



# BETON H1

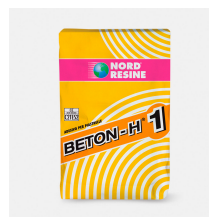
Adhesive for tiles on liquid membranes for exteriors

CE marking:

- EN 12004-1 - Designation: C2TES2

Certifications:

- VOC - Decreto francese 321/2011 - Classe: A+



## TECHNICAL SPECIFICATIONS



## FIELD OF APPLICATION

## APPLICATIONS

### Description

#### BETON H1:

- is a mono-component adhesive for tiles made with cement, sand with selected grain size, resins and special additives.
- is prepared by mixing with the sole addition of water when applied.
- it is highly workable and, once it has cured, boasts excellent resistance to frost.
- is designed for adhesive thicknesses up to 15 mm and for laying small-, medium- and large-size tiles.

### CE marking

- ▶ EN 12004-1 + EN 12004-2

BETON H1 fulfils the requirements of the EN 12004-1 standard "Adhesives for ceramic tiles - Part 1: Requirements, evaluation and verification of the performance persistence, classification and marking" and of the EN 12004-2 standard "Adhesives for ceramic tiles - Part 2: Test methods", with the following designation:

→ C2TES2

- Improved (2) cementitious adhesive for laying on floors and walls, in interiors and exteriors.
- Adhesive with reduced slip (T).
- Adhesive with extended open time (E).
- Highly deformable adhesive (S2).

### Certifications

- ▶ VOC - Decreto francese 321/2011 - Classe: A+

BETON H1 soddisfa i requisiti relativi all'emissione di VOC in ambienti interni, secondo la French Regulation (Decreto n° 2011-321 del 23 marzo 2011 e della Delibera del 19 aprile 2011), rientrando in classe A+ (emissione molto bassa).

### Colour

The product is available in grey.

### Field of application

- BETON H1 is specially formulated for laying floors and ceramic coatings on waterproofing membranes made with BETONGUAINA, BETONGUAINA.S, E.P.LASTIK, NORTIG and similar.
- BETON H1 is suitable for laying with adhesive thickness up to 15 mm
- BETON H1 is suitable for bonding of all types of tiles, including very large ones.

- ▶ Types of substrates

- Terraces, flat roofs and balconies waterproofed with BETONGUAINA, BETONGUAINA.S, E.P. LASTIK, NORTIG and

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other polymeric systems in dispersion.

- Plasterboard, fibre cement walls and cement blocks.
- Exterior walls coated with plaster or mortar.
- Ready-made or conventional screeds and self-levelling cement screeds.
- Gypsum, anhydrite screeds, wood, prior treatment with RICRETE 1C.
- Concrete.
- Radiant floors (except for systems with gypsum fibre slabs).
- Radiant floors with gypsum fibre slabs, prior treatment with RICRETE 1C.
- Tiled floors.

► Types of bondable materials

- Single-fired or double-fired ceramic tiles.
- Stoneware, porcelain stoneware and clinker tiles of any size.
- Ceramic and vitreous mosaics on meshes.
- Stone material (damp-resistant).

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## General preparation of the laying support

- Clean all substrates thoroughly and remove any loose parts, oil, grease, paint and anything else that may prevent proper adhesion of the binder.
- Make sure that the substrates are free of rising damp.

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## Specific preparation of the laying support

► Supports with rising damp

- In case of rising damp, prime the surface with Q-PRIMER or Q-RASANTE primer.

► Chalking supports

- If the surface reveals evident signs of deep chalking, consolidate it using a solvent-based product such as NORPHEN FONDO IGRO.
- If instead the chalking is only superficial, consolidate the surface with 1 coat of NORPHEN SW SOLID diluted 4–5 times in water.

► Supports on which a liquid membrane has been applied (e.g. BETONGUAINA)

- Thoroughly check the condition of the waterproofing membrane before proceeding with the application.
- If it is necessary to reapply BETONGUAINA or BETONGUAINA S, treat the relevant zone with the specific primer FONDO C60 (see Technical Sheet).

► Treatment of the fractionation joints and cracks in the screed

- The screed's fractionation joints and any cracks can be eliminated through stitching with bars featuring enhanced adherence secured with PLAST EPO (see Technical Sheet).

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## Preparing the product

- Pour the mix water (roughly 7.0 l for a 25 kg bag) into a suitable service container.
- Add BETON H1 in powder.
- Mix using a low-speed mixer (500–600 rpm) until obtaining a homogeneous lump-free mixture.
- Leave to rest for roughly 6–7 minutes.
- Mix the adhesive paste again.
- Proceed with the application.

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## Application of the product

► Application of the mix

- When applied on liquid membranes, observe the instructions and current state of the art regarding laying of large-size tiles.
- Laying of ceramic coverings outdoors must always include the presence of a compact and homogeneous layer of adhesive under the tiles.

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This prevents the build-up of water and the potential formation of ice between the laying surface and the tile. Double spreading, therefore, is highly recommended.

