles:
<https://www.vitrageglobal.com/brochures/tile-brochures/general-brochures/>



Some of the Vitra Tiles Collections with V-Safe Technology:

R10B



Cemental



Quarstone



Cementart

R10B



Boscostone



Marmostone

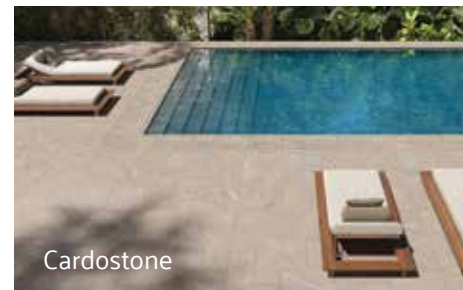


Ultra 2.0

R11



Meteorite



Cardostone



Royalstone



V-Safe Wet

Collection	Surface
BetonX	R10B
BetonX	R11B
Boscostone	R10B
Canyon	R10B
Cardostone	R10B
Cardostone	R11C
Cemental	R10B
Cementart	R10B
CementEra	R10B
Cementine	R10B
Cementside	R10B
Cementside	R11
Color2.0	R10B
Color Dot	R10B
Dotti	R10B
Dotti	R10B
Dotti	R10B
Flakeart	R10B
Flakestone	R10B
Lombardy	R10B
Marmostone	R10B
Meteorite	R10B
Naturalux	R10B
Newcon	R10B
Newcon	R11B
Noblestone	R10B
Novatone	R10B
Quarstone	R10B
Royalstone	R10B
Sense	R10B
Stoneart	R10B
Ultra 2.0	R10B
Uni	R10B
Uni	R10B



V-Safe Outdoors

Collection	Surface
BetonX	R11B 20mm
Cardostone	R11 20mm
Cardostone	R11C 20mm
Craft	R11B 20mm
Flakestone	R11B 20mm
Metro	R11 20mm
Naturalux	R11 20mm
Newcon	R11B 20mm
Noblestone	R11 20mm
Quarstone	R11 20mm
Royalstone	R11 20mm
Ultra 2.0	R11 20mm
Urbancrete	R11 20mm

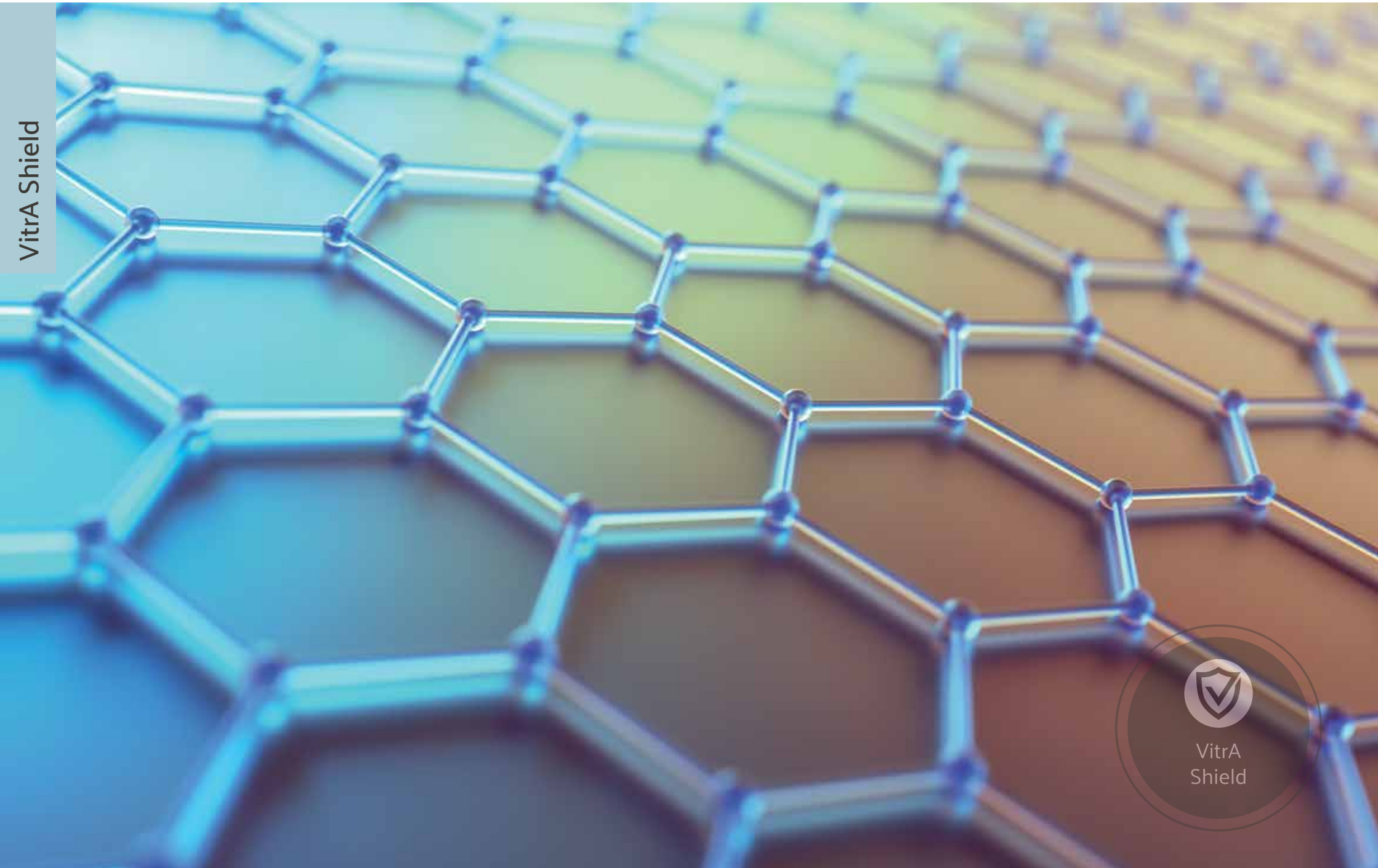


V-Safe Industrial

Collection	Surface
Dotti	R11B Mercato
Dotti	R11B Corund
Dotti	R12 V4 Diamond
Uni	R11B Mercato
Uni	R11B Corund
Uni	R12 V4 Diamond



VitrA Shield



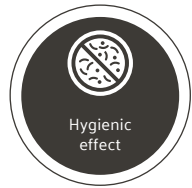


What is VitrA Shield Technology?

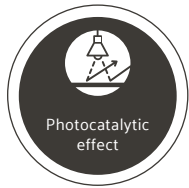
VitrA Shield is an application of nano titanium dioxide (TiO₂) coating on tiles. VitrA Shield technology applied tiles are self-cleaning thanks to the photocatalytic features activated by light and humidity in the air, inhibit the growth of harmful bacteria and eliminate impact of airborne unpleasant odours and dirt in the air in spaces where VitrA Shield applied tiles are used.

Thanks to all these powerful features, VitrA Shield offers a clean, healthy and safe solution for homes, schools, hospitals, sports centres, clinics, kindergartens and any living space where hygiene is important.





