# BIOFLEX®


Grey

White SHOCK formula

eco4®

eco5®

**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.**

## FEATURES AND ADVANTAGES

### 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

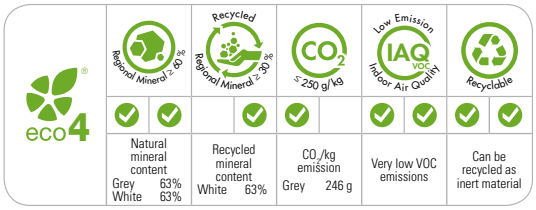
**BIOFLEX® CONTAINS MINERAL CEMENT IMPROVED WITH NATURAL NHL LIME, WHICH GIVES THE MIX GREATER PLASTICITY AND SLIDE. IT PREVENTS THICKENING IN THE BUCKET AND REDUCES THE USE OF CHEMICAL ADDITIVES.**

### 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.**

## GREENBUILDING RATING®

- Category: Inorganic mineral products
- Laying ceramic tiles and natural stone
- Rating: Eco 4




RATING SYSTEM ACCREDITED BY CERTIFICATION BODY SGS

- The GreenBuilding Rating® is a dependable and reliable evaluation method for measuring and improving the environmental performance of building materials.

## 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 $CO_2$ emissions and the need to dispose of special waste

## COMPLIANCE AND CERTIFICATIONS

| CE 1599 0407 | **KERAKOLL S.p.A.** Via dell'Artigianato, 9<br>41049 Sassuolo - MO - Italy - www.kerakoll.com |
|---|---|
| 13<br>DoP n° 0208<br>EN 12004:2007+A1:2012<br>BIOFLEX<br>Improved cementitious adhesive for all internal and external tiling | |
| **Reaction to fire** | Class A1 |
| **Bond strength, as:**<br>initial tensile adhesion strength | ≥ 1,0 N/mm² |
| **Durability, for:**<br>tensile adhesion strength after heat ageing<br>tensile adhesion strength after water immersion<br>tensile adhesion strength after freeze/thaw cycles | <br>≥ 1,0 N/mm²<br>≥ 1,0 N/mm²<br>≥ 1,0 N/mm² |
| **Release of dangerous substances** | See SDS |

TYPE C — CLASS 2TE — EN 12004 STANDARD

GEV-EMICODE EC 1 PLUS very low emission

CO2eq Carbon Footprint

CONTRIBUTES TO LEED POINTS

00714Bioflex® Code: P888 2018/08-UK

# MATERIALS and SUBSTRATES

The combination of substrates, materials and uses indicated may not always be possible to achieve. It is essential that you consult the individual product technical sheets to check their suitability. Anything that is not foreseen in this list must be requested directly from Kerakoll Global Service.

## 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**
**INSULATING AND SOUNDPROOFING PANELS**

## USES

**ADHESIVE AND FINISHING**
**FLOORS AND WALLS**
**INTERNAL USE – EXTERNAL USE**
**OVERLAYING**
**TERRACES AND BALCONIES**
**SWIMMING POOLS AND FOUNTAINS**
**SAUNAS AND SPA**
**DOMESTIC**
**COMMERCIAL**
**INDUSTRIAL**
**STREET FURNITURE**

# PREPARATION AND USE

The indications for use refer to the general principles of application to a high professional standard. Abide by any standards and national regulations.

- **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.

Anhydrite substrates must have a residual humidity ≤ 0,5 CM-%. Cement-based screeds must have a residual humidity ≤ 2 CM-%. Anchored substrates must comply with BS 8204 and anhydrite must have a residual humidity ≤ 0,3 CM-%.

- **ADHESIVE PREPARATION**

**Mixing water (EN 1348)**

| | |
|---|---|
| Grey | ≈ 30.5% – 33.5% by weight |
| Shock White | ≈ 33% – 36% by weight |

**Mixing water on-site**

| | |
|---|---|
| Grey | ≈ 7.8 ℓ / 1 bag |
| Shock White | ≈ 8.3 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 maximum 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:

- ≈ 10 m² in external applications,
- ≈ 25 m² in internal applications,
- every 8 metres in long, narrow applications.

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

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## SAFE LAYING ON SITE

The SAFE LAYING ON SITE method has the aim of testing adhesives both using relevant standards and in some of the most extreme conditions that can be met on site, using rigorous scientific methods and the latest technology available with Kerakoll GreenLab.

**WORKABILITY**

| | |
|---|---|
| **Pack** | 25 kg |
| **Shelf life** | ≈ 12 months in the original packaging<br>Protect from humidity |

**Adhesive thickness** from 2 to 15 mm

**Coverage per mm thickness:**

| | |
|---|---|
| Grey (mixing ratio. 32%) | ≈ 1.25 kg/m² |
| White Shock (mixing ratio. 33%) | ≈ 1.25 kg/m² |

**Temperature of the air, substrates and materials**
from +5 °C to +35 °C

**Pot life at +23 °C**

| | |
|---|---|
| Grey | ≈ 8 hrs |
| White | ≈ 6 hrs |

**Open time at +23 °C (BIII tile):**

| | | |
|---|---|---|
| Grey | ≥ 60 min. | EN 1346 |
| White | ≥ 60 min. | EN 1346 |

**Open time at +35 °C (BIII tile):**

| | | |
|---|---|---|
| Grey | ≥ 20 min. | EN 1346 |
| White | ≥ 30 min. | EN 1346 |

**Time required until fully frost-proof (Bla tile)**

| | |
|---|---|
| from +5 °C to -5 °C | ≈ 8 hrs |

**Foot traffic/grouting of joints at +5 °C (Bla tile):**

| | |
|---|---|
| Grey | ≈ 50 hrs |
| White | ≈ 50 hrs |

**Foot traffic/grouting of joints at +23 °C (Bla tile):**

| | |
|---|---|
| Grey | ≈ 24 hrs |
| White | ≈ 20 hrs |

**Grouting in walls at +23 °C (Bla tile)**

| | |
|---|---|
| Grey | ≈ 20 hrs |
| White | ≈ 15 hrs |

**Ready for use at +23 °C / +5 °C (Bla tile)**

| | |
|---|---|
| - light foot traffic | ≈ 2 / 3 days |
| - heavy traffic | ≈ 3 / 7 days |
| - swimming pools (+23 °C) | ≈ 14 days |

## 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.

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## PERFORMANCE

**VOC INDOOR AIR QUALITY (IAQ) - VOLATILE ORGANIC COMPOUND EMISSIONS**

| | | |
|---|---|---|
| Conformity | EC 1-R plus GEV-Emicode | GEV certified 4616/11.01.02 |
| Shear adhesion (porcelain tiles/porcelain tiles) after 28 days | ≥ 1 N/mm² | ANSI A-118.1 |
| Tensile adhesion (concrete/porcelain tiles) after 28 days | ≥ 2 N/mm² | EN 1348 |
| Durability test: | | |
| - adhesion after heat ageing | ≥ 1 N/mm² | EN 1348 |
| - adhesion after water immersion | ≥ 1 N/mm² | EN 1348 |
| - adhesion after freeze-thaw cycles | ≥ 1 N/mm² | 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.*

## GENERAL NOTICES

- **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 01527 578000 - info@kerakoll.co.uk

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