► Checks on the mix-open time

BETON H1 is a binder with a theoretical open time of roughly 30 minutes.

However, in critical weather conditions (strong wind and low humidity), the open time can drop to one-half or even one-third of the initial time.

For this reason, it is important to check the condition of the applied mix during use.

- While laying the tiles, check that no film forms.
- If it forms, apply fresh binder by remixing it with the one already applied.
- Do not wet with water.
- Do not add water to the mix in the bucket.

► Grouting

• Grout the gaps using grouts suited to the conditions of use of the coating.

• NORD RESINE recommends always using deformable and impermeable fillers.

To this aim, it is possible to choose between the COLORFILL FLEX cement-based grout (CE CG2 marking) or the EPOSEAL W reactive filler (CE RG-R2T marking).

• Grouting: on walls after 4–8 hours, on floors after 24 hours.

► Joints

Seal, using overcoatable hygro-hardening polymer sealants (BETONSEAL MS 2.0) or coloured non-yellowing hygro-hardening sealants (NORDSIL AC), the following points of the tiled surface:

- The grout lines on the screed's fractionation joints, adequately lined up on the waterproof membrane.
- The tile expansion joints.
- The joint between the floor tiles and the skirting board (if any).

## Consumption

► Variable in relation to the thickness of the adhesive layer:

type of application	minimum consumption	maximum consumption	UoM	dilution
For bonding with adhesive layer up to 3 mm thick	3,5	4,0	kg/m <sup>2</sup>	-
For bonding with adhesive layer up to 9 mm thick	11,0	11,5	kg/m <sup>2</sup>	-

The consumption of adhesive is 1.25 kg/m<sup>2</sup> for 1 mm of thickness.

## Cleaning of tools

- Wet product: clean with water (including a power wash).
- Hardened product: remove mechanically.

## Useful application tips

- Do not apply BETON H1 on frosted surfaces or surfaces that are expected to frost within the next 24 hours.
- Do not apply BETON H1 directly on substrates made with gypsum and anhydrite. In this case, pre-treat the surface with RICRETE 1C.
- Apply preferably at a temperature of the substrate between +5°C and +40°C.
- The coating applied with BETON H1 can be walked over 24–36 hours after application.
- The coating applied with BETON H1 can be used 12–14 days after application.

## Technical data

► PRODUCT IDENTIFICATION DATA	UoM	value
Consistency	-	Powder

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► PRODUCT IDENTIFICATION DATA	UoM	value
Solid residue	-	100%
► APPLICATION DATA AND FINAL PERFORMANCES	UoM	Value
Density of the mix, EN 1015-6	kg/L	1,65 ± 0,05
Grain-size distribution, EN 933-1	mm	≤ 0,315
Mix water	-	27% - 29%
Pot-life of the mix	hours	> 8
Registration time	min	50
Application temperature	°C	from +5 to +40
Operating temperature	°C	from -30 to +90
Minimum curing time for grouting (on wall)	hours	after 4-8
Minimum curing time for grouting (on floor)	hours	after 24
Walk-over time (at +23°C, 50% R.H.)	hours	after 24-36
Minimum commissioning time (at 23°C, 50% R.H.)	days	12 - 14
Frost sensitivity interval (after application)	days	4 - 5
► TECHNICAL DATA IN CONFORMITY TO EN 12004-1 + EN 12004-2	UoM	value
Compressive strength (at 28 days), EN 1015-11	MPa	18,0 ± 0,3
Flexural strength (at 28 days), EN 1015-11	MPa	7,00 ± 0,08
Initial tensile adhesion at 28 days, EN 12004-2	MPa	2,30 ± 0,05
Tensile adhesion after thermal ageing, EN 12004-2	MPa	1,90 ± 0,05
Tensile adhesion after immersion in water, EN 12004-2	MPa	1,10 ± 0,05
Tensile adhesion after freeze-thaw cycles, EN 12004-2	MPa	1,80 ± 0,05
Transversal deformation, EN 12002	-	Highly deformable (S2)
Open time, EN 12004-2	min	30,0 ± 0,5
Fire reaction (Euroclass) for thicknesses below 20 mm, EN 13501-1 (EN 12004, Par. 4.4.2 – CWT)	-	A1 / A1fl

## Storage of the product

- 12 months in the closed original packaging, in a dry and covered place away from direct sunlight, at a temperature between +5°C and +35°C.
- Protect the product against humidity.

## Packages

VARIANT	PACKAGE	ADR	PACKAGES PER PALLET	COMPONENTS
Grey	25 kg bag	NO	48 sacchi	

Legenda ADR:  
NO = merce NON PERICOLOSA

## LEGAL NOTES

Advice on how to use our products corresponds to the current state of our knowledge and does not involve the assumption of any guarantee and / or responsibility for the final result of the work. They do not refore exempt the customer from the responsibility of verifying the suitability of the products for the use and the prefixed purposes through preventive tests. The website [www.nordresine.com](http://www.nordresine.com) contains the latest revision of this datasheet.

## EDITION

Issue date: 03.01.2008

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