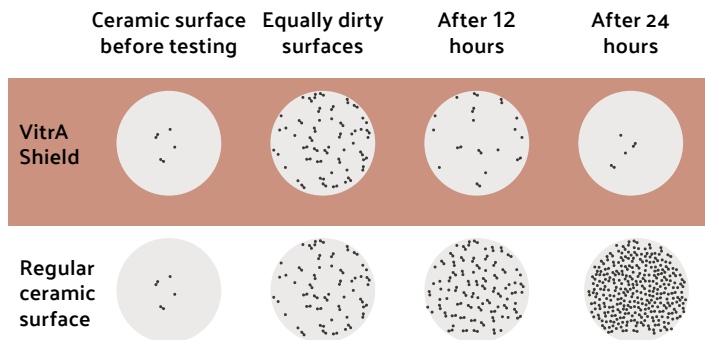
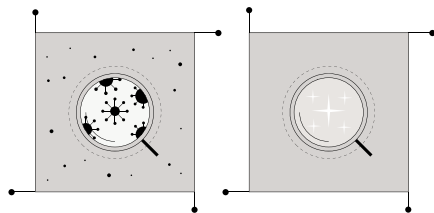
Hygienic effect



Photocatalytic effect

Technology that inhibits the growth of harmful bacteria

VitrA Shield applied tiles, that are produced with nano technology, inhibit the growth of harmful bacteria therefore provide long lasting and continuous hygiene in living spaces. Tests performed in national and international accredited laboratories show that VitrA Shield provides 99.9% hygienic protection.

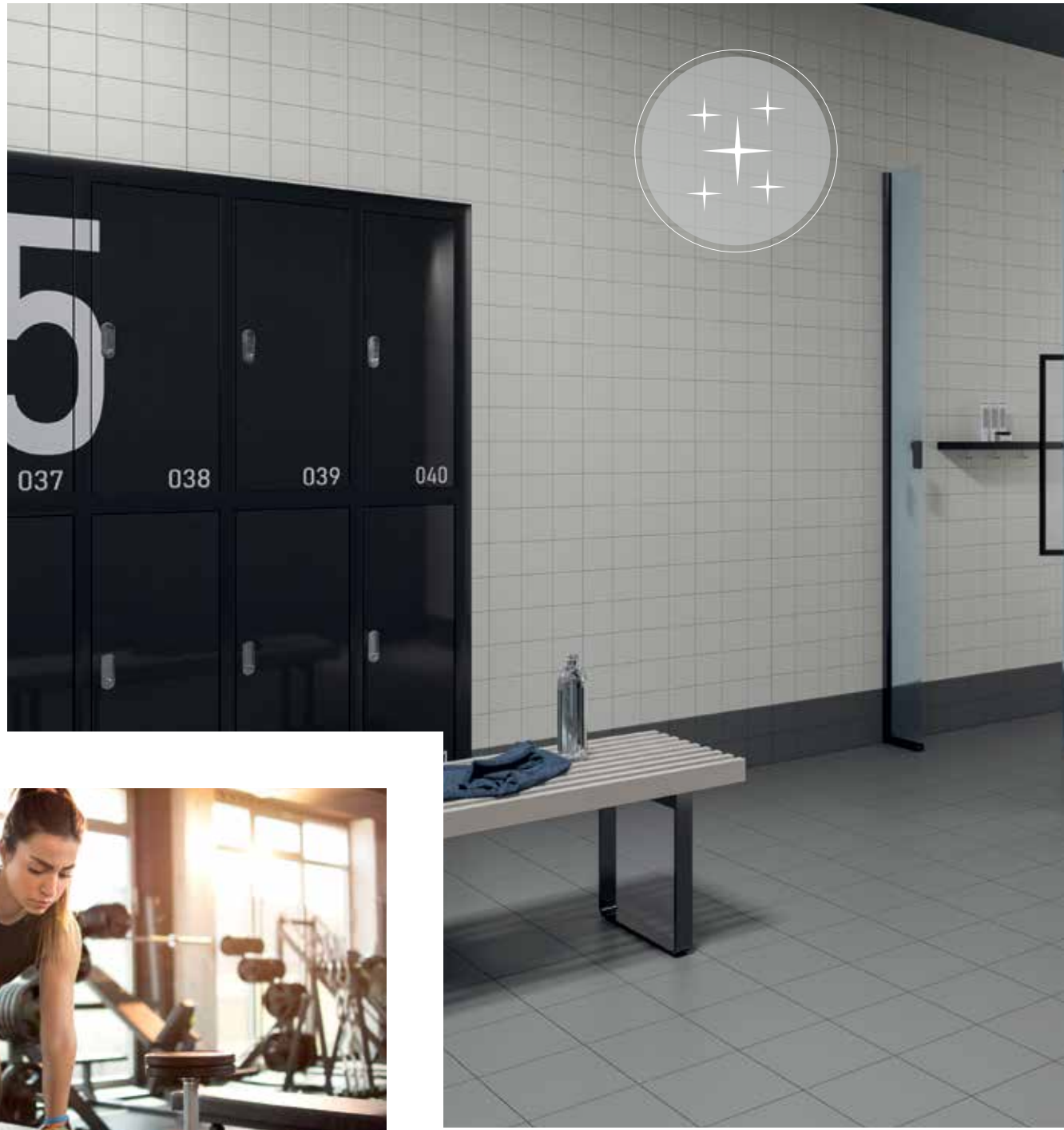
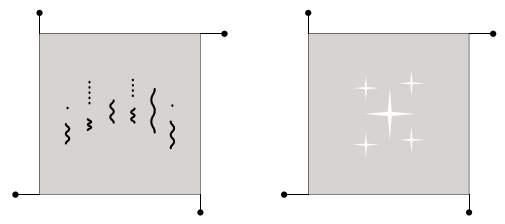


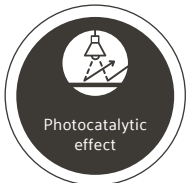


Technology that reduces unpleasant odours and dirt in the air

Thanks to its strong photocatalytic effect, VitrA Shield reduces unpleasant odours and the negative effects of airborne dirt such as nitrogen oxide, sulphur-oxide and exhaust fumes outdoors and sweat and cigarette smoke indoors. Thus, it provides a clean and fresh air.

It is also an excellent solution to lessen the effect of strong odours such as disinfectants.

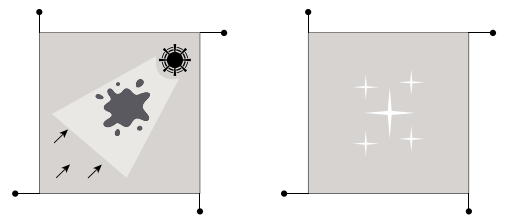




Self-cleaning technology

VitrA Shield technology decomposes and removes the organic dirt on the tile's surface when it gets in contact with its photocatalytic effect surface. It easily removes dust and other dirt particles from the surface through the help of rain outdoors and water indoors.

