

# Kerakoll® Laminates: revolutionary laying systems for safe and secure uncoupling, anti-cracking and waterproofing



“The technical and application limits of old uncoupling anti cracking systems have now been overcome by revolutionary Kerakoll® Laminates: the only product on the market to ensure perfectly prepared substrates even in the most extreme conditions.

Result: a safe, perfect, everlasting installation for all internal and external surfaces of all types and sizes”.



**KERAKOLL**  
The GreenBuilding Company

# Gel technology has given birth to Kerakoll® Laminates



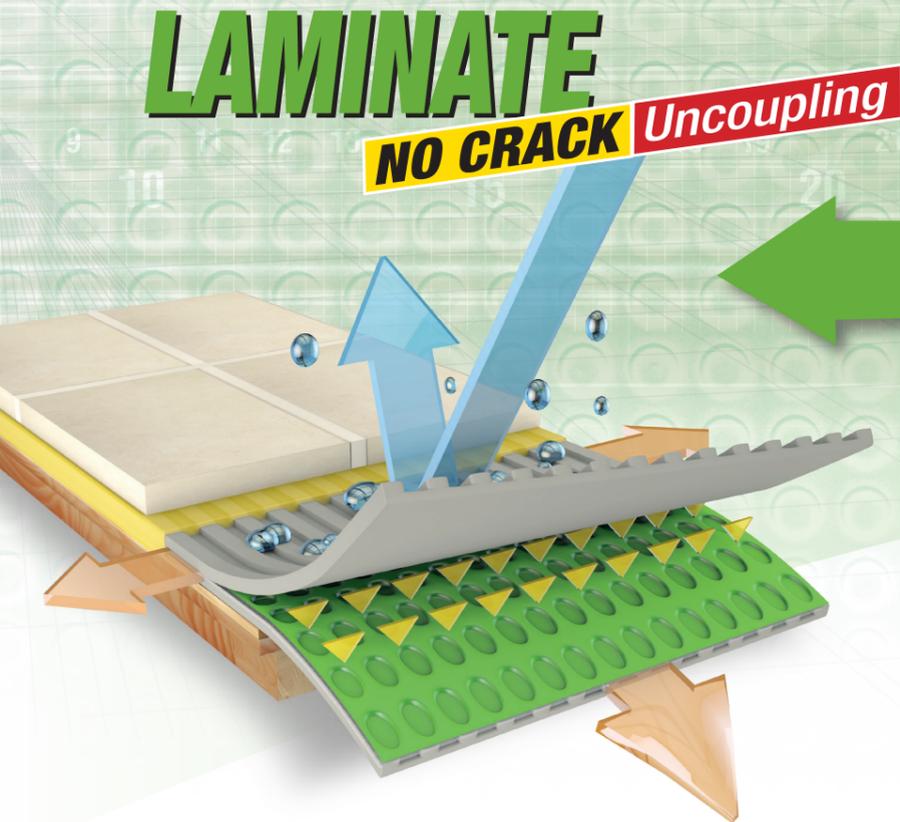
**GEL**<sup>®</sup>  
TECHNOLOGY

The 9 research laboratories within the futuristic **GreenLab Kerakoll** represent the world's most advanced technology centre for the study and development of new materials for green building sector.

The constraints of traditional laying products and systems have been overcome by the highly technical design of these polymer-based membranes which use advanced technology.

With **Green-Pro**, the new multi-layer anti-cracking composite membrane, laying becomes easy even under the most extreme conditions.

The revolutionary **Laminate No Crack** system is born from the combination of **Green Pro** waterproofing, uncoupling, anti-cracking membrane and **Biogel® Revolution** gel adhesive. It solves any laying problem and ensures perfect waterproofing guaranteed to keep your floor safe and secure.



