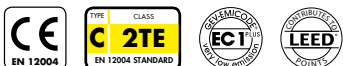


# Bioflex®

Eco-friendly mineral adhesive with an extremely low chemical additive content for high performance bonding with no vertical slip and long open time, for porcelain tiles, ceramic tiles and natural stone. Ideal for use in GreenBuilding.



**GREENBUILDING RATING®**

**Bioflex®**  
 - Category: Inorganic mineral products  
 - Laying ceramic, porcelain tiles and natural stone

**rating3**

- Natural mineral content: Grey 62%, White 61%
- Very low VOC emissions
- Can be recycled as inert material

RATING SYSTEM ACCREDITED BY CERTIFICATION BODY SGS

**PRODUCT STRENGTHS**

- WITH MINERAL BENTONITE**  
 Bioflex® contains exclusive mineral bentonite which, on contact with the mixing water, transforms into a highly thixotropic adhesive, maintaining shape and thickness under the tile and guaranteeing unbeatably smooth spreading.
- WITH NATURAL NHL LIME**  
 Bioflex® contains mineral cement improved with natural nhl lime, which gives the mix greater plasticity and slide. It prevents thickening in the bucket and reduces the use of chemical additives.
- WITH PLANT LATEX**  
 Bioflex® contains ingredients of plant origin that improve workability and open time. Bioflex® has an extremely low chemical additive content and does not emit dangerous substances and unpleasant odours.

**ECO NOTES**

- Formulated with locally-sourced minerals meaning lower greenhouse gas emission during transportation
- The white version contains recycled minerals thereby reducing the damage to the environment caused by extracting primary raw materials
- Single-component; avoiding the use of plastic cans reduces CO<sub>2</sub> emissions and the need to dispose of special waste

**AREAS OF USE**

**Use**

**Substrates:**

- Cement-based screeds and mortars
- Anhydrite screeds
- Cement-based and gypsum renders/plasters
- Cellular concrete, for internal use
- Plasterboard
- Heated floors
- Waterproofing products
- To overlay existing floors
- Fibro-cement slabs

**Materials:**

- Ceramic tiles
- Porcelain tiles
- Terracotta
- Klinker
- Marble and natural stone
- Various mosaics
- Internal insulating and soundproofing panels

**Uses:**

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

## INSTRUCTIONS FOR USE

### Preparation of the substrate

Substrates must comply with BS 5385, parts 1-5, be level, cured, undamaged, compact, rigid, resistant, dry and free from any debonding agents and from damp rising. It is good practice to dampen highly absorbent concrete substrates or apply a coat of Primer A Eco. Anhydrite substrates must have a residual humidity  $\leq 0,5$  CM-%. Cement-based screeds must have a residual humidity  $\leq 2$  CM-%. Anchored substrates must comply with BS 8204 and anhydrite must have a residual humidity  $\leq 0,3$  CM-%.

### Adhesive preparation

Mixing water (EN 1348):

- Grey  $\approx 25,5\% - 28,5\%$  by weight  
- White  $\approx 27 - 30\%$  by weight

Mixing water on-site

- Grey  $\approx 5.4$  l/1 bag  
- White  $\approx 5.7$  l/1 bag

The amount of water to be added, indicated on the packaging, is an approximate guide. It is possible to obtain mixtures with consistency of variable thixotropy according to the application to be made.

### Application

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  $> 60$  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:

- $\approx 10$  m<sup>2</sup> in external applications,
- $\approx 25$  m<sup>2</sup> in internal applications,
- every 8 metres in long, narrow applications.

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

## SPECIAL NOTES

### Pre-treatment of special substrates

Gypsum-based plasters/renders, anhydrite screeds and cellular concrete, for internal use: Primer A Eco

Vinyl sheets for interior use: Keragrip Eco

*Please see the technical data sheet on how to use the Primers properly.*

### Materials and special substrates

**Marble and natural stone:** materials that are subject to deformation or staining due to water absorption require a quick-setting or reactive adhesive.

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.