Thus, it significantly reduces the effort, the amount of water, energy, chemical cleaning agents and labour required for cleaning indoor and outdoor surfaces.





Vitra Shield in residential areas



Vitra Shield in public areas

You can watch our videos on the benefits of the **Vitra Shield** technology solution in different living spaces.

Applicability tables

	Wall tile body											
	7.5x30	10x30	15x15	20x20	20x25	20x30	20x40	25x40	20x60	30x60	30x90	40x120
Vitra Shield	√*				√		√		√	√	√*	

* Vitra Shield technology can only be applied to these sized products in the mode series within the wall tiles.

	Floor body										
	5x5	5x10	5x20	10x10	10x20	10x30	15x15	20x20	30x30	33x33	60x60
Vitra Shield				√*	√*	√*	√*	√*	√*	√	

* Vitra Shield technology can only be applied to these sized products in the PRO Color & miniworx series within the floor tiles.

	Colorbody & glazed porcelain body wall																
	2.5x2.5	2.5x5	5x5	7.5x30	12.5x25	15x15	30x30	30x60	45x45	40x80	45x90	60x60	80x80	20x120	30x120	40x120	60x120
Vitra Shield	√**	√**						√*		√*		√*	√*				

* Vitra Shield technology can only be applied to these sized products in the mode series within the glazed porcelain body.

* Vitra Shield technology can only be applied to these sized products in the PRO Color2.0 series in glazed porcelain.

* Vitra Shield technology can be applied in PRO Nature products in colorbody, fullbody and glazed porcelain.

	Fullbody porcelain					
	5x5	10x10	15x15	20x20	30x30	30x60
Vitra Shield			√*	√*	√*	√*

* Vitra Shield technology can be applied to these sized products in the PRO Technic series within the fullbody.

* Vitra Shield technology can be applied to these sized products in the PRO Nature series within the fullbody.





What is VitrA Clean 2.0 Technology?

VitrA Clean 2.0 is a surface technology that makes VitrA Tiles easy to clean. The special glazing method increases the surface tension. Thus, water acts like mercury on the surface and allows dirt to easily separate from the surface.

Tiles can be easily cleaned with the help of a waterdamped wipe or with addition of mild cleaning agents, if needed.

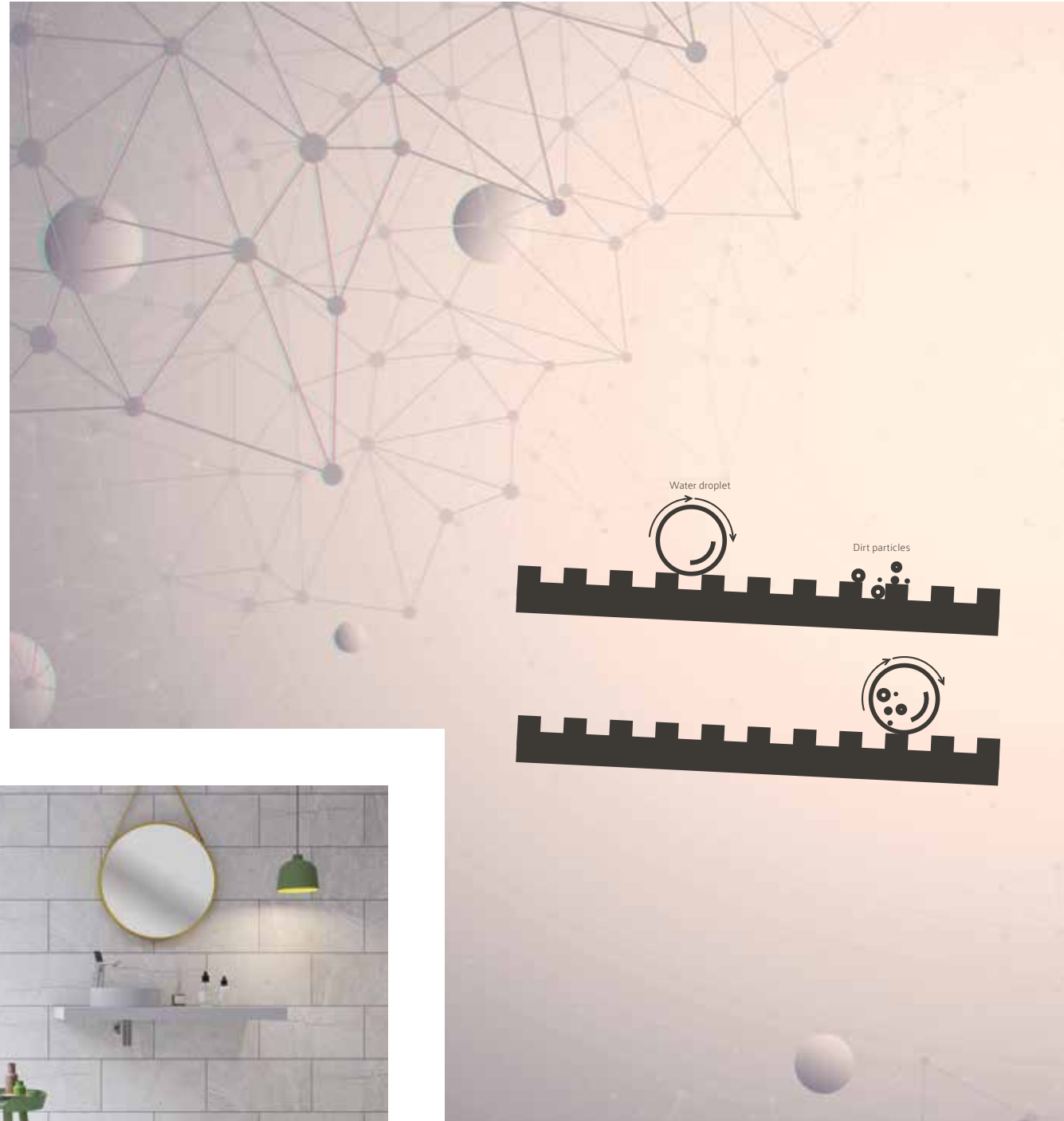
This permanent feature provides great convenience to the users when cleaning both commercial and residential areas. With VitrA Clean 2.0, not only wall tiles but also floor tiles can now have VitrA Clean 2.0 technology.





Super hydrophobic effect

VitrA Clean 2.0 is a special nanotechnology surface finish, to ensure easy cleaning of dust and dirt on tile surfaces. This coating which causes the water to form droplets on the surface very much like a mercury droplet, is applied by a spraying technique. These droplets collect dirt while moving along the surface and thus ensure and allow the surfaces to be easily cleaned.

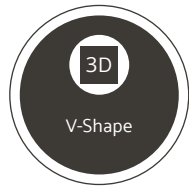


V-Shape



3D

V-Shape

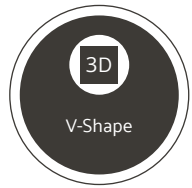


What is Vitra V-Shape Technology?

