

Bioscud Artic

TPO-based, high performance waterproofing liquid membrane. Ideal for flat roofs, bituminous layers and external surfaces, flexible even at very low temperatures. Suitable for the containment of water, resistant to UV light and atmospheric agents.

Solvent-based and ready-to-use, Bioscud Artic can be applied quickly even at low temperatures on large surfaces to create a highly reflective decorative protective waterproofing (Cool Roof) with very high mechanical performance and constant flexibility even at very low temperatures.



Rating 1

1. Specifically designed for decorative waterproofing with permanent flexibility down to -40 °C
2. Easy to apply even at low temperatures (-5 °C) and extremely high environmental humidity
3. Certified for highly reflective protective decoration – Cool Roof (white colour)
4. Broof certificate (t2) (t3) according to EN 13501-5
5. Solvent-based TPO copolymers with very high chemical resistance to agents and water solutions
6. Suitable for the containment of water and resistant to UV light, it does not need protection (cover)

- × Regional Mineral ≥ 30%
- × VOC Low Emission
- × Solvent ≤ 5 g/kg
- ✓ Low Ecological Impact
- × Health Care

Areas of application

→ Use

- Decorative, exposed waterproofing under positive thrust of coverings in general, flat and pitched roofs, old pre-shaped bituminous layers, floors and slabs, canopies, flat roofs, fibre-cement roofs, gutter channels, chimney flashings, roofing details, cornices.
- Decorative, exposed waterproofing under positive thrust of fountains, tankers, reservoirs, planters, hanging gardens, green roofs and tanks (occasional contact maximum limits: HCl 10%, NaCl 10%, NaClO 4%).
- Protection for humidity control of concrete and reinforced concrete structures (horizontal, vertical, inclined surfaces) with high protection from carbonation (low CO₂ permeability).
- Repair and protective decoration Cool Roof (white colour) of old pre-shaped bituminous layers.
- Waterproofing of structures and elements under roofing tiles before fixing with polyurethane foam.
- Surfaces occasionally subject to foot traffic for maintenance work.

Substrates:

- concrete and prefabricated reinforced concrete or fresh concrete castings
- mineral screeds from Keracem Eco range and cement-based screeds
- old, smooth or slated pre-shaped bituminous layers aged at least 6 months
- old TPO, EPDM and PVC layers after sanding and preliminary test (check for the absence of plasticisers)
- aluminium, steel, iron, copper, steel sheets, boards and wooden floors
- fibreglass and polycarbonate after sanding, fibre-cement slabs, dry building systems
- old liquid polyurethane and epoxy sheathings and old aluminium-based varnishes after sanding, specific cleaning and checking the adhesion with a peeling test
- floor and coverings featuring ceramic tiles, cement-based marble tiles, clinker, stone materials

→ Cool Roof

- The use of a highly reflective covering reduces the surface temperature of the roof, especially flat roofs most exposed to direct radiation due to the incidence of sunlight in summer. Thanks to the reduction of solar energy absorption, lower temperatures are reached in the rooms below the roof, thus reducing energy consumption of air conditioning in summer: passive cooling of the buildings occurs, with direct improvement of living and working comfort.
- The reflective properties of the covering decrease over time due to the accumulation of dirt; it is recommended to periodically clean the surface and to reapply the covering when it is not possible to restore the initial whiteness.
- Cool Roof waterproofing using Bioscud Artic reduces the effects of the local "Heat island" (difference in thermal gradient between urban and green areas), resulting in LEED scores.

Do not use:

- during the hottest hours of the day and/or on excessively hot substrates
- in strong sunlight both before and during application
- if imminent rain is forecast
- on floating or not perfectly anchored, damp, wet substrates or substrates subjected to rising damp
- on constantly trafficked surfaces, surfaces subject to heavy traffic or surfaces intended for glued heavy covering
- on lightened cement-based substrates not suitable to withstand direct loads, on substrates containing polystyrene, on insulating panels, on substrates not resistant to xylene
- on light boards, wooden beads or canopies
- for waterproofing in negative thrust
- where heavy objects could be dragged

Instructions for use

→ Substrate requirements

Cured (dimensionally stable):

- screeds in Keracem Eco and Keracem Eco Pronto, waiting time 24 hrs;
- concrete waiting time 6 months unless otherwise specified;
- cement-based screeds or plasters/renderers waiting time 7 days per cm of thickness (good weather).