In the absence of specific indications from the manufacturer, natural stone slabs with reinforcement layers, in the form of resin coating, polymer mesh, matting, etc. or treatments (for example damp courses, etc.) applied on the laying surface must be tested in advance to ensure they are compatible with the adhesive.

Check for the presence of any really consistent traces of rock dust created during cutting, and remove them if found.

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

### Special applications

Insulating and soundproofing panels applied using spot adhesion as recommended by the manufacturers.

Plasterboard and fibro-cement slabs must be firmly anchored to specific metal frames.

### Do not use

On timber, metal, plastic or resilient materials, deformable substrates or subject to vibrations.

On screeds, plasters/renders, concrete not yet cured and affected by important drying shrinkage.

On organic-based waterproofing products (such as RM according to EN 14891).

On smooth prefabricated concrete.

## TECHNICAL DATA COMPLIANT WITH KERAKOLL QUALITY STANDARD

Shelf life	$\approx 12$ months in the original packaging in dry environment. Protect from humidity
Pack	20 kg
Adhesive thickness	from 2 to 15 mm
Temperature of the air, substrates and materials	from $+5$ °C to $+35$ °C
Pot life at $+23$ °C	
- Grey	$\approx 4$ hrs
- White	$\approx 5$ hrs
Open time at $+23$ °C (BIII tile):	
- Grey	$\geq 60$ min. EN 1346
- White	$\geq 40$ min. EN 1346

## TECHNICAL DATA COMPLIANT WITH KERAKOLL QUALITY STANDARD

<b>Open time at +35 °C (BIII tile):</b>		
- Grey	≥ 20 min.	EN 1346
- White	≥ 20 min.	EN 1346
<b>Time required until fully frost-proof (BIIa tile)</b>		
- from +5 °C to -5 °C	≈ 8 hrs	
<b>Foot traffic/grouting of joints at +23 °C (BIIa tile):</b>		
- Grey	≈ 16 hrs	
- White	≈ 16 hrs	
<b>Foot traffic/grouting of joints at +5 °C (BIIa tile):</b>		
- Grey	≈ 40 hrs	
- White	≈ 50 hrs	
<b>Grouting in walls at +23 °C (BIIa tile)</b>		
- Grey	≈ 12 hrs	
- White	≈ 12 hrs	
<b>Ready for use at +23 °C / +5 °C (BIIa tile)</b>		
- light foot traffic	≈ 2 – 3 days	
- heavy traffic	≈ 3 – 7 days	
- swimming pools (+23 °C)	≈ 14 days	
<b>Coverage per mm thickness:</b>		
- Grey (mixing ratio 27%)	≈ 1.35 kg/m <sup>2</sup>	
- White (mixing ratio 28%)	≈ 1.25 kg/m <sup>2</sup>	

*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.*

## PERFORMANCE

<b>VOC INDOOR AIR QUALITY (IAQ) - VOLATILE ORGANIC COMPOUND EMISSIONS</b>		
Conformity	EC 1 plus GEV-Emicode	GEV certified 4616/11.01.02
<b>HIGH-TECH</b>		
Shear adhesion (porcelain tiles/porcelain tiles) after 28 days	≥ 1 N/mm <sup>2</sup>	ANSI A-118.1
Tensile adhesion (concrete/porcelain tiles) after 28 days	≥ 2 N/mm <sup>2</sup>	EN 1348
<b>Durability test:</b>		
- adhesion after heat ageing	≥ 1 N/mm <sup>2</sup>	EN 1348
- adhesion after water immersion	≥ 1 N/mm <sup>2</sup>	EN 1348
- adhesion after freeze-thaw cycles	≥ 1 N/mm <sup>2</sup>	EN 1348
Working temperature	from -30 °C to +80 °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 from direct rainfall for at least 24 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
- 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 01772 456 831 - info@kerakoll.co.uk

The Rating classifications refer to the GreenBuilding Rating® Manual 2012. This information was last updated in April 2020 (ref. GBR Data Report - 05.20); 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.