V-Shape is a new digital technology as a shaper application creating a three-dimensional effect on tiles surfaces.

It enables precision and realism in each tile design, creating a three-dimensional effect with a sense of volume, depth, and realism on tiles.





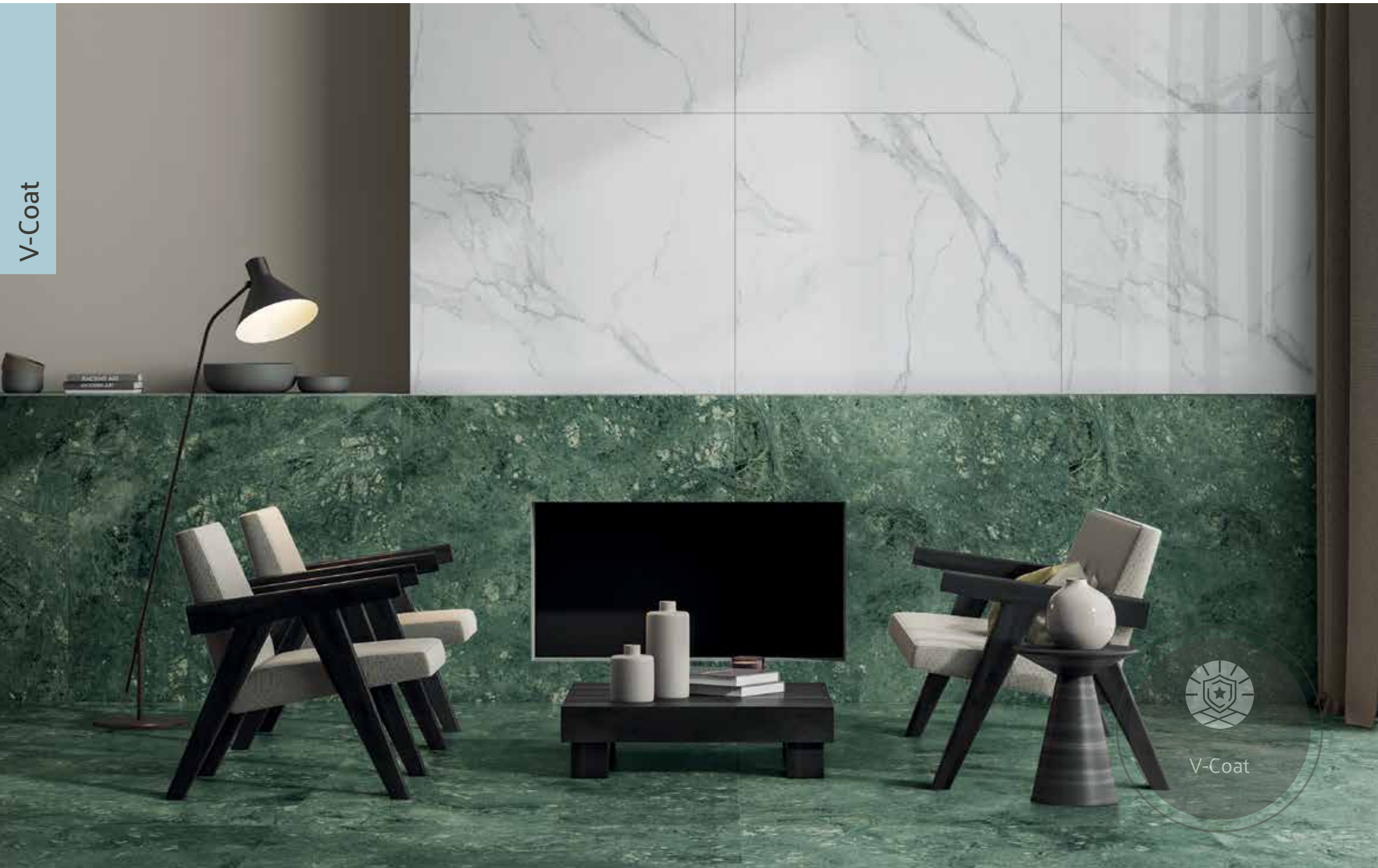
More natural digital reliefs

The pioneering V-Shape technology is capable of creating more natural digital reliefs.

As well as ensuring slip resistance, V-Shape offers surface softness and a natural feel.



V-Coat



V-Coat



What is Vitra V-Coat Technology?

V-Coat is an innovative surface protection technology for porcelain tiles applied in Vitra Tiles porcelain collections.

By offering optical and technical advantages, it further improves the aesthetic appearance of tiles and increases their durability. This innovative technology provides long-lasting protection to tiles, an ideal solution for both residential and commercial spaces.





The secret of vibrant colours: V-Coat

V-Coat technology makes tile colours appear more vibrant and bright. It adds an aesthetic touch to living spaces by revealing the depth and richness of colours.

With the application of V-Coat, tiles gain extra protection against fading or matting over time.





Maximum shine on Full Lappato surfaces

V-Coat technology, used in tiles with Full Lappato glossy surface features, provides maximum shine after surface treatment.

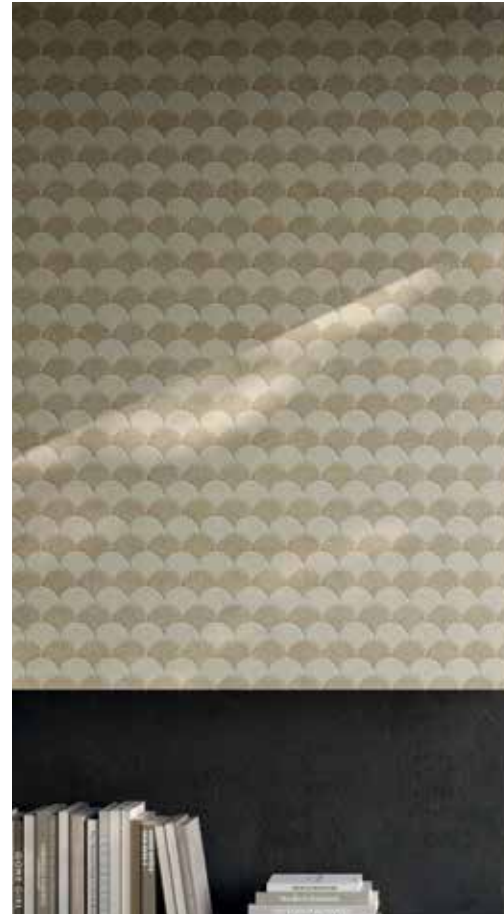
This feature gives the tiles an appearance enriched with prestige and elegance, and highlights the natural beauty of the surface. Surface protection technology makes spaces eye-catching with bright and smooth surfaces.





Softness and anti-slip combined

V-Coat provides a unique usage experience by ensuring that the tile surface is both soft and anti-slip. This dual feature makes tiles safer and more comfortable for all living spaces. It offers security thanks to its anti-slip feature and a unique surface aesthetic with its soft texture.