Undamaged (remove parts or elements not perfectly adherent, verify adhesion and compatibility of any existing coatings).

Compact (to full thickness) and consistent.

Resistant and free from bleeding on the surface.

Dry (R.H. cement-based substrates < 3%), without superficial condensation (always wait for the substrate to dry completely after pressure washing).

Clean: surfaces free of cement slurry, oil-based parting compounds, residues of previous processes, dust; everything that can compromise adhesion must be eliminated (when in doubt, carry out a peeling preliminary test).

Check for any moisture rising or negative thrust: vapour pressures could form at the substrate-waterproofing interface such as to cause debonding and bubbles. To check the residual humidity of substrates, it is recommended to apply a sheet of PE (minimum thickness 0.2 mm) sealed with adhesive tape in an area exposed to the sun and to check for the presence of condensation after 24-48 hrs and/or to measure the humidity content of the substrate using a calcium carbide hygrometer.

→ Preparation of substrates

- Surfaces in concrete and reinforced concrete: carry out the mechanical excavation for preventive treatment of any metal spacers; cutting of the spacers, if any, and passivation with Aquastop Nanosil; prepare the substrate with Bioscud Artic diluted 1:0,5 with Bioscud DL, coverage 300 g/m².
- Cement-based screeds: Check that the residual moisture is less than 3%.

In the presence of fractionizing joints, remove dust and seal with Aquastop Nanosil; bond 20 cm-wide strips of Bioscud TNT with Bioscud Artic near any joint.

If cracks are present, carry out the mechanical excavation, remove dust, seal with Kerarep Eco as shown in the technical data sheet, proceed with quartz coating; bond 20 cm-wide strips of Bioscud TNT with Bioscud Artic near the sealed cracks.

To avoid the swelling of the fabric in the presence of movements, bond the entire surface of the sheet on the back in contact with the surface of the screed; take care of the soft bonding of the sheet near the joints (the sheet must follow the transverse profile and not be bonded while taut).

To conceal joints and cracks previously treated, insert the Bioscud TNT (100 cm) sheet into the first coat of Bioscud Artic while still wet, and cover with one or more coats, waiting for the drying between coats. The use of Bioscud TNT over the whole surface avoids the application of Bioscud TNT strips as previously described.

Apply two or more coats of Bioscud Artic until the total quantity required is reached.

Prepare the substrate with Bioscud Artic diluted 1:0,5 with Bioscud DL, coverage 300 g/m².

- Old pre-shaped bituminous sheaths: to allow the dispersion of oils and plasticizers before the overlay, the sheaths must be completely cured (at least 6 months). If bubbles are present, they should be cut crosswise and after waiting for the substrate to dry, a patch of material of suitable characteristics should be applied. In case of circumscribed portions and/or strips that are not perfectly anchored, any surface varnishes or coatings must be removed and Bioscud BT Fix applied.

In the event of reptation phenomena (folds, wrinkles, debonding of overlaps and curling of the waterproofing membrane starting at the corners of the roof) maintenance or repair work must be carried out before applying the Bioscud Artic system.

Prepare the substrate according to the type of bituminous sheathing:

- Smooth bituminous sheathing: perform a thorough dry cleaning removing dust and environmental residues (pressure washing is recommended in the presence of oil and plasticizer residues, wait until fully dry). application mode, direct without using primer.
- Slated bituminous sheathing: perform a thorough dry cleaning by removing the poorly adhered flakes. Prepare the substrate with Bioscud Artic diluted 1:0,5 with Bioscud DL, coverage 300 g/m².

