Biogel® Extreme Code: P675 2017/12 EN

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

Rating System Accredited by Certification Body SGS
- Category: Organic Mineral products
- Laying ceramic tiles and natural stone
- Rating: Eco 2

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

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

Features and Advantages
- 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
- EASY TO SPREAD
- HIGH AND LOW THICKNESS
- MAXIMUM DEFORMABILITY
- FULL WETTABILITY
- NO SHRINKAGE
- STRUCTURAL ADHESION
- DISTRIBUTES TENSOLE STRENGTH
- INCREASES THE PERFORMANCE
- TRANSFERS THE FORCES
- ABSORBS DYNAMIC LOADS
- ELIMINATES THE RISK OF FROST

Compliance and Certifications
- Reaction to fire: Class B-s1,d0
- Bond strength, as: initial shear adhesion strength ≥ 2.0 N/mm²
- Durability, for: shear adhesion strength after thermal shock ≥ 2.0 N/mm² shear adhesion strength after water immersion ≥ 2.0 N/mm²
- Release of dangerous substances: See SDS

Greenbuilding Rating® is a dependable and reliable evaluation method for measuring and improving the environmental performance of building materials.
**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. Packs of Biogel® Extreme must be stored at a temperature of ≈ +20 °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 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.

**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.

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**AREAS OF USE**

- **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**

- **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**

- **ADHESIVE AND FINISHING INTERIOR WATERPROOFING PRODUCT**
- **FLOORS AND WALLS FOR INTERNAL USE - EXTERNAL OVERLAYING**
- **TERRACES AND BALCONIES FACADES**
- **SWIMMING POOLS AND FOUNTAINS**
- **SAUNAS AND SPA DOMESTIC COMMERCIAL INDUSTRIAL STREET FURNITURE**

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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.
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 some of the most modern technology currently available in the Kerakoll® GreenLab.

WORKABILITY

Pack: monopack 10 kg (8.6 +1.4 kg)
Mixing ratio: Part A : Part B = 8.6 : 1.4
Shelf life: ≈ 24 months in original packaging
Adhesive thickness: from 2 to 15 mm
Coverage per mm of thickness: ≈ 1.45 kg/m²
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 (Bla tile):
+23 °C: ≈ 4 hrs
+5 °C: ≈ 15 hrs
Ready for use at +23 °C / +5 °C (Bla tile):
- light foot traffic: 6 – 20 hrs
- heavy traffic: 12 – 24 hrs
- swimming pools (+23 °C): 3 days

SPECIAL NOTES

PRE-TREATMENT OF SPECIAL SUBSTRATES
Timber thickness ≥ 25 mm: Keragrip Eco Pulep
Metal and sheet metal: Keragrip Eco Pulep
Gypsum and anhydrite (internal use only): Sic® Eco 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
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. Always apply a layer of adhesive directly on the back of the material.
In insulation panelling systems, carry out a reinforced plaster/render cycle, mechanically fixed to the substrate, with a minimum thickness of 10 mm.

WATERPROOFING FOR INTERIORS
Waterproofing the fractionizing, expansion and desolidarisation joints in the substrates using Aquastop 120 anchored using Biogel® Extreme adhesive; create special pieces for external angles, internal angles and connections to drains and installations by cutting the Aquastop 120 tape.
Apply the first coat with a smooth spreader in a thickness of about 1-2 mm, pressing down to ensure maximum adhesion to the substrate. Once the product has hardened, and after removing any surface condensation, apply a second coat of Biogel® Extreme, creating a continuous even layer, about 2 – 3 mm thick, covering the substrate completely. The subsequent laying of the covering should be carried out with Biogel® Extreme at least 12 hours after the application of the last coat. when working in low temperatures and with high humidity, the waiting time before laying will be longer.
The waterproofing on roofs of residential spaces must allow for the presence of a vapour barrier and insulation layers.
Performance

High-tech

Shear adhesion after 7 days ≥ 7.5 N/mm² EN 12003
Shear adhesion after water immersion ≥ 5 N/mm² EN 12003
Shear adhesion after thermal shock ≥ 5.5 N/mm² EN 12003
Shear adhesion after immersion in chlorine water ≥ 3 N/mm² EN 12003

Adhesion test according to EN 12004 for class C (cement based) adhesives

Tensile adhesion (concrete/porcelain tile):
- after 6 hrs ≥ 2.4 N/mm² EN 1348
- after 28 days ≥ 4.5 N/mm² EN 1348

Durability test:
- Adhesion after heat ageing ≥ 4 N/mm² EN 1348
- Adhesion after water immersion ≥ 2.5 N/mm² EN 1348
- Adhesion after freeze-thaw cycles ≥ 2 N/mm² EN 1348
- Adhesion after straining cycles ≥ 2 N/mm² SAS Technology

Transversal deformation ≥ 50 mm EN 12002
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
- Adhere 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
- Adhesion after heat ageing
- Adhesion after water immersion
- Adhesion after freeze-thaw cycles
- Adhesion after straining cycles
- Transversal deformation
- Working temperature

Additions and/or amendments to this information 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 site for laying, 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.