Anti-slip effect maintained for many years

The top glaze with anti-slip granules maintains its anti-slip performance for a long time, preventing the surface from deteriorating and losing its anti-slip class properties over time.

V-Coat stands out as the best choice for wet living areas, spaces frequently used by children and the elderly, and outdoor use where slip resistance is important.





Superior resistance to stains

The special stain resistance of V-Coat technology allows the toughest stains to be easily removed with just water, without using solvents and corrosive chemicals.

With this superior feature, V-Coat tiles are ideal for commercial areas with heavy traffic.







What is VitrA Block Technology?

Watermark is a general problem occurring on white wall tiles due to water absorption. Wall tiles produced with VitrA Block reduces water absorption on the wall tiles which provides clean and no watermark look on the tile surface.

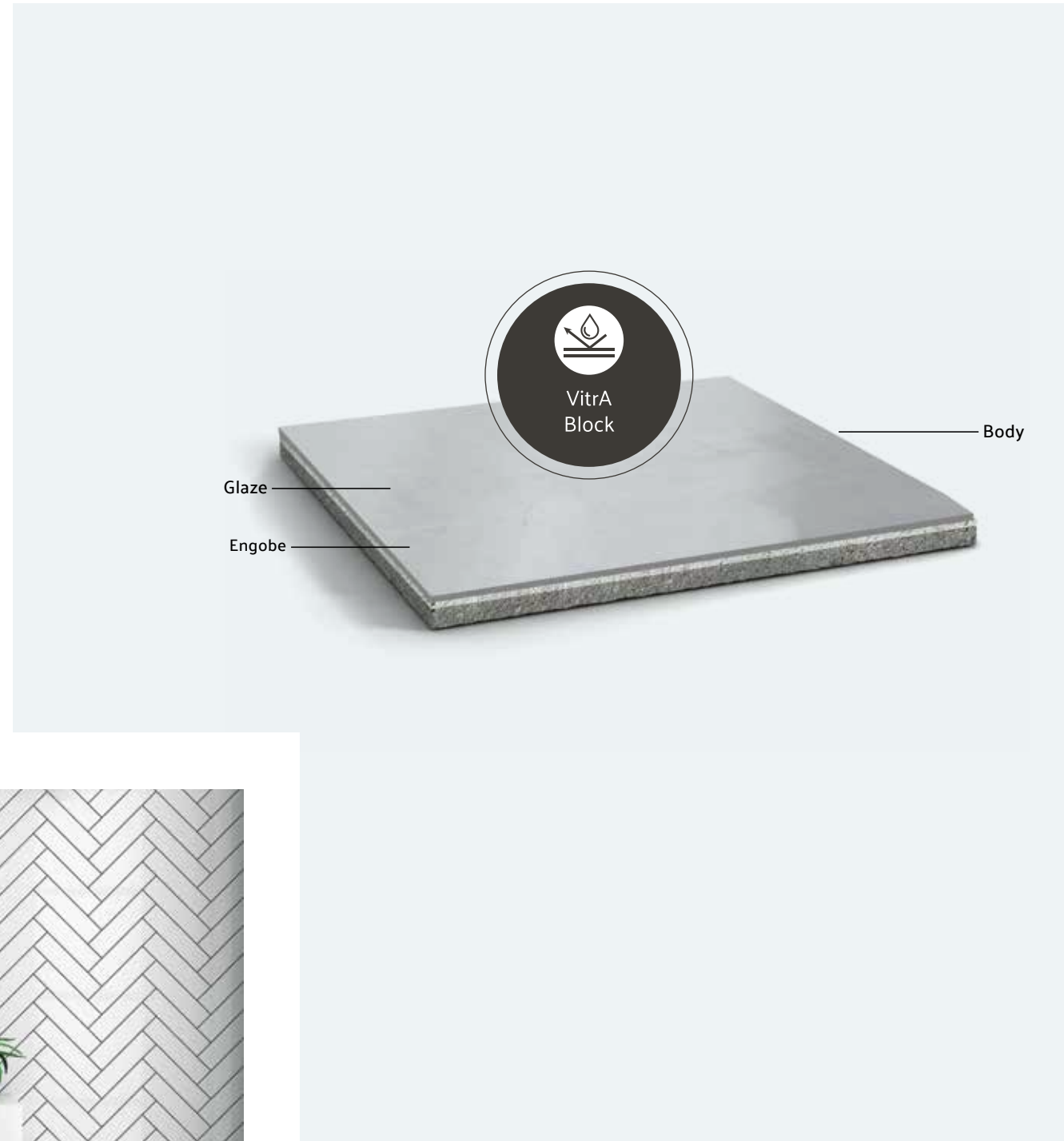
A new engobe recipe has been developed with 0% water absorption without making any change on body recipe, firing cycle and tiling. Thanks to this new recipe, VitrA Block provides a clean and spotless look on the white wall tiles.



Water absorption of wall tiles

Wall tiles differ from porcelain and floor tiles with their higher water absorption properties. The water absorption rate of porcelain tiles is between 0.0 - 0.5% while the water absorption rate of wall tiles is between 10 - 20%. Wall tiles are much more porous and have lower density. Both characteristics are required for easy application on the walls, making tiles easy to hold on the walls during tiling and creating less vertical load.

As seen in the figure, glaze is a glassy phase that does not absorb water, but just below it engobe and body layers have water absorption of 8 - 15% for engobe and 10 - 20% for body side due to the porosity inside the structure.

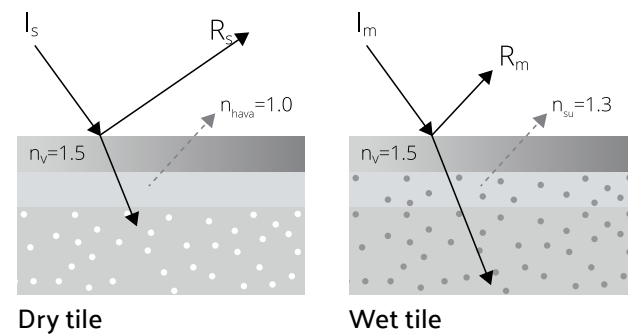


Watermark problem

Wall tiles high water absorption property is required for easy tiling on the walls, on the other hand this higher water absorption may create watermark problem especially on plain white and light colored wall tiles.

