

BIOGEL[®] REVOLUTION



**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.**

Grey



The number 1 gel adhesive without a warning label



Up to 1 hour of constant workability



Total safety after only 3 hours

FEATURES AND ADVANTAGES

THIXOTROPIC AND FLUID

WATER RESISTANT

FROST RISK REDUCED

LONG OPEN TIME

HIGH AND LOW THICKNESS

ABSORBS DYNAMIC LOADS

SHAPE MEMORY

FULL WETTABILITY

DISTRIBUTES TENSILE STRENGTH

NON-SLIP

NO SHRINKAGE

INCREASES THE PERFORMANCE

GREENBUILDING RATING[®]

- Category: Inorganic mineral products
- Laying ceramic tiles and natural stone
- Rating: Eco 3

			CO ₂ /kg emission 174 g	Very low VOC emissions	Can be recycled as inert material

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
- Contains recycled minerals thereby reducing the damage to the environment caused by extracting pure raw materials
- Single-component; avoiding the use of plastic cans reduces CO₂ emissions and the need to dispose of special waste

COMPLIANCE AND CERTIFICATIONS

 1599 0407	KERAKOLL S.p.A. Via dell'Artigianato, 9 41049 Sassuolo - MO - Italy - www.kerakoll.com
17 DoP n° 0396 EN 12004:2007+A1:2012 BIOGEL REVOLUTION Improved fast setting cementitious adhesive for all internal and external tiling	
Reaction to fire	A2-s1,d0
Bond strength, as: early tensile adhesion strength ≥ 0.5 N/mm ² initial tensile adhesion strength ≥ 1.0 N/mm ²	
Durability, for: tensile adhesion strength after heat ageing ≥ 1.0 N/mm ² tensile adhesion strength after water immersion ≥ 1.0 N/mm ² tensile adhesion strength after freeze/thaw cycles ≥ 1.0 N/mm ²	
Release of dangerous substances	See SDS



GEL[®]
TECHNOLOGY





AREAS OF USE

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

REVOLUTION

EXISTING TILES
WATERPROOFING PRODUCTS
HEATING SYSTEMS
CEMENT-BASED SCREEDS
CONCRETE
PLASTERBOARD
FIBRO-CEMENT SLABS
GYPSUM AND ANHYDRITE
CELLULAR CONCRETE
BRICK
LIME AND CEMENT-BASED
PLASTERS/RENDERS
THERMAL INSULATION
PANELLING SYSTEMS
INSULATING PANELS
IMPACT NOISE INSULATION
SHEETS
TIMBER
METAL
PVC

MATERIALS

REVOLUTION

PORCELAIN TILES
LAMINATED STONEWARE
LOW THICKNESS SLABS
CERAMIC TILES
LARGE FORMATS
300x150 cm SLABS
MARBLE - NATURAL STONE
RECOMPOSED MATERIALS
GLASS MOSAICS
GLASS TILES
THERMAL AND ACOUSTIC
INSULATION
TERRACOTTA - KLINKER

USES

REVOLUTION

ADHESIVE AND FINISHING
FLOORS AND WALLS
FOR INTERNAL USE - EXTERNAL
OVERLAYING
TERRACES AND BALCONIES
FACADES
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

All substrates must 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.

• ADHESIVE PREPARATION

Mixing water (EN 1348)

Grey ≈ 23% – 25% by weight

Mixing water on-site

For low thickness laying and full wettability:

Grey ≈ 6.2 l / 1 bag

on walls, for high and low thickness laying:

Grey ≈ 5 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:

- ≈ 10 m² in external applications,

- ≈ 40 m² in internal applications,

- every 8 metres in long, narrow applications.

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



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	Protect from humidity
Adhesive thickness	from 2 to 15 mm	
Coverage per mm thickness:		
Grey (mixing ratio. 25%)	≈ 1.25 kg/m ²	
Temperature of the air, substrates and materials	from +5 °C to +35 °C	
Pot life at +23 °C		
Grey	≈ 1 hr	
Open time at +23 °C (BIII tile):		
Grey	≥ 45 min.	EN 1346
Open time at +35 °C (BIII tile):		
Grey	≥ 15 min.	EN 1346
Correction time (BIII tile)		
+23 °C	≥ 6 min.	
+35 °C	≥ 5 min.	
Time required until fully frost-proof (BIa tile)		
from +5 °C to -5 °C	≈ 3 hrs	
Foot traffic/grouting of joints at +23 °C (BIa tile)		
Grey	≈ 3 hrs	
Foot traffic/grouting of joints at +5 °C (BIa tile)		
Grey	≈ 8 hrs	
Grouting in walls at +23 °C (BIa tile)		
Grey	≈ 2 hrs	
Ready for use at +23 °C / +5 °C (BIa tile)		
- heavy traffic	≈ 24 – 28 hrs	
- swimming pools (+23 °C)	≈ 7 days	



• PRE-TREATMENT OF SPECIAL SUBSTRATES

Timber (internal use only) thickness ≥ 15 mm:

Keragrip Eco

Metal (internal use only): Keragrip Eco

Asphalt screed (internal use only): Primer A Eco

Gypsum and anhydrite (internal use only):

Primer A Eco

PVC (internal use only): Keragrip Eco

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

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

• SPECIAL APPLICATIONS

FACADES

The substrate should guarantee a cohesive tensile strength of ≥ 1.0 N/mm².

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

For coverings with > 60 cm, add to the mixing water a percentage of Top Latex Eco to assess the function of the thermo-dynamic strain provided by the structure.

PERFORMANCE

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

Conformity EC 1 plus GEV-Emicode GEV Certified 8562/11.01.02

HIGH-TECH

Shear adhesion

(porcelain tiles/porcelain tiles) after 28 days $\geq 2 \text{ N/mm}^2$ ANSI A-118.4

Tensile adhesion after 6 hrs $\geq 0.5 \text{ N/mm}^2$ EN 1348

Tensile adhesion

(concrete/porcelain tiles) after 28 days $\geq 2.5 \text{ N/mm}^2$ EN 1348

Durability test:

- adhesion after heat ageing $\geq 1 \text{ N/mm}^2$ EN 1348

- adhesion after water immersion $\geq 1 \text{ N/mm}^2$ EN 1348

- adhesion after freeze-thaw cycles $\geq 1 \text{ N/mm}^2$ EN 1348

- adhesion after straining cycles $\geq 1 \text{ N/mm}^2$ SAS Technology

Transversal deformation $\geq 2.5 \text{ mm}$ EN 12002

Vertical slip $\leq 0.5 \text{ mm}$ EN 1308

Working temperature from $-40 \text{ }^\circ\text{C}$ to $+90 \text{ }^\circ\text{C}$

Values taken at $+23 \text{ }^\circ\text{C}$, 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 6 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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The Eco and Bio classifications refer to the GreenBuilding Rating® Manual 2013. This information was last updated in January 2018 (ref. GBR Data Report - 02.18); 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.