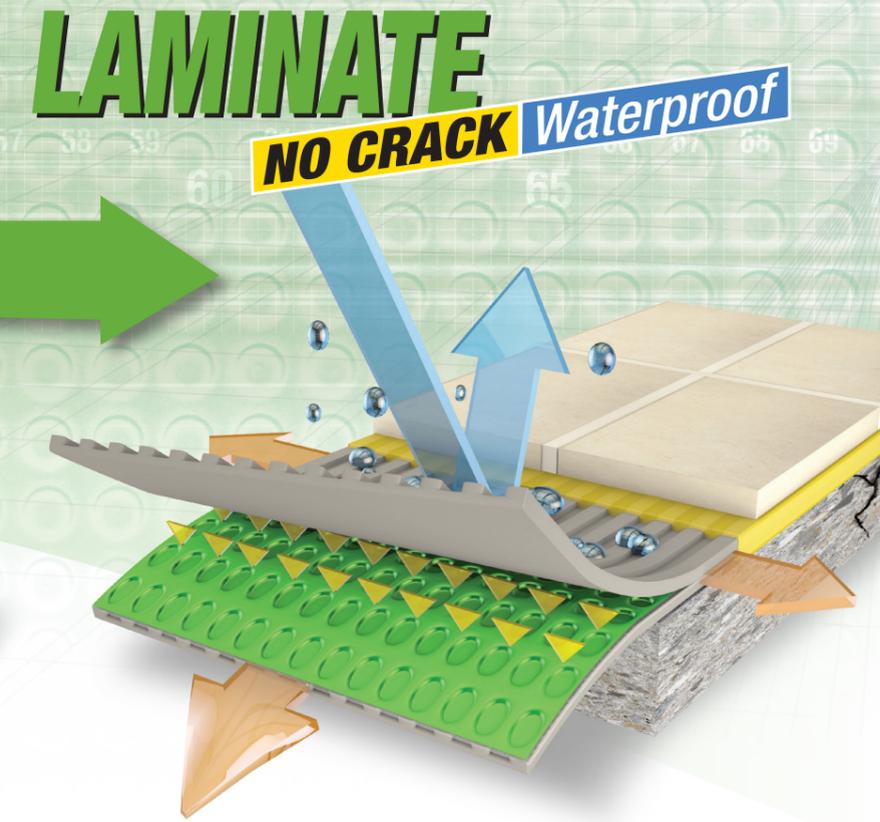
**BIOGEL® REVOLUTION  
GREEN-PRO**

THE GUARANTEED SOLUTION FOR  
**UNCOUPLING, ANTI-CRACKING  
LAYING OF TILES AND NATURAL  
STONE ON ANY KIND OF SUBSTRATE**



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THE GUARANTEED SOLUTION FOR  
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WATERPROOF LAYING OF ANY TYPE OF  
COATING ON ANY TYPE OF SUBSTRATE**



# The Green-Pro innovative membrane

## Green-Pro the 1<sup>st</sup> multi-layer, composite polymer-based membrane

**Green-Pro** is a Kerakoll laboratories' invention with the highest possible innovative and technological content: a multi-layer, un-coupling, anti-cracking composite polymer membrane that revolutionizes laying.

The high-density polyethylene central structure — the waterproof and deformable membrane core — can blend with the crystalline microstructure of the **Biogel® Revolution** gel adhesive thanks to the upper and lower layers which are specifically designed to allow total affinity with cement-based substrates and ceramic tiles.

**Laminate No Crack:** the definitive solution for laying on old or new, cracked and uncured substrates or substrates subject to dimensional movements or with vapour pressure caused by residual moisture.



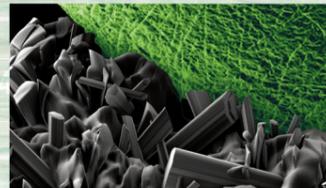
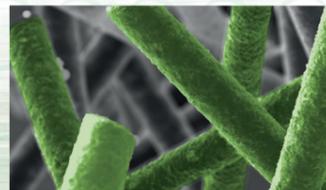
## Green-Pro secrets

The **Green-Pro** membrane is the result of innovative research aimed at optimizing the contact surfaces between the polymer membrane and **Biogel® Revolution** gel adhesive.