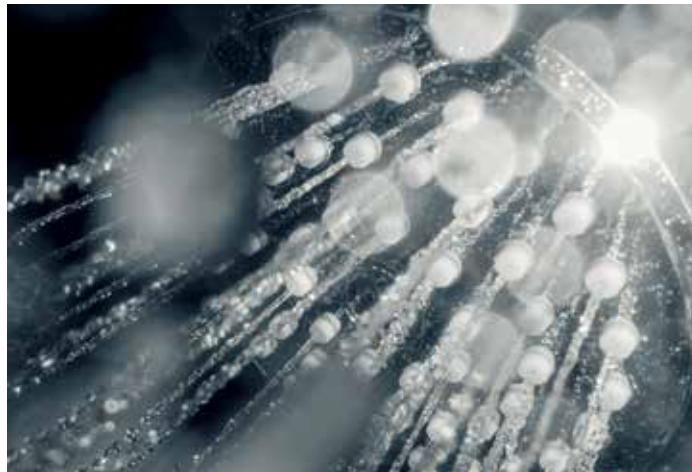
Watermark problem is darkening of color on glazed surface due to the absorption of water by porous body which causes customer complaints due to stain like plots on tiles. Especially at Scandinavian countries due to the application of backboards at laying of wall tiles, the watermark attend to form much more easily because all the water stay between the tile and backboard. Watermark formation is directly related to visualization on the glaze surface of porous body when it became wet as darkening in color. The mechanism of watermark formation is given in the gure. At the dry state, tile has porous structure where the pores are fullled with air and incident light does not penetrate inside the pores, but at wet state since the pores are lled with water and the dierence between the refractive index, incident light pass through the pores which is seen as darkening of colour at glazed surface.

Watermark formation of wall tile



Watermark-free technology

The new engobe recipe of VitrA Block with 0% water absorption provides watermark-free surface technology ensuring much lower water absorption and therefore no sign of watermark can be seen on the tile surface. The wall tiles remain clean and white like the first day.



Applicability tables

	Wall tile body											
	75x30	10x30	15x15	20x20	20x25	20x30	20x40	25x40	20x60	30x60	30x90	40x120
VitrA Block						✓	✓	✓	✓	✓	✓	



V-Safe
technical
informations

VitrA slip resistance

1. Coefficient of friction / Slip resistance

Slip-resistant coverings in publicly accessible areas are distinguished according to those that are walked over barefoot or in footwear. Special protective measures against slipping are necessary where there is a risk due to use of water, oil, slush, grease or waste. This should be taken into consideration when choosing the surface material.

The slip resistance value of installed tiles can change over time as a result of wear and surface contaminants. In addition to regular cleaning, deep cleaning and traction-enhancing maintenance may be needed periodically to maintain the slip resistance values. (Ref: ANSI A137.1-2017)

There are many factors that affect the possibility of a slip occurring on a surface including by way of example, but not in limitation, the following: the material of the shoe sole and the degree of its wear; the presence and nature of surface contaminants; the speed and length of stride at the time of a slip; the physical and mental condition of the individual at the time of a slip; whether the floor is flat or inclined; how the hard surface flooring material is used and maintained, and the slip resistance classification of the material, how the flooring surface is structured, and how drainage takes place if liquids are involved. Because many variables affect the risk of a slip occurring, the slip resistance classification shall not be the only factor in determining the appropriateness of a hard surface flooring material for a particular application. (Ref: ANSI A326.3 April 2017)

1.1. Slip resistance properties in commercial applications

DIN 51130 (new version: EN 16165-Annex B) is the test method that is used for determining slip resistance of floor coverings in work rooms and work areas subject to higher risk of slipping. Working rooms and areas are classified according to five assessment groups on the basis of size and the risk of slipping. The lowest slip resistance value is R9 whereas the highest one is R13 for industrial slip resistance of tiles. In table of industrial areas slip resistance classification and collection space, the application areas are indicated in accordance with "ASR 1.5/1,2 Technical Regulations for workplaces -Floors".



6° < R9 < 10°

Low static friction



10° < R10 < 19°

Normal static friction



19° < R11 < 27°

Increased static friction



27° < R12 < 35°

High static friction



R13 > 35°

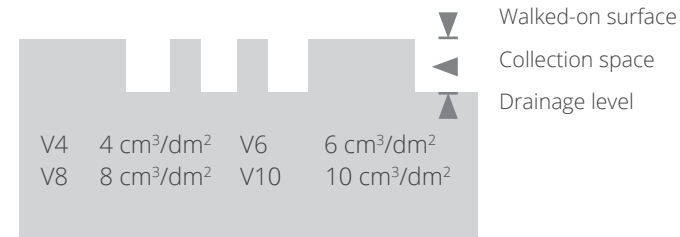
Very high static friction

Open field test

Important Notice: The indicated angles of inclination helps to identify anti-slip classification of the product and cannot be related to the angles of inclination of slopes/ramps.

1.1.1. Working rooms and areas with risk of slipping (in accordance with ASR A1.5/1,2)

DIN 51130 (new version: EN 16165-Annex B) is the test method that is used for determining slip resistance of floor coverings in work rooms and work areas subject to higher risk of slipping. Working rooms and areas are classified according to five assessment groups on the basis of size and the risk of slipping. The lowest slip resistance value is R9 whereas the highest one is R13 for industrial slip resistance of tiles. In table of industrial areas slip resistance classification and collection space, the application areas are indicated in accordance with "ASR 1.5/1,2 Technical Regulations for workplaces -Floors".



The displacement space (V4-V10) is the open space between the upper walked-on surface and the drainage level of profiled surfaces.

Industrial areas slip resistance classification and collection space - Application areas

Nr.	Working areas, walking corridors	Antislip groups (R classes)	Minimum collection space
0	General working rooms and areas		
0.1	Entrance areas (inside)	R 9	
0.2	Entrance areas (outside)	R 11 - R 10	V 4
0.3	Stairs (inside)	R 9	
0.4	Stairs (outside)	R 11 - R 10	V 4
0.5	Sloping ramps, inside* (e.g. for wheelchairs, leveling slopes, transport paths)		
0.6	Sanitary rooms		
0.6.1	Toilets	R 9	
0.6.2	Changing or washrooms	R 10	
0.7	Break rooms (e.g. dayrooms, canteens)	R 9	
0.8	First aid rooms and similar facilities (see ASR A4.3)	R 9	
1	Manufacture of margarine, edible fats and oils		
1.1	Melting of fat	R 13	V 6
1.2	Cooking oil refinery	R 13	V 4
1.3	Margarine production and packaging	R 12	
1.4	Cooking fat production and packing, oil bottling	R 12	
2	Milk processing, cheese production		
2.1	Fresh milk processing and butter production	R 12	
2.2	Cheese production, storage and packaging	R 11	
2.3	Icecream manufacturing	R 12	
3	Chocolate and confectionery production		
3.1	Sugar processing	R 12	
3.2	Cocoa production	R 12	
3.3	Production of raw mixtures	R 11	
3.4	Fabrication of chocolate bars, shells and filled chocolates	R 11	
4	Production of bread, cakes and pastries (bakeries, cake shops, production of long-life bakery products)		
4.1	Dough production	R 11	
4.2	Rooms in which predominantly fats or liquid mixtures are processed	R 12	
4.3	Washing-up rooms	R 12	V 4

