



# H40<sup>®</sup> Eco Rapid

Eco-friendly, extra-fast setting and hardening mineral adhesive for high-performance laying or overlaying with no vertical slip, ideal for use in GreenBuilding. Single-component with very low volatile organic compound emissions, contains recycled raw materials. Recyclable as an inert material at the end of its life.

H40<sup>®</sup> Eco Rapid quickly returns surfaces to normal use even at low temperatures, guaranteeing high levels of adhesion in both new building and renovation work, whilst maintaining the same extended workability as normal-setting adhesives.



## Product Strengths

- Ideal for porcelain tiles, ceramics, large formats, low thickness slabs and stable natural stone
- Floors and walls, for internal and external use
- Thicknesses up to 10 mm
- Suitable for underfloor heating systems
- SAS<sup>®</sup> and STC technology guarantee adhesion in real on-site conditions
- Open time ≥ 30 min.
- Adjustability time ≥ 20 min.



## GreenBuilding Rating

	 Mineral ≥ 60%	 Recycled Mineral ≥ 30%	 CO <sub>2</sub> ≤ 250 g/kg	 VOC Low Emission	 Recyclable
		Recycled mineral content 30%		Very low VOC emissions 20 µg/m <sup>3</sup>	Can be recycled as inert material

### H40<sup>®</sup> Eco Rapid

- Category: Inorganic Mineral Products
- Class: Mineral Adhesives with SAS Technology
- Rating: Eco 3

## Areas of use

### Use

Laying of homogeneous tiles, ceramic tiles, klinker, cotto, glass and ceramic mosaic, of all types and formats. Laying of dimensionally and colour stable natural stone coverings and resin or cement-based recomposed materials, on flooring and walls. For domestic, commercial and industrial applications; in areas that are permanently damp and subject to thermal shock and freezing.

Suitable for use on:

- cement or lime and cement-based plasters and cement screeds,
- mineral screeds made using hydraulic binders such as Keracem<sup>®</sup> Eco,
- cement-based levelling and self-levelling products,
- concrete and cellular concrete,
- existing flooring with glazed tiles, cement-based and resin paving, homogeneous tiles,,
- underfloor heating systems,
- cement and synthetic resin-based waterproofing products,
- cast asphalt screeds,
- rigid wood substrates.

Suitable for gypsum-based plasters and anhydrite-based screeds, gypsum-based levelling and self-levelling products, after application of the eco-friendly water-based surface isolation product Primer A Eco.

### Do not use

Do not use to lay recomposed materials subject to thermal expansion; on plastic or resilient materials, metals and on substrates subject to continuous moisture rising.

## Instructions for use

### Preparation of substrates

Substrates must comply with BS 5385, parts 1-5, be compact, free from substances that reduce adhesion such as dust, oil, grease and with no loose material. The substrate must be stable, non-deformable, without cracks and have already completed the curing period of hygrometric shrinkage. Uneven sections must be corrected with suitable smoothing and finishing products such as Keralevel® Eco LR or Keratech® Eco R30. Anhydrite screeds must have a damp content of  $\leq 0.5$  CM-% and be adequately sanded, cleaned using a suitable vacuum cleaner and primed with Primer A Eco. Cement-based screeds must be cured for at least 28 days and have a residual humidity  $\leq 2$  CM-%. Can be laid on mineral screeds prepared using the eco-friendly binder Keracem® Eco after only 24 hrs ( $\leq 3$  CM-%). When laying on screeds containing heating systems, follow the instructions given in the BS 8204 used to test the heating system itself. When under floor heating has been used the residual humidity of anhydrite screeds must be  $\leq 0.3$  CM-%, whereas that of cement screeds must be  $\leq 2$  CM-%. Cast asphalt screeds with well-bonded sand must be cleaned by vacuuming off the excess sand before laying.

### Instruction for use

Prepare H40® Eco Rapid in a clean container, first of all pouring in a quantity of water equal to approximately  $\frac{3}{4}$  of the amount required. Gradually pour the powder into the container, mixing the paste from the bottom upwards with a low-rev (400/min.) electrical mixer. Add more water until the desired consistency is obtained. The mixture must be of smooth consistency and without any lumps. Apply a contact layer of adhesive using the smooth part of the notched trowel. Then apply the adhesive with a suitable, notched trowel for the type and dimensions most appropriate for the format and type of tiles to be used. In environments subject to heavy traffic and in external locations, use the back buttering technique

### Tools

Mixing agitators, toothed spreaders suitable for the formats and types of tiles to be used. Wash tools with water before the product hardens.