Kerakoll researchers devised a **three-dimensional reinforcing mesh**, composed of polyamide fibres with a predefined length, which have a calibrated nanometric roughness which ensures the development of physical-chemical bonds with the **Biogel® Revolution** gel adhesive.

The presence of the fibres guarantees an available contact surface equal to about **4.7 times** (+ 470%) that of the flat surface of the membrane; the adhesion values of the gel adhesive to the polymeric support increase enormously, guaranteeing extremely high performances and durability.

The fibres are also subjected to a specific **spry-dry polymeric treatment** to regulate the balance between hydrophobicity and hydrophilicity, both to reduce the circulation of rainwater and to allow the gel adhesive to complete the geo-binder hydration process and fully develop adhesion and cohesion properties.



## Green-Pro: 3 highly specialised layers



### PA - hydrophobic fibres

The upper layer in PA fibres guarantees adhesion to the **Biogel® Revolution** on the underlying layer; without fibres the adhesion values are much lower than the minimum requirements of standard EN 12004 (tile adhesives). The presence of the fibre layer allows the physical fusion of the **Biogel® Revolution** gel adhesive and the same durability performances that can be achieved on traditional substrates. The water-repellent treatment restricts the circulation of water under the tiles.



### HDPE - waterproof structure

The HDPE membrane bends to compensate for stress generated by expansion of the floor and hygrometric shrinkage of uncured substrates. The membrane compensates for cracks in the screed with movements of up to 1 mm. **Green-Pro** makes it possible to waterproof uncured screeds without fractioning/expansion joints: movement of screed due to hygrometric shrinkage is compensated by bending of the membrane. Elastic floor expansion joints can be created while avoiding unattractive cuts in the tiling scheme.

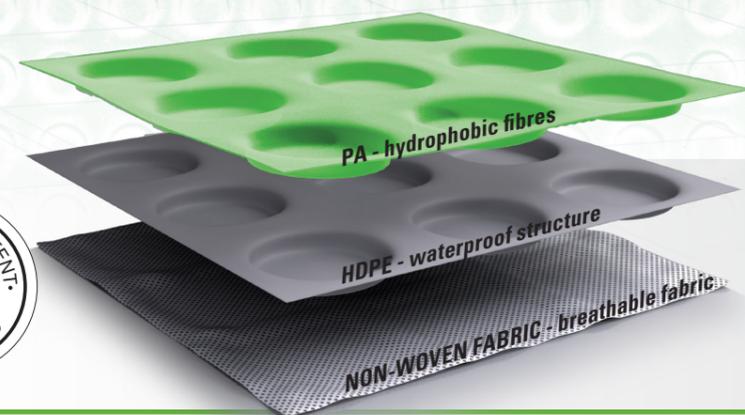


### NON-WOVEN FABRIC - breathable fabric

Working in concert with **Biogel® Revolution**, **Green-Pro** special non-woven fabric geo-textile guarantees perfect adhesion to the substrates and allows vapour to be dispersed into a network of channels not blocked by the adhesive. The channels, air space ensures the rapid dispersal of moisture and vapour from the substrate meaning it can be applied as early as 24 hours from the creation of the screed as long as it is capable of bearing foot traffic. This feature permits the application of **Green-Pro** even in the event of rain or rain showers during the hours preceding laying. Simply check that the surface is dry and free from standing water.

### EUROPEAN PATENT

The extremely high innovative content of **Green-Pro** is the subject of an industrial patent issued by the European Patent Office and valid in 36 designated European countries. The text of the patent includes the specific methods and materials used for the composite membrane, the relative geometries, the manufacturing technical innovations and, in particular, the characteristics of the exclusive PA fibres.



Green-Pro fibre layer.



Green-Pro compensates for expansion and shrinkage stress caused by the coating or the substrate.



The air space volume allows dispersion of vapour pressure from the substrate.

# How the LAMINATE No Crack was born

## LAMINATE NO CRACK

The structural fusion between the Green-Pro membrane and the gel adhesive creates an extremely innovative system giving high anti-cracking, waterproofing, shear adhesion and durability: **Laminate No Crack**.