Instructions for use

- Old ceramic and stone floorings: check the anchoring of the covering, remove any poorly bonded element and any surface coverings (wax, water-repellent products, etc.). Clean thoroughly and specifically according to the intended use of the surfaces; in the impossibility to perform chemical cleaning, perform mechanical abrasion by polishing or scarifying the surface layer, remove dust and proceed with any surface adjustment. Fill any uneven surfaces with suitable products from the Keralevel range. In the presence of substrates with high residual humidity ($\geq 3\%$ measured with a calcium carbide hygrometer taking samples from the base of the screed) provide for the insertion of water vapour exhalers equipped with suitable anchoring systems and a waterproof connection to the extent of 1 every 15 m² approx.; install the exhalers 5-10 days prior to the waterproofing and verify the degree of R.H. before applying in the most distant point between two adjacent exhalers. In the presence of fractionizing joints and/or cracks, carry out the mechanical excavation, remove dust and seal with Aquastop Nanosil; waterproof by bonding 20 cm-wide strips of Bioscud TNT using Bioscud Artic near any joint and sealed crack. To avoid the swelling of the sheet in the presence of movements, bond the entire surface of the sheet on the back in contact with the surface of the floor; take care of the soft bonding of the sheet near the joints (the sheet must follow the transverse profile and not be bonded while taut). To conceal joints and cracks previously treated, insert the Bioscud TNT (100 cm) sheet into the first coat of Bioscud Artic while still wet, and cover with one or more coats, waiting for the drying between coats; the use of Bioscud TNT over the whole surface avoids the application of Bioscud TNT strips as previously described. Apply Bioscud Artic in two coats with total coverage ≥ 2 kg/m². Once the product has hardened, the presence of any bubbles in correspondence with the joints shows an excessive R.H. of the substrate; remove the bubbles, wait for the substrate to dry and reapply the product. application mode, direct without using primer.
 - Galvanized or pre-varnished metal substrates (with a well-anchored final layer): seal any overlaps, areas of movement, irregularities or constructive defects using Aquastop Nanosil. Prepare these areas by bonding Bioscud TNT with Bioscud Artic. Apply two or more coats of Bioscud Artic.
 - On galvanized substrates apply Exence Zinc in advance (remove any oxidation deposit with acid wash and rinse thoroughly). In the presence of damaged or rusty areas it is always necessary to completely remove and proceed with the application of rust-preventive, anti-corrosive paint.
 - Timber substrates: fill any gaps or edges tapped between boards (non-through cracks) with Aquastop Nanosil; wait for the product to cross-link, approx. 24 hrs; sand the impregnated or painted surfaces and perform a thorough cleaning with Keragrip Eco Pulep. Prepare the substrate with Bioscud Artic diluted 1:0,5 with Bioscud DL, coverage 300 g/m².
- Application
- The product is ready to use; if necessary, uniform consistency mixing from the bottom upwards using a low-rev (≈ 400 /min.) helicoidal agitator. Protect the product from frost; it must be stored, even on site, so as to avoid direct sunlight and heat sources.
- Perimeter waterproofing
After preparing the substrate as described above, waterproof the entire perimeter of the surface by bonding 20 cm high strips of Bioscud TNT with Bioscud Artic, overlapping the strips of Bioscud TNT by at least 5/10 cm; take care of contacts with other surfaces, whatever their orientation (columns, pillars, walls, ramps), thresholds, through elements, structures or systems anchored to surfaces, drains and sealing elements; in case of confined spaces and in the impossibility to bond Bioscud TNT, make connection shells in several coats with Aquastop Nanosil or make special pieces with Aquastop BT. Waterproof the structural joints with suitable systems.
 - Waterproofing of bituminous sheathing overlaps
If the Bioscud TNT reinforcement is not used over the entire surface area, it will be necessary to bond 20 cm high strips of Bioscud TNT with Bioscud Artic for each overlap of the bituminous sheathing, providing an overlap between the Bioscud TNT strips of at least 5/10 cm.
 - Waterproofing of TPO, EPDM, PVC surfaces
A preliminary peeling test must be carried out. After sanding a small area, apply a small amount of Bioscud Artic and place a strip of Bioscud TNT over it, while the material is still wet; wait for the membrane to harden completely and carry out the test, particularly:
 - EPDM synthetic layers: reinforce with Bioscud TNT (100 cm);

Instructions for use

- PVC synthetic layers: sand; if the substrate is damaged, worn and micro-perforated, apply one coat of Bioscud Artic diluted using Bioscud DL to 50%; due to the large number of products available on the market, a preventive test is always recommended.

