

# H40 Ultimate

Rapid setting, multipurpose gel-adhesive, structural, ultra flexible, thixo & fluid. For tiles and stone of all types and formats.



1. Highly deformable (S2 tested)
2. Improved workability
3. High adhesion and flexibility, maximum safety on difficult substrates
4. Highly polymer modified
5. No warning label

## Rating 3



- × Regional Mineral  $\geq 60\%$
- × Recycled Regional Mineral  $\geq 30\%$
- ✓ CO<sub>2</sub> Emission  $\leq 250$  g/kg
- ✓ VOC Low Emission
- ✓ Recyclable

## Areas of application

### → Intended use:

#### Substrates:

- Existing tiles
- Waterproofing products
- Heating systems
- Cement-based screeds
- Concrete substrates
- Plasterboard
- Fibro-cement slabs
- Gypsum and anhydrite
- Asphalt screeds
- Brick/blockwork
- Lime and cement-based plasters/renders
- Thermal insulation panelling systems
- Insulating panels
- Impact noise insulation sheets
- Timber - metal - PVC
- Green screeds
- Floating floors

#### Materials:

- Porcelain tiles
- Laminated stoneware
- Low thickness slabs
- Ceramic tiles

- Large size
- 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
- Internal use - external use
- Overlaying
- Terraces and balconies
- Facades
- Swimming pools and fountains
- Saunas and spa
- Domestic
- Commercial
- Industrial
- Street furniture
- Substrates subject to vibrations
- Areas of high deformation
- Heavy traffic areas

## Instructions for use

### → Preparation of the substrate

Substrates must comply with BS 5385, parts 1-5, be level, cured, undamaged, compact, rigid, dry and free from any debonding agents. It is good practice to dampen highly absorbent concrete substrates or apply a coat of Primer A Eco. Anhydrite screeds must have a damp content of  $\leq 0.5\%$  CM and be adequately sanded, cleaned using a suitable vacuum cleaner and primed.

### → Preparation of wood substrates

Make sure that the floor is able to bear the added weight of the tiles plus the static / dynamic service load indicated in the project. The wooden substrate must be rigid and stable and within normal levels of humidity; it may be necessary to strengthen the structure by inserting reinforcement noggings between the beams. Select appropriate plywood sheets of suitable thickness before laying the tiles (as indicated in BS5385-3). The plywood sheets must be screwed onto the beams with screws placed every 300 mm from the centre. The screws must be of a suitable length to ensure they fasten to the substrate, taking care not to damage anything under the floor. All sheet edges must be supported by beams or reinforcements. The surface of the sheet must be cleaned before laying to remove any dust and debris.

If the surface of the sheet has been treated in advance with fireproofing or waterproofing materials, check that the sheet is certified by the manufacturer for laying of tiles. A test should also be carried out in advance to ensure that the treatment in question does not restrict the adhesion of the adhesive itself. If in doubt, please contact Kerakoll Global Service before laying.

### → Adhesive preparation

Mixing water (EN 12004-2):  $\approx 20\% - 22.5\%$  by weight

Mixing water on-site

For low thickness laying and full wettability:

$\approx 4.5\text{ l} / 1\text{ bag}$

on walls, for high and low thickness laying:

$\approx 4\text{ l} / 1\text{ bag}$

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.

## Instructions for use

### → 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 m<sup>2</sup> in external applications (approx. 3x3 m)
  - ≈ 40 m<sup>2</sup> in internal applications (8x5 m) with underfloor heating
  - ≈ 100 m<sup>2</sup> in internal applications (10x10 m) without underfloor heating
  - every 8 metres in long, narrow applications.
- Respect all structural, fractionizing and perimeter joints present in the substrates.

## Special notes

### → Pre-treatment of special substrates

Metal (internal use only): Keragrip 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.

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).

### → Materials and special substrates

For green screeds tiling should not commence until 7 days after installation of the screed. Please ensure there are sufficient movement joints throughout the screed before applying adhesive and also throughout the tiling surface. 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.

### → 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.

## Certificates and marks



**Technical Data compliant with Kerakoll Quality Standard**

Shelf life	≈ 12 months from production in the original sealed packaging, protect from humidity	
Pack	20 kg	
Adhesive thickness	from 2 to 15 mm	
Temperature of the air, substrates and materials	from +5 °C to +35 °C	
Pot life at +23 °C	≈ 1 hr	
Open time at +23 °C (BIII tile):	≥ 20 min.	EN 12004-2
Correction time at +23 °C (BIII tile)	≥ 10 min.	
Foot traffic/grouting of joints at +23 °C (BIa tile)	≈ 3 hrs	
Foot traffic/grouting of joints at +5 °C (BIa tile)	≈ 7 hrs	
Grouting in walls at +23 °C (BIa tile)	≈ 2 hrs	
Ready for use at +23 °C / +5 °C (BIa tile)		
- light foot traffic	≈ 6 – 16 hrs	
- heavy traffic	≈ 24 – 28 hrs	
- swimming pools (+23 °C)	≈ 7 days	
Coverage per mm of thickness	≈ 1.4 kg/m <sup>2</sup>	

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.

<b>Performance</b>		
<b>VOC Indoor Air Quality (IAQ) - Volatile organic compound emissions</b>		
Conformity	EC 1 Plus GEV-Emicode	GEV certified 16491/11.01.02
<b>HIGH-TECH</b>		
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 12004-2
Tensile adhesion (concrete/porcelain tiles) after 28 days	$\geq 2.5 \text{ N/mm}^2$	EN 12004-2
<b>Durability test:</b>		
- adhesion after heat ageing	$\geq 1 \text{ N/mm}^2$	EN 12004-2
- adhesion after water immersion	$\geq 1 \text{ N/mm}^2$	EN 12004-2
- adhesion after freeze-thaw cycles	$\geq 1 \text{ N/mm}^2$	EN 12004-2
- adhesion after straining cycles	$\geq 1 \text{ N/mm}^2$	SAS Technology
- concentrated load on plywood/por- celain tiles after 28 days	$\geq 15 \text{ kN}$	Timber Tested
- flexural strength of the plywood/ porcelain tiles system after 28 days	$\geq 35 \text{ N/mm}^2$	Timber Tested
- adhesion after strain cycles on plywood	$\geq 1 \text{ N/mm}^2$	SAS Timber Tested
Transversal deformation	$\geq 5 \text{ mm}$	EN 12004-2
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.

## 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 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 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 Worldwide Global Service 01772 456 831 - info@kerakoll.co.uk



The Rating classifications refer to the GreenBuilding Rating Manual 2013. This information was last updated in March 2023 (ref. GBR Data Report - 03.23); please note that additions and/or amendments to this information may be made over time by KERAKOLL Spa; for the latest version, see [www.kerakoll.com](http://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.