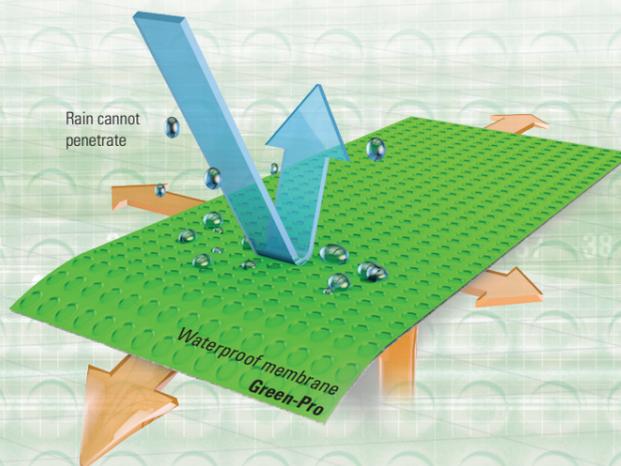
**Laminate No Crack** allows critical issues in substrates to be overcome before fixing the tiles. The system's anti-cracking deformation physically interrupts stress transmission between substrate and floor, thus guaranteeing the adhesion of the floor and the durability of the installation.

Kerakoll has always been on the side of the installer, offering innovative solutions to building site problems to make the job easier and safer.



### 1. IT IS A TRICOMPOSED MEMBRANE

The **Green-Pro** polymer membrane is the technological core of **Laminate No Crack**.



#### ANTI-CRACKING - NO JOINTS

*Laminate No Crack is capable of compensating for hygrometric shrinkage of the screeds (movements  $\leq 1$  mm); this means it is possible to lay the membrane even on uncured screeds and/or on screeds without a suitable network of fractionising joints.*

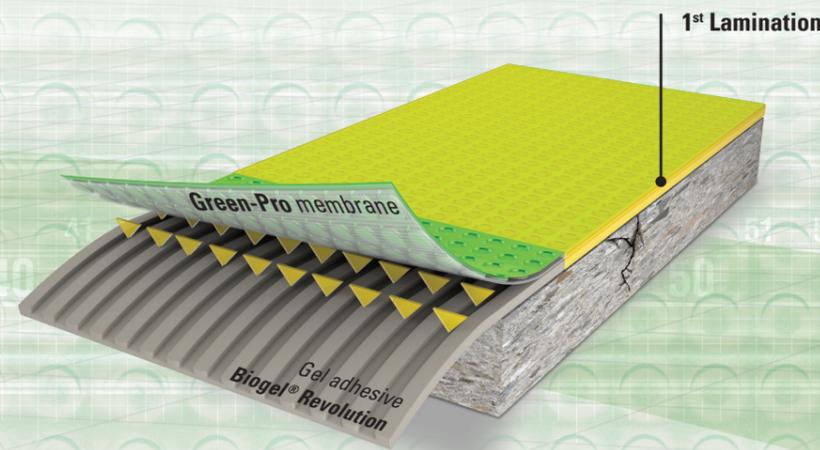
*In the case of fractured screeds or floors or those with a network of fractionising joints, application of the membrane means that the laying pattern of the new flooring is not bound by the layout of the joints in the substrate.*



**Green-Pro** is the result of innovative design aimed at the optimization of contact surfaces: a three-dimensional reinforcing mesh system composed of polymer fibres and a special non-woven fabric; surfaces specifically designed for structural adhesion with the **Biogel® Revolution** gel adhesive used for the laying of the membrane and the subsequent bonding of the coating.