- Surface waterproofing

Apply Bioscud Artic using a solvent-resistant short-bristle roller, brush, hard rubber float (recommended only for rough or porous substrates) or airless (store Bioscud Artic in a closed environment for at least 24 hours before application; if necessary, dilute using Bioscud DL according to the equipment to be used, maximum 20%), taking care to completely cover all previously bonded Bioscud TNT surfaces (horizontal and vertical) to be waterproofed; wait at least 4 hours after applying the first coat and apply the second coat with a pass perpendicular to the first for the optimal distribution of the product. The second coat must be applied after the complete drying of the first one (environmental conditions can significantly alter durations measured under standard conditions) as the presence of solvent may damage the not-quite-dry first coat; on the other hand, long waits between coats cause the reduction of the adhesion values of the next coat.

The use of Bioscud TNT over the entire surface is mandatory in the case of timber substrates, fibre-cement panels, EPDM synthetic layers and in areas with standing water; apply a coat of Bioscud with a roller (average bristle 10-15 mm) taking care to completely cover all surfaces and apply Bioscud TNT over the first coat of product while it is still wet. Press with the unloaded roller to avoid wrinkles and creases. Overlap the reinforcement by at least 10 cm on the perimeter waterproofing and between the sheets; the second coat must be applied after the complete drying of the first one (environmental conditions can significantly alter durations measured under standard conditions); long waits between coats cause the reduction of the adhesion values of the next coat.

Apply two or more coats for a total of at least 2 kg/m² of product, net of the material used for preparing the substrate. Strictly follow the indications as to the minimum weight required to be applied; to check the applied weight, we recommend distributing the cans of the product to be applied on the surfaces at regular intervals of 18 m² per coat.

The product hardens by evaporation of the solvent contained in the emulsion; drying times are constrained by temperature and environmental humidity in the hours following application. If the product is not perfectly dry, it risks being washed away and irreparably deteriorated by weather events or condensation.

Resistance to standing water is depended on perfect drying. Once the product has hardened, the presence of any bubbles shows an excessive R.H. of the substrate; remove the bubbles, wait for the substrate to dry and reapply the product. The stickiness of the surfaces in the moments following application is a feature of the product and does not preclude its final performance; it runs out over time and can be removed by dusting industrial talc or cement.

Special applications:

- Planters and hanging gardens: apply Bioscud Artic reinforced with Bioscud TNT added to the first coat when it is still fresh; provide a sliding layer (high density PP) and a separation layer (non-woven fabric 300 g/m²) before filling (waiting time ≥ 48 hrs); in the presence of tall trees, provide anti-root fabric.
- Tanks and tankers for water containment: carry out the preventive treatment depending on the type of substrate. Create a connection shell with special mortars in the wall-floor and wall-wall corners joints. Provide ventilation to facilitate drying before filling (waiting time ≥ 15 days). Do not use for the containment of drinking water, washing water containing hydrocarbons and/or solvents, sewage, when chemical resistances are required, and when the containment of water at pH < 5 or pH > 7 is required; containment of water is permitted provided the pH requirements are met.

→ Cleaning

The removal of the fresh product is carried out with Bioscud DL, to reuse rolls and brushes soak them in water to avoid drying the product. To remove residues of hardened product use Bioscud DL.

