

# BIOGEL® EXTREME



White



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.



### EXTREME ADHESION

**VERY FAST BONDING**  
Adhesive strength 5 times superior to a class C2 (4.5 N/mm<sup>2</sup>) cement-based adhesive after 24 hours



### EXTREME DEFORMABILITY

**STRESS RESISTANT**  
10 times more deformable than a class S2 (> 50 mm) cement-based adhesive



### EXTREME FLUIDITY

**EASY TO SPREAD**  
5 times less viscous than a (35 Pa\*s) polyurethane adhesive, transforms into a smooth gel like a cement-based adhesive

## FEATURES AND ADVANTAGES

<b>VERY FAST BONDING</b>	<b>HIGH AND LOW THICKNESS</b>	<b>DISTRIBUTES TENSILE STRENGTH</b>
<b>LONG OPEN TIME</b>	<b>MAXIMUM DEFORMABILITY</b>	<b>INCREASES THE PERFORMANCE</b>
<b>SHAPE MEMORY</b>	<b>FULL WETTABILITY</b>	<b>TRANSFERS THE FORCES</b>
<b>WATER RESISTANT</b>	<b>NO SHRINKAGE</b>	<b>ABSORBS DYNAMIC LOADS</b>
<b>EASY TO SPREAD</b>	<b>STRUCTURAL ADHESION</b>	<b>ELIMINATES THE RISK OF FROST</b>

## GREENBUILDING RATING®

- Category: Organic Mineral Products
- Class: Biogel® adhesives gel with SAS Technology
- Rating: Eco 2

eco2	 Bio-based Mineral (≥ 20%)	 Low Emission Indoor Air Quality	 Solvent ≤ 5 g/kg	 Low Ecological Impact	 Health Care
			 Solvent-free		 Non-toxic and non-hazardous

RATING SYSTEM ACCREDITED BY CERTIFICATION BODY SGS

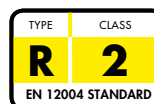
- The GreenBuilding Rating® is a dependable and reliable evaluation method for measuring and improving the environmental performance of building materials.

## ECO NOTES

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

## COMPLIANCE AND CERTIFICATIONS

 1599 0407	KERAKOLL S.p.A. Via dell'Artigianato, 9 41049 Sassuolo - MO - Italy - www.kerakoll.com
	16 DoP n° 0358 EN 12004:2007+A1:2012 BIOGEL EXTREME Improved reaction resin adhesive for all internal and external tiling Reaction to fire Class B-s1,d0 Bond strength, as: initial shear adhesion strength ≥ 2,0 N/mm <sup>2</sup> Durability, for: shear adhesion strength after thermal shock ≥ 2,0 N/mm <sup>2</sup> shear adhesion strength after water immersion ≥ 2,0 N/mm <sup>2</sup> Release of dangerous substances See SDS





## 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

**EXTREME**

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  
INSULATING PANELS  
IMPACT NOISE INSULATION SHEETS  
CRACKED SCREEDS  
UNCURED DAMP SCREEDS  
WOOD – METAL – SHEET METAL  
RUBBER FLOORS – PVC

### MATERIALS

**EXTREME**

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

### USES

**EXTREME**

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



## 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 flat, compact, free from with no loose flaky parts, resistant, free from any debonding agents, dust and moisture rising.

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 in anhydrite must have a residual humidity  $\leq 0,3$  CM-%.

#### • 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  $\approx +20$  °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:

-  $\approx 10$  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.

#### • 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.



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  
 Protect from frost

**Adhesive thickness** from 2 to 15 mm

**Coverage per mm of thickness** ≈ 1,45 kg/m<sup>2</sup>

**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 (BIIa tile)

+23 °C ≈ 4 hrs  
 +5 °C ≈ 15 hrs

#### Ready for use at +23 °C / +5 °C (BIIa tile)

- light foot traffic ≈ 6 – 20 hrs  
 - heavy traffic ≈ 12 – 24 hrs  
 - swimming pools (+23 °C) ≈ 3 days



### • 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):

Slc® 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/mm<sup>2</sup>.

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.

## SPECIAL NOTES

### WATERPROOFING FOR INTERIORS

Waterproof 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/mm <sup>2</sup>	EN 12003
Shear adhesion after water immersion	≥ 5 N/mm <sup>2</sup>	EN 12003
Shear adhesion after thermal shock	≥ 5,5 N/mm <sup>2</sup>	EN 12003
Shear adhesion after immersion in chlorine water	≥ 3 N/mm <sup>2</sup>	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/mm <sup>2</sup>	EN 1348
- after 28 days	≥ 4,5 N/mm <sup>2</sup>	EN 1348
Durability test:		
- adhesion after heat ageing	≥ 4 N/mm <sup>2</sup>	EN 1348
- adhesion after water immersion	≥ 2,5 N/mm <sup>2</sup>	EN 1348
- adhesion after freeze-thaw cycles	≥ 2 N/mm <sup>2</sup>	EN 1348
- adhesion after straining cycles	≥ 2 N/mm <sup>2</sup>	SAS Technology
Transversal deformation	≥ 50 mm	EN 12002
Working temperature	from -40 °C to +110 °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 against direct rain for at least 12 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
- for laying on cement-polymer waterproofing coverings, check the suitability on the producer's technical data sheet
- do not use in contact with polystyrene (Styrofoam, EPS, XPS, etc...)
- 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 December 2016 (ref. GBR Data Report – 01.17); 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.