**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.**

**FEATURES AND ADVANTAGES**

<table>
<thead>
<tr>
<th>THIXOTROPIC AND FLUID</th>
<th>WATER RESISTANT</th>
<th>FROST RISK REDUCED</th>
</tr>
</thead>
<tbody>
<tr>
<td>LONG OPEN TIME</td>
<td>HIGH AND LOW THICKNESS</td>
<td>ABSORBS DYNAMIC LOADS</td>
</tr>
<tr>
<td>SHAPE MEMORY</td>
<td>FULL WETTABILITY</td>
<td>DISTRIBUTES TENSILE STRENGTH</td>
</tr>
<tr>
<td>NON-SLIP</td>
<td>NO SHRINKAGE</td>
<td>INCREASES THE PERFORMANCE</td>
</tr>
</tbody>
</table>

**GREENBUILDING RATING®**

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

**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**

**STANDARD**

<table>
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<tbody>
<tr>
<td>Improved fast setting cementitious adhesive for all internal and external tiling</td>
<td></td>
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</tbody>
</table>

**Reaction to fire**

A1-s1,d0

**Bond strength, as:**
- early tensile adhesion strength ≥ 0.5 N/mm²
- initial tensile adhesion strength ≥ 1.0 N/mm²

**Durability, for:**
- tensile adhesion strength after heat ageing ≥ 1.0 N/mm²
- tensile adhesion strength after water immersion ≥ 1.0 N/mm²
- tensile adhesion strength after freeze/thaw cycles ≥ 1.0 N/mm²

**Release of dangerous substances**

See SDS
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.

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

**SUBSTRATES**
- 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**
- 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**
- 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**

**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**

<table>
<thead>
<tr>
<th>Pack</th>
<th>25 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shelf life</td>
<td>= 12 months in the original packaging Protect from humidity</td>
</tr>
<tr>
<td>Adhesive thickness</td>
<td>from 2 to 15 mm</td>
</tr>
<tr>
<td>Coverage per mm thickness:</td>
<td>Grey (mixing ratio. 25%) = 1.25 kg/m²</td>
</tr>
<tr>
<td>Temperature of the air, substrates and materials</td>
<td>from +5 °C to +35 °C</td>
</tr>
<tr>
<td>Pot life at +23 °C</td>
<td>Grey = 1 hr</td>
</tr>
<tr>
<td>Open time at +23 °C (BIII tile):</td>
<td>Grey ≥ 45 min. EN 1346</td>
</tr>
<tr>
<td>Open time at +35 °C (BIII tile):</td>
<td>Grey ≥ 15 min. EN 1346</td>
</tr>
<tr>
<td>Correction time (BIII tile):</td>
<td>+23 °C ≥ 6 min. +35 °C ≥ 5 min.</td>
</tr>
<tr>
<td>Time required until fully frost-proof (Bla tile)</td>
<td>from +5 °C to -5 °C = 3 hrs</td>
</tr>
<tr>
<td>Foot traffic/grouting of joints at +23 °C (Bla tile)</td>
<td>Grey = 3 hrs</td>
</tr>
<tr>
<td>Foot traffic/grouting of joints at +5 °C (Bla tile)</td>
<td>Grey = 8 hrs</td>
</tr>
<tr>
<td>Grouting in walls at +23 °C (Bla tile)</td>
<td>Grey = 2 hrs</td>
</tr>
<tr>
<td>Ready for use at +23 °C / +5 °C (Bla tile) - heavy traffic</td>
<td>= 24 – 28 hrs - swimming pools (+23 °C) = 7 days</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Conformity</th>
<th>EC 1 plus GEV-Emicode</th>
<th>GEV Certified 8562/11.01.02</th>
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</table>

HIGH-TECH

Shear adhesion
(porcelain tiles/porcelain tiles) after 28 days ≥ 2 N/mm²  ANSI A-118.4
Tensile adhesion after 6 hrs ≥ 0.5 N/mm²  EN 1348
Tensile adhesion
(concrete/porcelain tiles) after 28 days ≥ 2.5 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
- adhesion after straining cycles ≥ 1 N/mm²  SAS Technology

Transversal deformation ≥ 2.5 mm  EN 12002
Vertical slip ≤ 0.5 mm  EN 1308
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.

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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