Special notes

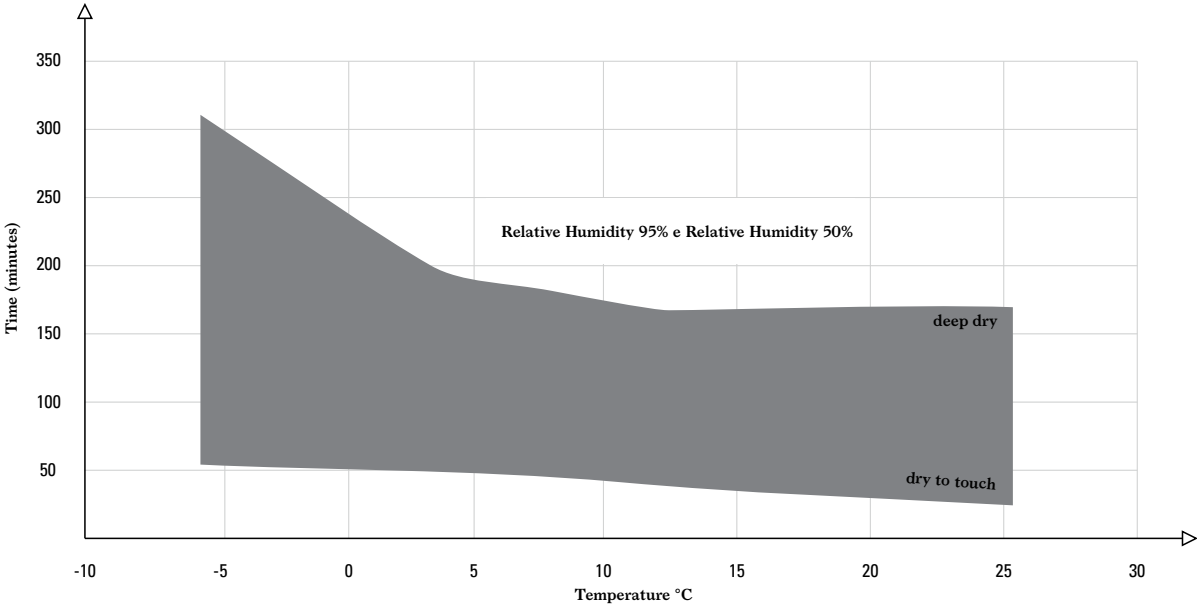
- In excessively hot conditions during the application of the second coat, the solvent contained in Bioscud Artic may cause the hardened first coat to soften with the risk of bubbles formation and/or blowing; do not apply during the hottest hours of the day, on excessively hot substrates and/or in strong sunlight both before and during application

→ In case of constant foot traffic, apply Bioscud Traffic.

→ Reinforcing using Bioscud TNT significantly increases shear strength and crack-bridging performances of the waterproofing, reducing the criticalities of the substrates. Apply Bioscud TNT on the first wet coat of Bioscud Artic and completely cover with the second coat.
- The durability of applications may be expanded by installing a reinforcement or increasing the number of Bioscud Artic coats, applied following the indications provided in the technical data sheet.

Unscheduled maintenance: to restore aesthetic and functional continuity following wear, clean carefully the surfaces and apply the product with a roller as described.

→ **Drying**
Drying times according to ASTM D 5895-03 (Dry-Time test)
See the Technical Data table



Colour chart

white (RAL 9010)	
grey (RAL 7034)	
red (RAL 3013)	
green (RAL 6017)	

Shades shown are purely indicative.

Certificates and marks



Abstract

Waterproofing of the substrate – Supply and certified laying of single-component, solvent-based, TPO-based, high performance waterproofing liquid membrane; flexible even at very low temperatures, suitable for the containment of water, resistant to UV light and atmospheric agents, such as Bioscud Artic by Kerakoll Spa, CE-marked and compliant with the performance requirements of Standard EN 1504-2.

Technical Data compliant with Kerakoll Quality Standard	
Appearance	coloured paste
Colours *	white (RAL 9010) - grey (RAL 7034) - red (RAL 3013) - green (RAL 6017)
Specific weight	≈ 1.15 kg/dm ³
Chemical nature	solvent-based thermoplastic copolymers
Mineralogical nature of inert material	crystalline carbonate
Apparent volumetric mass	≈ 1.40 ± 0.05 kg/dm ³
Solid content	≈ 57%
Shelf life	≈ 18 months from production in the original sealed packaging
Warning	protect from frost and avoid direct exposure to sunlight and store away from sources of heat
Pack	18 kg buckets
Dynamic viscosity	≈ 9000 mPas · sec (S 0.5; 20 rpm at +20° C) Brookfield method
Only to be used:	
- temperature	from -5 °C to +35 °C
- humidity	≤ 85%
Drying time (dry-time test)	ASTM D 5859-03
+30 °C and 50% relative humidity:	
- dry to touch	30 min
- deep dry	3 hrs
+15 °C and 50% relative humidity:	
- dry to touch	45 min.
- deep dry	3 hrs
+5 °C and 50% relative humidity:	
- dry to touch	1 hr
- deep dry	3.5 hrs
+30 °C and 95% relative humidity:	
- dry to touch	30 min
- deep dry	3 hrs
+15 °C and 95% relative humidity:	
- dry to touch	45 min.
- deep dry	3 hrs
+5 °C and 50% relative humidity:	
- dry to touch	1 hr
- deep dry	3.5 hrs

