

Biogel® Extreme®

Highly deformable and workable, hybrid gel adhesive, bonds everything and is tested under the most extreme working conditions. Ideal for use in GreenBuilding.



GREENBUILDING RATING®

Biogel® Extreme®
 - Category: Organic Mineral products
 - Laying ceramic, porcelain tiles and natural stone

rating 2

RATING SYSTEM ACCREDITED BY CERTIFICATION BODY SGS

PRODUCT STRENGTHS

- VERY FAST BONDING**
Adhesive strength 5 times superior to a class C2 (4.5 N/mm²) cement-based adhesive after 24 hours
- STRESS RESISTANT**
10 times more deformable than a class S2 (> 50 mm) cement-based adhesive
- EASY TO SPREAD**
5 times less viscous than a (35 Pa·s) polyurethane adhesive, transforms into a smooth gel like a cement-based adhesive

- Long open time
- Shape memory
- Water resistant
- High and low thickness
- Maximum deformability
- Full wettability
- No shrinkage
- Structural adhesion
- Distributes tensile strength
- Increases resistance
- Transfers the forces
- Absorbs dynamic loads
- Eliminates the risk of frost



ECO NOTES

- Improved on-site safety guaranteed as it is non-toxic and non-hazardous
- Made from solvent-free organic raw materials

AREAS OF USE

Use

Substrates Extreme:

- Existing tiles
- Heating systems
- Cement-based screeds
- Asphalt screeds
- Concrete
- Plasterboard
- Fibro-cement slabs
- Gypsum and anhydrite
- Cellular concrete
- Brick
- Lime and cement-based plasters/renders
- Thermal insulation panelling systems
- Impact noise insulation sheets
- Cracked screeds
- Uncured damp screeds
- Wood – metal – sheet metal
- Rubber floors – PVC
- High-thickness coatings in epoxy and polyurethane resin

Materials Extreme:

- Porcelain tiles
- Laminated stoneware
- Porcelain tile with resin back
- Very large formats
- Low thickness slabs
- Ceramic tiles
- Marble - natural stone
- Marble with resin back
- Recomposed materials
- Cement-based recomposed materials
- Glass mosaics
- Glass tiles
- Thermal and acoustic insulation
- Terracotta - klinker
- Metal tiles

Uses Extreme:

- Adhesive and finishing
- Interior waterproofing product
- Floors and walls
- For internal use - external
- Overlaying
- Terraces and balconies
- Façades
- Swimming pools and fountains
- Saunas and spa
- Domestic
- Commercial
- Industrial
- Street furniture

* ÉMISSION DANS L'AIR INTÉRIEUR Information sur le niveau d'émission de substances volatiles dans l'air intérieur, présentant un risque de toxicité par inhalation, sur une échelle de classe allant de A+ (très faibles émissions) à C (fortes émissions).

INSTRUCTIONS FOR USE

Preparation of the substrate

All the substrates must be flat, compact, free from with no loose flaky parts, resistant, free from any debonding agents, dust and moisture rising.

It is best to apply a coat of diluted Primer A Eco on very absorbent cement-based substrates.

Adhesive preparation

Single Pack: Part B is found inside the pack.

Respect the preset ratio of 8.6 : 1.4.

Remix part B into the bucket containing part A, being careful to mix the two parts uniformly until a smooth, even coloured mixture is obtained.

The containers of Biogel® Extreme® must be stored at a temperature of $\approx +20\text{ }^{\circ}\text{C}$ for at least 2 – 3 days prior to use.

Application

Biogel® Extreme® can be applied with a suitable toothed spreader, to be chosen according to the size and type of the tile. Using the smooth part of the spreader, apply a fine layer of product, pressing down onto the substrate in order to ensure maximum adhesion. Press down each tile to allow for maximum coverage of the surface.

To guarantee structural adhesion it is necessary to apply a layer of adhesive sufficient to cover the entire back of the coating material. Large, rectangular sizes with sides $> 60\text{ cm}$ and low thickness sheets may require adhesive to be applied directly to the back of the material.

Check samples to make sure the adhesive has been transferred to the back of the material.

Create elastic expansion joints:

- $\approx 10\text{ m}^2$ in external applications,

- $\approx 25\text{ m}^2$ in internal applications,

- every 8 metres in long, narrow applications.

Respect all structural, fractionizing and perimeter joints present in the substrates.

Cleaning

Clean the tools and any residues of Biogel® Extreme® from the coated surfaces using water while the adhesive is still fresh. Once hardened, the adhesive can only be removed mechanically or using Fuga-Shock Eco cleaner.

SPECIAL NOTES

Pre-treatment of special substrates

Timber thickness $\geq 25\text{ mm}$: Keragrip Eco Pulep

Metal and sheet metal: Keragrip Eco Pulep

Gypsum and anhydrite (internal use only): EP21

PVC and rubber: Keragrip Eco Pulep

As treating special substrates is difficult to classify in a standard manner, it is always advisable to contact Kerakoll Global Service and/or request a site inspection by a GreenBuilding Consultant. In any case it is essential to carefully read the technical data sheet on how to use the indicated primers properly.

