

Bioflex S1

High performance deformable adhesive for bonding large format tiles and natural stones.



Rating 3

1. Highly polymer modified
2. Thicknesses up to 15 mm
3. For internal and external use
4. High deformability
5. Prolonged workability
6. Adjustable
7. For fixing large format tiles and natural stones
8. Ideal for civil, commercial and industrial projects

- ✓ Regional Mineral $\geq 60\%$
- × Recycled Regional Mineral $\geq 30\%$
- × CO₂ Emission ≤ 250 g/kg
- ✓ VOC Low Emission
- ✓ Recyclable

Areas of application

→ Intended use:

Substrates:

- cement-based screeds and mortars
- cellular concrete, for internal use
- plasterboard
- heated floors
- waterproofing products
- to overlay existing floors
- lime and cement-based plasters/renders
- fibro-cement slabs
- concrete surfaces
- screeds produced with Biocem
- cement-based self-levelling products

Materials:

- ceramic tiles
- vitrified tiles
- terracotta
- marble and natural stone
- indian marble
- various mosaics
- internal insulating and soundproofing panels

Uses:

- adhesive and finishing
- for floors and walls
- internal use – external use
- overlaying
- terraces and balconies
- swimming pools and fountains
- saunas and spa
- domestic applications
- commercial applications

Instructions for use

→ Preparation of the substrate

All surfaces must be dimensionally stable according to IS 1443-1972, 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:

- ≈ 5 – 6 litres per 20 kg bag
- ≈ 7.5 – 9 litres per 30 kg bag

The amount of water indicated on the packaging is indicative. 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 sufficient layer of adhesive.

Large, rectangular sizes with sides > 60 cm may require adhesive to be applied directly to the back of the tile surface.

Check samples to make sure the adhesive has been transferred to the back of the material. Respect structural, fractionizing, and perimeter joints present in the substrates. Abide by local existing provisions when creating elastic expansion joints.

Special notes

→ Pre-treatment of special substrates

Gypsum-based plasters/renderers: Primer A Eco. Please see the technical data sheet on how to use the Primer properly.

As treating special surfaces 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 that are subject to deformation or staining due to water absorption require a reactive adhesive. Marble, natural stones and recomposed materials 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 India Helpline 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 fixing 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

Plasterboard and fibro-cement slabs must be firmly anchored to specific metal frames.

Facades: the surface should guarantee a cohesive tensile strength of $\geq 1.0 \text{ N/mm}^2$.

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

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

Always apply a layer of adhesive directly on the back of the material (per India tile/stone).

→ Do not use

On non-cured screeds, plaster/renderers or concrete.

On plasterboard and fibre-cement slabs without priming.

Certificates and marks



* émission dans l'air intérieur Information sur le niveau d'émission de substances volatiles dans l'air intérieur, présentant un risque de toxicité par inhalation, sur une échelle de classe allant de A+ (très faibles émissions) à C (fortes émissions).

Technical Data compliant with Kerakoll Quality Standard		
Shelf life	≈ 12 months in the original packaging. Protect from humidity.	
Pack	20 kg and 30 kg bags	
Adhesive thickness	up to 15 mm	
Temperature of the air, substrates and materials	from +5 °C to +35 °C	
Pot life at +23 °C		
- Grey	≈ 5 hrs	
- White	≈ 5 hrs	
Pot life at +35 °C:		
- Grey	≈ 3 hrs	
- White	≈ 3 hrs	
Open time at +27 °C:		
- Grey	≥ 30 min.	EN 12004
- White	≥ 30 min.	EN 12004
Correction time at +27 °C (BIII tile)		
- Grey	≥ 50 min.	EN 12004
- White	≥ 50 min.	EN 12004
Foot traffic/grouting of joints at +23 °C (BIa tile):		
- Grey	≈ 24 hrs	
- White	≈ 24 hrs	
Foot traffic/grouting of joints at +35 °C (BIa tile):		
- Grey	≈ 12 hrs	
- White	≈ 12 hrs	
Grouting in walls at +23 °C (BIa tile)		
- Grey	≈ 24 hrs	
- White	≈ 24 hrs	
Grouting in walls at +35 °C (BIa tile):		
- Grey	≈ 18 hrs	
- White	≈ 18 hrs	
Ready for use at +23 °C / +35 °C (BIa tile):		
- foot traffic	≈ 2 - 3 days	
- heavy traffic	≈ 3 - 4 days	
- swimming pools (+23 °C)	≈ 14 days	
Coverage:		
- Grey	≈ 1.3 kg/m ² per mm of thickness	
- White	≈ 1.3 kg/m ² per mm of thickness	

Values taken at +23 °C, 50% R.H. and no ventilation. Data may vary depending on specific conditions at the building site, i.e. temperature, ventilation and absorbency level of the substrate and of the materials laid.

Performance**VOC Indoor Air Quality (IAQ) - Volatile organic compound emissions**

Conformity	EC 1 plus GEV-Emicode	GEV certified 6363/11.01.02
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HIGH-TECH

Tensile adhesion strength (dry condition)	$\geq 2 \text{ N/mm}^2$	IS 15477:2019
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Tensile adhesion strength (wet condition)	$\geq 1 \text{ N/mm}^2$	IS 15477:2019
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Shear adhesion (dry condition)	$\geq 1.50 \text{ N/mm}^2$	IS 15477:2019
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Shear adhesion (wet condition)	$\geq 1 \text{ N/mm}^2$	IS 15477:2019
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Shear adhesion (heat ageing)	$\geq 1 \text{ N/mm}^2$	IS 15477:2019
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Durability test:

- adhesion after heat ageing	$\geq 1 \text{ N/mm}^2$	EN 12004-2
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- adhesion after water immersion	$\geq 1 \text{ N/mm}^2$	EN 12004-2
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- adhesion after freeze-thaw cycles	$\geq 1 \text{ N/mm}^2$	EN 12004-2
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Vertical slip	$\leq 0.5 \text{ mm}$	EN 12004-2
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Transversal deformation	$\geq 2.5 \text{ mm}$	EN 12004-2
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Working temperature	from $-30 \text{ }^\circ\text{C}$ to $+90 \text{ }^\circ\text{C}$	
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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.

Warning

- 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 notched trowel 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 India Helpline (Toll Free) 1800-200-6550 - info@kerakollindia.com

The Rating classifications refer to the GreenBuilding Rating Manual 2012. This information was last updated in July 2024 (ref. GBR Data Report - 06.24); 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 site 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.