### 2. IT IS A GEL ADHESIVE

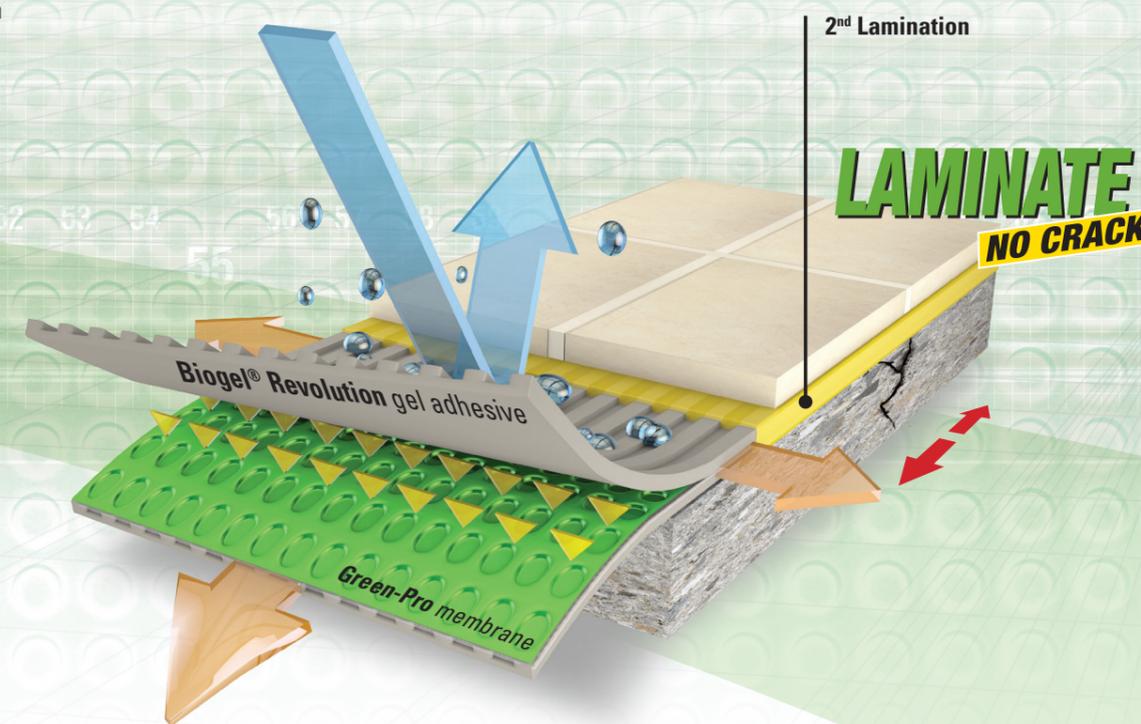
The high-performance **Biogel® Revolution** gel adhesive applied on the **Green-Pro** membrane creates **Laminate No Crack**.



**Biogel® Revolution's** fluid and thixo consistency with total wettability ensures maximum structural adhesion of the non-woven fabric of the **Green-Pro** membrane creating the 1<sup>st</sup> lamination layer. When the tiles are laid the gel adhesive captures and envelopes the fibres of the three-dimensional reinforcing mesh, generating the 2<sup>nd</sup> lamination through selective bonds with extremely high shear adhesion, which produce a physical-mechanical structural fusion: this is how the new **Laminate No Crack** is born.

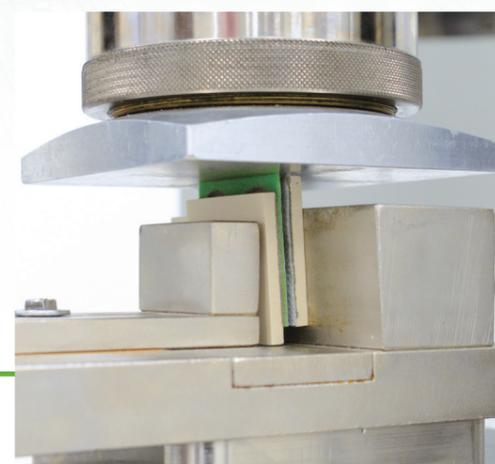
### 3. IT IS AN INNOVATIVE TECHNOLOGY

Unlike the old uncoupling anti-cracking systems, **Laminate No Crack** creates a single body with no stresses between the substrate and the coating, ensuring shear adhesion and cohesion performances never achieved before. The revolutionary **Laminate No Crack** guarantees the safety of uncoupling, anti cracking, waterproof laying vapour releasing even in the most extreme weather conditions.