## Special notes

When H40® Eco Rapid is mixed with Top Latex Eco As a replacement for mixing water, the deformability requirements for EN 12002 class S2 are met.

On highly absorbent screeds and plasters, apply the eco-friendly water-based surface isolation product Primer A Eco to improve the workability of the adhesive, following the instructions provided on the technical sheet.

Cast asphalt screeds that are not evenly sanded or in which the sand is not well anchored must be primed with Keragrip Eco before laying.

## Technical data compliant with Kerakoll Quality Standard

Appearance	Grey pre-mixed	
Mineralogical nature of inert material	Silicate crystalline	
Grading	$\approx 0 - 500 \mu\text{m}$	
Shelf life	$\approx 6$ months in the original packaging in dry environment	
Pack	Bags 25 kg	
Mixing water	$\approx 7 \ell / 1$ bag 25 kg	
Specific weight of the mixture	$\approx 1,48 \text{ kg/dm}^3$	UNI 7121
Pot Life	$\geq 50$ min.	
Temperature range for application	from $+5^\circ\text{C}$ to $+30^\circ\text{C}$	
Maximum thickness obtainable	$\leq 10$ mm	
Open time	$\geq 30$ min.	EN 1346
Adjustability	$\geq 20$ min.	
Vertical slip	$\leq 0,5$ mm	EN 1308
Foot traffic	$\approx 3$ hrs	
Grouting joints	$\approx 3$ hrs on walls and floors	
Interval before normal use	$\approx 48$ hrs	
Coverage *	$\approx 1,3 \text{ kg/m}^2$ per mm of thickness	
- Toothed spreader 6x6 mm	$\approx 2,6 \text{ kg/m}^2$	
- Toothed spreader 8x8 mm	$\approx 3,4 \text{ kg/m}^2$	
- Toothed spreader 10x10 mm	$\approx 4,3 \text{ kg/m}^2$	

Values taken at  $+23^\circ\text{C}$ , 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.

(\*) Can vary depending on the irregularity of the substrate and the format of the tile.

## Performance High-Tech

Shear adhesion after 28 days:		
- porcelain tile / porcelain tile	≥ 2 N/mm <sup>2</sup>	ANSI A-118.1
Tensile adhesion after 28 days:		
- concrete/porcelain tiles	≥ 2 N/mm <sup>2</sup>	EN 1348
Tensile adhesion after 6 hrs	≥ 0,5N/mm <sup>2</sup>	EN 1348
Durability test:		
- adhesion after heat ageing	≥ 2 N/mm <sup>2</sup>	EN 1348
- adhesion after water immersion	≥ 1 N/mm <sup>2</sup>	EN 1348
- adhesion after freeze-thaw cycles	≥ 1 N/mm <sup>2</sup>	EN 1348
- adhesion after straining cycles	≥ 1 N/mm <sup>2</sup>	SAS Technology
Working temperature	from -40 °C to +90 °C	
Conformity	C2F TE	EN 12004
	EC 1 GEV-EMICODE	Cert. GEV 1876/11.01.02

*Values taken at +23 °C, 50% R.H. and no ventilation. Data may vary depending on specific conditions at the building site.*

## Warning

- **Product for professional use**
- do not use the adhesive to correct substrate irregularities greater than 10 mm
- lay and press tiles onto fresh adhesive, making sure it has not formed a surface skin
- expansion joints must be incorporated as defined in BS 5385, parts 1-5
- protect against direct rain and freezing for at least 12 hrs
- the temperature, ventilation and absorption of the substrate and covering materials, may vary the adhesive workability and setting times
- if necessary, ask for the safety data sheet
- for any other issues, contact the Kerakoll Worldwide Global Service - [info@kerakoll.co.uk](mailto:info@kerakoll.co.uk)

This information was last updated in September 2010; please note that additions and/or amendments 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.