VitrA slip resistance

Nr.	Working areas, walking corridors	Antislip groups (R classes)	Minimum collection space	Nr.	Working areas, walking corridors	Antislip groups (R classes)	Minimum collection space
5	Slaughtering, meat processing			11.8.2	For meat processing, except for no.5	R 11	
5.1	Slaughter house	R 13	V 10	11.9	Florists shops	R 11	
5.2	Tripe processing room	R 13	V 10	11.10	Sales areas with stationary ovens		
5.3	Meat sectioning	R 13	V 8	11.10.1	For the production of bread, cakes and pastries	R 11	
5.4	Sausage kitchen	R 13	V 8	11.10.2	For the warming-up of refabricated bread, cakes and pastries	R 10	
5.5	Boiled sausage unit	R 13	V 8	11.11	Sales areas with stationary chip pans or grills	R 12	V 4
5.6	Raw sausage unit	R 13	V 6	11.12	Shops, customer rooms	R 9	
5.7	Sausage drying room	R 12		11.13	Preparation areas for food and self-service shops	R 10	
5.8	Smoking establishments	R 12		11.14	Cash register areas, packing areas	R 9	
5.9	Salting and curing rooms	R 12		11.15	Outdoor sales areas	R 11 - R10	V 4
5.10	Poultry processing	R 12	V 6	12	Health service rooms		
5.11	Gut store	R 12		12.1	Disinfection rooms (wet)	R 11	
5.12	Cold cuts and packaging unit	R 12	V 8	12.2	Pre-cleaning areas of sterilization	R 10	
6	Fish processing, production of delicatessen			12.3	Faeces disposal rooms, discharge rooms, unclean nursing work rooms	R 10	
6.1	Fish processing	R 13	V 10	12.4	Pathological facilities	R 10	
6.2	Production of delicatessen	R 13	V 6	12.5	Rooms for medical baths, hydrotherapy, fango preparation	R 11	
6.3	Manufacture of mayonnaise	R 13	V 4	12.6	Washrooms of operating theatres, plastering rooms	R 10	
7	Processing of vegetables			12.7	Sanitary rooms, ward bathrooms	R 10	
7.1	Production of sauerkraut	R 13	V 6	12.8	Rooms for medical diagnosis and therapy, massage rooms	R 9	
7.2	Vegetable tinning	R 13	V 6	12.9	Operation theatres	R 9	
7.3	Sterilization rooms	R 11		12.10	Wards with hospital rooms and corridors	R 9	
7.4	Rooms in which vegetables are prepared for processing	R 12	V 4	12.11	Medical practices, day clinics	R 9	
8	Food areas in food and beverage production (if not specifically mentioned)			12.12	Pharmacies	R 9	
8.1	Storage cellars	R 10		12.13	Laboratories	R 9	
8.2	Beverage bottling, fruit juice production	R 11		12.14	Hairdressing salons	R 9	
9	Catering establishments			13	Laundries		
9.1	Kitchens in the catering trade (restaurant kitchens, hotel kitchens)	R 12		13.1	Rooms with continuous-flow washing machines	R 9	
9.1.1	Up to 100 meals per day			13.2	Rooms with washing machines or with spin-drier	R 11	
9.1.2	More than 100 meals per day			13.3	Ironing rooms	R 9	
9.2	Catering kitchens serving to homes, schools, kindergartens, sanatoria	R 11		14	Fodder concentrate production		
9.3	Kitchens of hospitals and clinics	R 12		14.1	Dried fodder production	R 11	
9.4	Catering kitchens serving to universities and industrial canteens	R 12	V 4	14.2	Fodder concentrate production using fat and water	R 11	V 4
9.5	Food preparation kitchens (fast-food kitchens, snack bars)	R 12		15	Leather productions, textiles		
9.6	Kitchens for heating up frozen meals	R 10		15.1	Wet areas in tanneries	R 13	
9.7	Coffee and tea kitchens, hotel garni kitchens and ward kitchens	R 10		15.2	Rooms with fleshing machines	R 13	V 10
9.8	Washing-up areas			15.3	Areas where leather scraps accumulate	R 13	V 10
9.8.1	Washing-up areas for 9.1, 9.4, 9.5	R 12	V 4	15.4	Rooms for making leather impermeable by means of grease	R 12	
9.8.2	Washing-up areas for 9.2	R 11		15.5	Dye mills for textures	R 11	
9.8.3	Washing-up areas for 9.3	R 12		16	Paint shops		
9.9	Dining rooms, guest rooms, canteens including serving counters	R 9		16.1	Wet grinding areas	R 12	V 10
10	Cold stores, deep freeze stores			17	Ceramic industry		
10.1	For unpacked goods	R 12		17.1	Wet grinding mills (processing of ceramic, raw materials)	R 11	
10.2	For packed goods	R 11		17.2	Mixers; handling of materials like tar, pitch, graphite and synthetic resins	R 11	V 6
11	Sales outlets, shops			17.3	Presses (shaping); handling of materials like tar, pitch, graphite and synthetic resins	R 11	V 6
11.1	Reception of goods, meats			17.4	Casting / die casting areas	R 12	
11.1.1	For unpacked goods	R 11		17.5	Glazing areas	R 12	
11.1.2	For packed goods	R 10		18	Glass and stone processing		
11.2	Reception of goods, fish	R 11		18.1	Stone cutting, stone grinding	R 11	
11.3	Serving counters for meat and sausage			18.2	Glass moulding of hollow glass, container glass, structural glass	R 11	
11.3.1	For unpacked goods	R 11		18.3	Grinding areas for hollow glass ware, flat glass	R 11	
11.3.2	For packed goods	R 10		18.4	Insulating glass manufacture; handling of drying agents	R 11	V 6
11.4	Serving counters for bread, cakes and pastries, unpacked goods	R 10		18.5	Packaging, shipping of flat glass; handling of anti-adhesive agents	R 11	V 6
11.5	Serving counters for cheese and cheese products, unpacked goods	R 10		18.6	Etching and acid polishing facilities for glass	R 11	
11.6	Serving counters for fish			19	Cast concrete factories		
11.6.1	For unpacked goods	R 12		19.1	Concrete washing areas	R 11	
11.6.2	For packed goods	R 11		20	Storage rooms		
11.7	Serving counters from Nr.11.3 to 11.6	R 9		20.1	Storage areas for oils and fats	R 12	V 6
11.8	Meat preparation rooms			20.2	Storage areas for packed food	R 10	
11.8.1	For meat preparation, except for no.5	R 12	V 8	20.3	Outdoor storage areas	R 11 - R 10	V 4
				21	Chemical and thermal treatment of iron and metal		
				21.1	Pickling plants	R 12	
				21.2	Hardening shops	R 12	