### 4. IT IS SAFE AND SECURE

All surfaces created with **Laminate No Crack** technology are tested to make your floor secure.



# LAMINATE No Crack Uncoupling



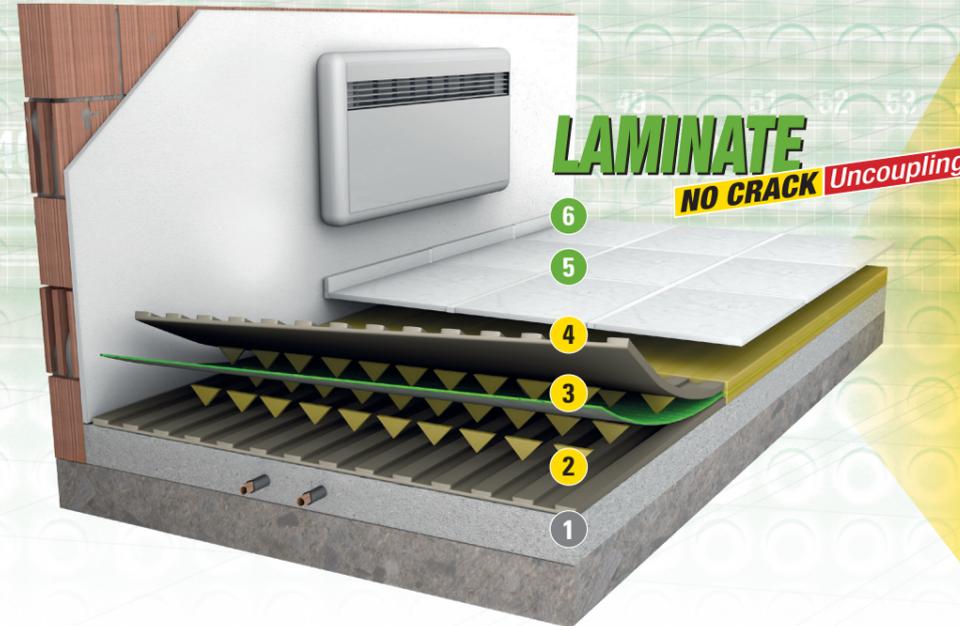
**LAMINATE**  
**NO CRACK Uncoupling**  
 FOR UNCOUPLING, ANTI-CRACKING,  
 LAYING ON ALL SURFACES

**UNCOUPLING, ANTI-CRACKING, HIGH-ADHESION AND SUPERIOR DURABILITY LAYING SYSTEM WHICH GUARANTEES IMMEDIATE LAYING OF CERAMIC TILES AND NATURAL STONES EVEN ON CRACKED SUBSTRATES THAT MAY CONTAIN VAPOUR PRESSURE DUE TO RESIDUAL SUBSTRATE MOISTURE CONTENT.**

Laminate No Crack Uncoupling is the safest laying system for any surface, old or new, damp or dry, cracked or subject to dimensional movements. It allows for immediate laying with Biogel® Revolution gel adhesive, giving extremely high shear strength whatever the laying pattern, with no need to respect the substrate's joints, thermo technical joints, and cancelling out fissures and cracks in the substrate.



- Specifically for cancelling out cracks, joints and chases in the substrates
- It compensates for hygrometric shrinkage stress in uncured substrates
- Allows any laying design
- Practical and fast, immediately accessible to foot traffic



## IDEAL FOR:

### UNDERFLOOR HEATING SYSTEMS

The Green-Pro membrane is ideal for **heated floors** of any kind as it promotes heat diffusion without reducing the yield of the system. The EN 1264-3 Standard indicates to consider a minimum thermal resistance value of 0.10 m<sup>2</sup> K/W for all the elements except to use the characteristic value when it is higher (higher resistance). The thermal resistance of Green-Pro is **0.030 m<sup>2</sup> K/W** (Istituto Giordano test report 268740) therefore not influential for sizing (it **does NOT reduce the passage of heat**).