Materials and special substrates

Marble–natural stones and recomposed materials: the materials subjected to high deformation or staining due to water absorption need a reactive adhesive such as Biogel® Extreme®. Marble and natural stone in general may have characteristics that vary even with reference to materials of the same chemical and physical nature. For this reason it is essential you consult Kerakoll Global Service to request specific indications or to carry out a test on a sample of the material. Check for the presence of any really consistent traces of rock dust created during cutting, and remove them if found.

Special substrates: adherent and floating polymer sheets, liquid bitumen and tar-based sheets or membranes require application of a laying screed on top.

Special applications

Façades: the substrate should guarantee a cohesive tensile strength of $\geq 1.0\text{ N/mm}^2$.

The need to call for suitable mechanical safety anchoring must be evaluated by the designer for coverings with $> 30\text{ cm}$ side.

Always apply a layer of adhesive directly on the back of the material (per India tile/stone).

In insulation panelling systems, carry out a reinforced plaster/render cycle, mechanically fixed to the substrate, with a minimum thickness of 10 mm.

Ready for early use: product will be ready for early use adding a 160 g packaging of Factory Epofast to each 10 kg packaging of Biogel® Extreme® (1 pack. : 1 pack. ratio). If subject to heavy traffic, the product will be ready for use after $\approx 6\text{-}16\text{ hrs}$ ($+23\text{ }^{\circ}\text{C}$ / $+5\text{ }^{\circ}\text{C}$).

TECHNICAL DATA COMPLIANT WITH KERAKOLL QUALITY STANDARD

Shelf life	≈ 24 months in the original packaging in dry environment. Protect from frost.
Pack	monopack 10 kg (8,6 +1,4 kg)
Mixing ratio	Part A : Part B = 8.6 : 1.4
Adhesive thickness	from 2 to 15 mm
Temperature of the air, substrates and materials	from +5 °C to +35 °C
Pot life:	
- +23 °C	≈ 110 min.
- +35 °C	≈ 80 min.
Open time (BIII tile):	
- +23 °C	≈ 180 min.
- +35 °C	≈ 90 min.
Correction time (BIII tile):	
- +23 °C	≥ 120 min.
- +35 °C	≥ 60 min.
Foot traffic/grouting of joints (BIIa tile):	
- +23 °C	≈ 4 hrs
- +5 °C	≈ 15 hrs
Ready for use at +23 °C / +5 °C (BIIa tile)	
- light foot traffic	≈ 6 – 20 hrs
- heavy traffic*	≈ 12 – 24 hrs
- swimming pools (+23 °C)	≈ 3 days
Coverage per mm of thickness	≈ 1.45 kg/m ²

Values taken at +23 °C, 50% R.H. and no ventilation. Data may vary depending on specific conditions at the building site, i.e. temperature, ventilation and absorbency level of the substrate and of the materials laid.

* see section Special notes to reduce timing.

PERFORMANCE

HIGH-TECH

Shear adhesion after 7 days	≥ 7.5 N/mm ²	EN 12004-2
Shear adhesion after water immersion	≥ 5 N/mm ²	EN 12004-2
Shear adhesion after thermal shock	≥ 5.5 N/mm ²	EN 12004-2
Shear adhesion after immersion in chlorine water	≥ 3 N/mm ²	EN 12004-2

ADHESION TEST ACCORDING TO EN 12004 FOR CLASS C (CEMENT BASED) ADHESIVES

Tensile adhesion (concrete/porcelain tile):		
- after 6 hrs	≥ 2.4 N/mm ²	EN 12004-2
- after 28 days	≥ 4.5 N/mm ²	EN 12004-2
Durability test:		
- adhesion after heat ageing	≥ 4 N/mm ²	EN 12004-2
- adhesion after water immersion	≥ 2.5 N/mm ²	EN 12004-2
- adhesion after freeze-thaw cycles	≥ 2 N/mm ²	EN 12004-2
- adhesion after straining cycles	≥ 2 N/mm ²	SAS Technology
Transversal deformation	≥ 50 mm	EN 12004-2
Working temperature	from -40 °C to +90 °C	

Values taken at +23 °C, 50% R.H. and no ventilation. Data may vary depending on specific conditions at the building site.

WARNING

- **Product for professional use**
- abide by any standards and national regulations
- do not use the adhesive to correct substrate irregularities greater than 15 mm
- protect against direct rain for at least 12 hrs
- the temperature, ventilation and absorption of the substrate and covering materials, may vary the adhesive workability and setting times
- use the right size of toothed spreader for the format of the tile or slab
- for laying on cement-polymer waterproofing coverings, check the suitability on the producer's technical data sheet
- do not use in contact with polystyrene (Styrofoam, EPS, XPS, etc...), even if smoothed
- guarantee a full-bed in all external laying operations
- if necessary, ask for the safety data sheet
- for any other issues, contact the Kerakoll Worldwide Global Service - info@kerakoll.ae

The Rating classifications refer to the GreenBuilding Rating® Manual 2012. This information was last updated in December 2019 (ref. GBR Data Report - 12.19); please note that additions and/or amendments may be made over time by KERAKOLL SpA, for the latest version, see www.kerakoll.com. KERAKOLL SpA shall therefore be liable for the validity, accuracy and updating of information provided only when taken directly from its institutional website. The technical data sheet given here is based on our technical and practical knowledge. As it is not possible for us to directly check the conditions in your building yards and the execution of the work, this information represents general indications that do not bind Kerakoll in any way. Therefore, it is advisable to perform a preliminary test to verify the suitability of the product for your purposes.