VitrA slip resistance

Nr.	Working areas, walking corridors	Antislip groups (R classes)	Minimum collection space
21.3	Laboratory rooms	R 11	
22	Metal processing, metal workshops		
22.1	Galvanizing shops	R 12	
22.2	Grey cast iron processing	R 11	V 4
22.3	Mechanical processing areas (turnery, milling shop), punching room, pressroom, drawing shop (pipes, wires) and areas exposed to increased stress by oil and lubricants	R 11	V 4
22.4	Parts cleaning areas, exhaust steam areas	R 12	
23	Vehicle repair workshops		
23.1	Repair and servicing bays	R 11	
23.2	Working and inspection pits	R 12	V 4
23.3	Car washing halls, washing areas	R 11	V 4
24	Aircraft repair workshops		
24.1	Aircraft hangars	R 11	
24.2	Repair hangars	R 12	
24.3	Washing halls	R 11	V 4
25	Sewage treatment plants		
25.1	Pump rooms	R 12	
25.2	Rooms for sludge draining facilities	R 12	
25.3	Rooms for screening equipment	R 12	
25.4	Stands of workplaces, scaffolds and maintenance platforms	R 12	
26	Fire brigade buildings		
26.1	Vehicle parking places	R 12	
26.2	Rooms for hose maintenance equipment	R 12	
27	Functional rooms in the breathing apparatus training facility		
27.1	Preparation room	R 10	
27.2	Conditioning room	R 10	
27.3	Training room	R 11	
27.4	Air lock	R 10	
27.5	Mock-up dwelling	R 11	
27.6	Heat acclimatization room	R 11	
27.7	Control station	R 9	
28	Schools and day nurseries		
28.1	Class rooms, group rooms	R 9	
28.2	Stairs	R 9	
28.3	Toilets, washrooms	R 10	
28.4	Instructional kitchens in schools (also see no.9)	R 10	
28.5	Kitchens in kindergartens (also see no.9)	R 10	
28.6	Machine rooms for wood processing	R 10	
28.7	Special rooms for handicrafts	R 10	
28.8	Schoolyards	R 11 - R 10	V 4
29	Banks		
29.1	Bank counter	R 9	
30	Plant traffic routes in outdoor areas		
30.1	Footpaths	R 11 - R 10	V 4
30.2	Loading platforms		
30.2.1	Covered	R 11 - R 10	V 4
30.2.2	Not covered	R 12 - R 11	V 4
30.3	Sloping ramps (e.g. for wheel-chairs, loading platforms)	R 12 - R 11	V 4
30.4.1	Covered	R 11	
30.4.2	Not covered	R 12	
31	Parking areas		
31.1	Garages, multi-storey and underground car parks not subject to the effects of the weather	R 10	
31.2	Garages, multi-storey and underground car parks subject to the effects of the weather	R 11 - R 10	V 4
31.3	Parking areas outdoors	R 11 - R 10	V 4

1.2. Slip-resistance properties in barefoot areas

DIN 51097 (new version: EN 16165-Annex A) is the test method that is used for determining slip resistance of floor coverings in wet barefoot areas subject to risk of slipping. According to DIN 51097, there are three assessment groups on the basis of size and the risk of slipping in wet barefoot areas. The lowest slip resistance value is A, whereas the highest one is C for classification of barefoot slip resistance of tiles. In the following table of barefoot areas slip resistance classification, the application areas are indicated in accordance with the leaflet "DGUV Information 207-006 - Floor coverings for wet barefoot areas".

Wet barefoot areas slip resistance classification and application areas

Slip	Min. degree of slope	Areas
A	12°	<ul style="list-style-type: none"> - Barefoot passages and sanitary areas (mainly dry) - Individual and common dressing rooms - Pool floors in non-swimmer areas if the water depth is more than 80 cm in the entire area - Sauna and relaxation areas (mainly dry)
B	18°	<ul style="list-style-type: none"> - Barefoot passages and sanitary areas, if not classified in group A - Showers - Steam baths - Area of disinfecting spray facilities - Pool surrounds - Pool floors in non-swimmer areas if the water depth is less than 80 cm in certain areas - Non-swimmer sections of wave-action pools - Movable floors - Paddling pools - Ladders and stairs outside the pool area, if not classified in group C - Accessible surfaces of diving platforms and diving boards, if not classified in group C - Sauna and relaxation areas, if not classified in group A
C	24°	<ul style="list-style-type: none"> - Ladders and stairs leading into the water - Stairs up to diving facilities and water slides - Surfaces of diving platforms and diving boards over the length reserved for the diver (the slip-resistant surface of the diving platforms and diving boards must cover the front edge where the hands and the toes of the divers grip) - Walk-through pools - Inclined pool edge designs - Kneipp pools, water-treading pools - Ramps in the pool surround area with an inclination > 6 %

Important notice: The indicated angles of inclination helps to identify anti-slip classification of the product and cannot be related to the angles of inclination of slopes/ramps.

Headquarters

VitrA Karo San. ve Tic. A.Ş.

Büyükdere Cad. Ali Kaya Sok. No: 5
Levent, 34394 İstanbul
Phone: +90 (212) 350 80 00
Fax: +90 (212) 350 85 58

Regional offices

VitrA UK Ltd.

Park 34 Collet Way,
Didcot Oxon OX11 7WB, UK
Phone: +44 (1235) 750 990
Fax: +44 (1235) 750 985

VitrA Fliesen GmbH-Co. KG.

Brucknerstrasse 43
56566 Neuwied, Germany
Phone: +49 (2622) 7007-0
Fax: +49 (2622) 7007-60

VitrA Plitka LLC

142253, bld. 1, Bolshevik Settlement,
Serpukhov District, Moscow Region, Russia
Phone: +7 (496) 738 06 08
Fax: +7 (495) 520 78 76

vitraglobal.com

Attention

When ordering ceramic tiles specify the areas of use.
Before tile setting, verify the tonality and calibration numbers, claims regarding these indications cannot be accepted after tile setting.
Crazing of glass borders is a nature of the ceramic tiles.
It is recommended to use VitrA Fix grout and adhesive materials with VitrA Ceramic Tiles.
The colours of tiles in the catalogue may not reflect the exact colours of the products.
For the compatibility of the products to be used with complementary parts, a special order note should be added requesting the simultaneous production of all tiles. There may be a colour tone difference in products produced at different times.
VitrA Karo San. ve Tic. A.Ş. reserves the right to change the products and technical specifications.
For other technical details, please visit www.vitraglobal.com and review VitrA Cleaning and Maintenance Instructions and Warranty Conditions.

Flagship showrooms

VitrA Nişantaşı

Vali Konağı Cad. No: 24, Nişantaşı
Şişli, İstanbul
Phone: +90 (212) 233 07 78
Fax: +90 (212) 232 94 67

VitrA Suadiye

VitrA Suadiye (Cavit Paşa Köşkü)
Bağdat Cad. 493-1, Bostancı
Kadıköy, 34744 İstanbul
Phone: +90 (216) 467 06 40

VitrA Cologne

Agrippinawerft 24
D-50678 Köln, Cologne
Phone: +49 (221) 27 73 68-0
Fax: +49 (2622) 88 95 500

VitrA London

Unit 2
64 Turnmill Street
EC1M 5RR London
E-mail: london@vitra.co.uk

VitrA Moscow

Varshavskoe Highway, 9, Bld.1
“Danilovskaya Manufaktura” Office Center
117105 Moscow
Phone / Fax: +7 (495) 221 76 11

VitrA UAE

2020 Building – Al Quoz 3 Plot 27
Showroom No: 7 Sheikh Zayed Road –
Dubai/UAE
Phone: +971 (4) 547 8045

VitrA