### HEAVY TRAFFIC

Laminate No Crack coated with 10-mm thick porcelain tiles achieves extremely high mechanical performance and can be used for commercial and industrial uses even in the presence of high-impact, **extremely heavy loads** having passed the strictest resistance test to dynamic stress (Robinson Test) according to ASTM Standard C 627 (Floor Tiling Guide classification).



6	<b>Fugabella® Eco Silicone</b> Eco-friendly, silicone, acetic, anti-mould organic sealant with a high level of elasticity for expansion-deformation joints, ideal for use in GreenBuilding.	
5	<b>Fugabella® Eco Flex</b> Certified, eco-friendly, naturally bacteriostatic and fungistatic, rapid setting and hardening mineral grout stabilized with pure NHL 5 natural lime mortar for extremely colour-fast joints from 2 mm to 12 mm in thickness, ideal for use in GreenBuilding.	
4	<b>Biogel® Revolution</b> Multi-purpose flexible structural gel adhesive. Longer workability with accelerated adhesion for bonding even in extreme conditions of all types of material, on any substrate for any use. Eco-friendly. Ideal for use in GreenBuilding.	
3	<b>Green-Pro</b> Uncoupling and anti-cracking waterproof membrane with high adhesion for balconies, terraces and horizontal surfaces before laying ceramic tiles or natural stone; creates a waterproof surface even when overlaid on substrates that are cracked, have not been perfectly cured or might contain vapour pressure due to residual substrate moisture content.	
2	<b>Biogel® Revolution</b> Multi-purpose flexible structural gel adhesive. Longer workability with accelerated adhesion for bonding even in extreme conditions of all types of material, on any substrate for any use. Eco-friendly. Ideal for use in GreenBuilding.	
1	<b>Keracem® Eco</b> Certified, eco-friendly, hydraulic, normal-setting and rapid-drying mineral binder for high-performance screeds and heat-radiant slabs, ideal for use in GreenBuilding.	