Technical Data compliant with Kerakoll Quality Standard		
Dust-free drying	≥ 1 hr	ISO 9117-3
Time required until fully rain-proof (in windy conditions):		
- at +23 °C / 50% R.H.	≥ 1 hr	
- at +10 °C / 80% R.H.	≥ 2 hrs	
Waiting time between 1 st and 2 nd coat	≥ 4 hrs	
Waiting time for complete drying	≥ 8 hrs	
Minimum thickness required	≥ 0.9 mm dried product corresponding to ≈ 2 kg/m² fresh product	
Interval before normal use	≈ 24 hrs / ≈ 5 days (containment of water)	
Coverage**	≥ 2 kg/m²	

Values taken at +23 °C, 50% R.H. and no ventilation.
* RAL references are indicative.
** Consumption may increase on very rough substrates.

Performance		
HIGH-TECH		
Water-resistance:		
- watertightness	≥ 0.6 bar	EN 1928
- 1.5 bar per 7 days	no penetration	EN 14891
Elongation:		
- at F max	≥ 500%	ISO 527-1
- break warp (+23 °C)	≥ 500%	ISO 527-1
- break warp (-5 °C)	≥ 220%	ISO 527-1
- break warp (-20 °C)	≥ 108%	ISO 527-1
Adhesion:		
- on concrete	≥ 3 MPa	EN 1542
- on sheet metal	≥ 2 MPa	EN 1542
- on ceramic flooring	≥ 6 MPa	EN 1542
Resistance to static load (punching)	20 kg (rigid and soft substrates)	EN 12730
Impact resistance	IR 20	EN 6272-2
Cold flexibility	-40 °C	EN 1109
Fire classification	Broof (t2) (t3)	EN 13501-5
Working temperature	from -40 °C to +90 °C	

Performance		
Covering for the protection of concrete surfaces compliant to standard EN 1504-2		
Conformity	PI-MC-IR	EN 1504-2(C)
CO ₂ permeability	S _D > 50 m	EN 1062-6
Permeability to water vapour	class II, 5 m ≤ S _D ≤ 50 m	EN 7783-1 EN 7783-2
Capillary absorption and water permeability	w < 0.1 kg/m ² ·h ^{0.5}	EN 1062-3
Direct tensile adhesive strength concrete products	> 0.8 MPa	EN 1542
Thermal compatibility:		
- freeze-thaw cycles (in the presence of de-icing salts)	≥ 0.8 MPa	EN 13687-3
- thunderstorm cycles (thermal shock)	≥ 0.8 MPa	EN 13687-3
Exposure to environmental atmospheric agents	no visible defect	EN 1062-11
Dynamic Crack-Bridging at -20 °C	class A5	EN 1062-7
Adhesion (a)	≥ 1.3 MPa ^(a)	EN 24624
Adhesion after freeze/thaw	≥ 1.2 MPa ^(a)	EN 4624
Adhesion after sun/rain	≥ 1.1 MPa ^(a)	UNI 10686
Accelerated UVB ageing /condensation and water-resistance	no appearance of humidity	UNI 10686
Accelerated UV ageing	no appearance of humidity	UNI 10686
Resistance to washing	≥ 5000 cycles	EN 24624
(a) substrate cohesive breaking		
Cool Roof		
White Bioscud Artic:		
- solar reflectance	0.846 (Cool Roof DM 26/06/15 SR > 0.65)	ASTM C 1549-09
- solar absorption	0.154	ASTM C 1549-09
- emissivity	0.909	EN 15976/2011
- Solar Reflectance Index (SRI)	106.4 – 106.0 – 105.8	ASTM E 1980-01
Solar reflectance certificate - Cool Roof	Suitable	Unimore ETR-20-0458 Cert.

Warning

- Product for professional use

→ abide by any standards and national regulations

→ protect from rain and condensation for 2 hrs

→ resistance to standing water is depended on perfect drying after application

→ do not add binders or other materials to the product
- do not apply on dirty, loose, warm surfaces or surfaces exposed to strong sunlight, or in case of impending rain

→ if necessary, ask for the safety data sheet

→ for any other issues, contact the Kerakoll Worldwide Global Service +39 0536 811 516 - globalservice@kerakoll.com



The Rating classifications refer to the GreenBuilding Rating Manual 2012. This information was last updated in March 2025 (ref. GBR Data Report - 03.25); 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. 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 of 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.