# LAMINATE No Crack Waterproof



## LAMINATE NO CRACK Waterproof

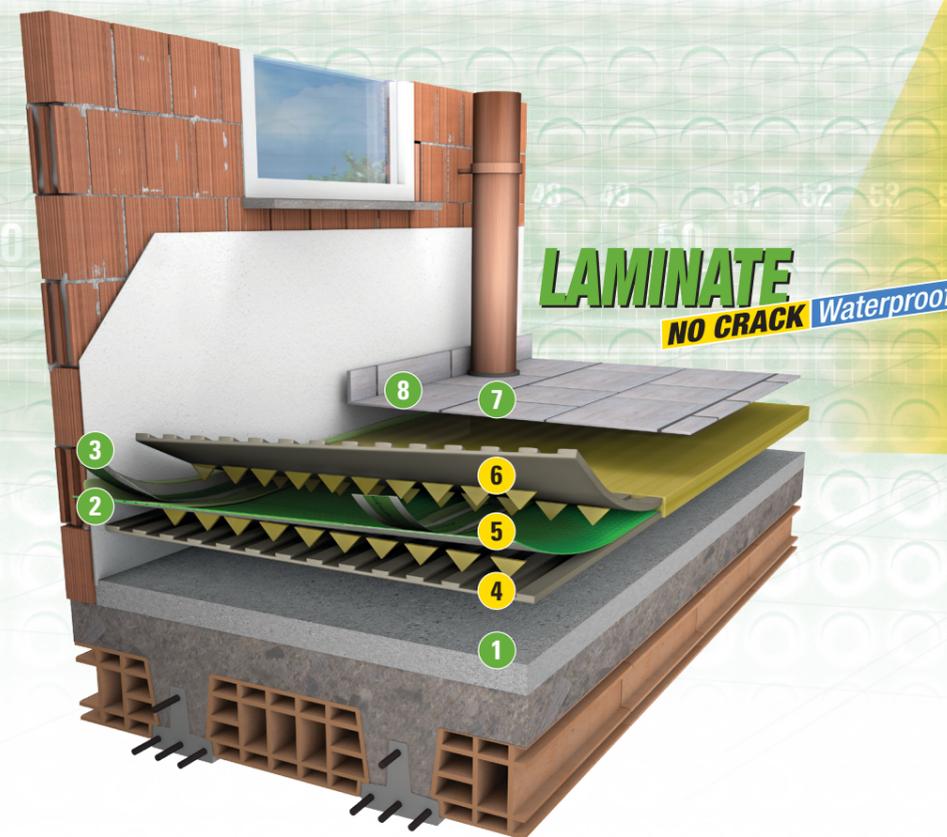
FOR ANTI-CRACKING WATERPROOF LAYING ON ALL SURFACES

**UNCOUPLING, ANTI-CRACKING, HIGH-ADHESION AND SUPERIOR DURABILITY WATERPROOFING SYSTEM WHICH GUARANTEES IMMEDIATE LAYING OF CERAMIC TILES AND NATURAL STONES EVEN ON CRACKED SUBSTRATES THAT MAY CONTAIN VAPOUR PRESSURE DUE TO RESIDUAL SUBSTRATE MOISTURE CONTENT.**

Laminate No Crack Waterproof is the safest system for waterproofing balconies, terraces and external surfaces of any size, old or new, damp or dry, cracked or subject to dimensional movements, allowing for an installation with very high shear strength using Biogel® Revolution gel adhesive with any laying pattern, without respecting the joints of the substrate.



- Specifically for waterproof laying on uncured or not perfectly dry substrates
- Separates the flooring layers
- Practical and fast, immediately accessible to foot traffic



### IDEAL FOR:

#### DAMP SUBSTRATES

Waterproofing substrates with high residual humidity is a risk that the installer often has to take in outdoor settings; in fact, curing times and sudden changes in the weather mean having to waterproof over-damp substrates. Laying of Laminate No Crack Waterproof can be carried out on cement-based screeds as soon as sufficient mechanical performance is achieved for foot traffic and subsequent operations. In the event of rain showers during the hours preceding laying, simply check that the surface is dry and free from standing water.



#### IMMEDIATELY WALKABLE

The Green-Pro structure allows immediate foot traffic avoiding mandatory laying patterns; all site activities can continue freely, avoiding costly job interruptions and helping installers to save time.



8	<b>Fugabella® Eco Silicone</b> Eco-friendly, silicone, acetic, anti-mould organic sealant with a high level of elasticity for expansion-deformation joints, ideal for use in GreenBuilding.	
7	<b>Fugabella® Eco Flex</b> Certified, eco-friendly, naturally bacteriostatic and fungistatic, rapid setting and hardening mineral grout stabilized with pure NHL 5 natural lime mortar for extremely colour-fast joints from 2 mm to 12 mm in thickness, ideal for use in GreenBuilding.	
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3	<b>Aquastop 120</b> Flexible NBR waterproof joint for perimeter and fractionizing joints in waterproofing systems. For use under ceramic and porcelain tiles and natural stone. Bonds directly on application.	
2	<b>Aquastop Fix</b> Certified, eco-friendly, mineral sealant for water-resistant, high-adhesion sealing, ideal for use in GreenBuilding.	
1	<b>Keracem® Eco</b> Certified, eco-friendly, hydraulic, normal-setting and rapid-drying mineral binder for high-performance screeds and heat-radiant slabs, ideal for use in GreenBuilding.	

# Kerakoll® Laminates tested to make your floor secure



**LAMINATE**  
**NO CRACK** **Uncoupling**

FOR UNCOUPLING ANTI-CRACKING  
LAYING ON ALL SURFACES



**LAMINATE**  
**NO CRACK** **Waterproof**

FOR UNCOUPLING ANTI-CRACKING AND  
WATERPROOF LAYING ON ALL SURFACES



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