

# Bioscud BT

**Rainproof, thixotropic, bituminous, waterproofing protection for roofs, bituminous layers and concrete products, elastomeric, resistant to UV light, atmospheric agents and standing water, ideal for use in GreenBuilding. Single-component, safeguards the health of both operators and the environment.**

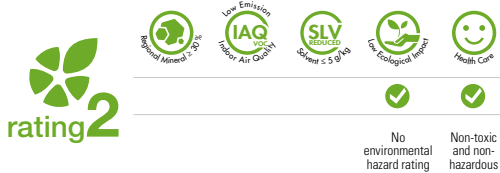
Bioscud BT is specific for waterproofing of roofs, structures, concrete products and for the functional restoration of old pre-shaped bituminous layers, without using the flame; it allows for fast and safe interventions on any substrate, including large-sized ones.



## GREENBUILDING RATING®

### Bioscud BT

- Category: Organic Mineral products
- Waterproofing



RATING SYSTEM ACCREDITED BY CERTIFICATION BODY SGS

## ECO NOTES

- Water-based, limits the risk of loads that could be harmful and dangerous to the environment during storage and transportation
- Improved on-site safety guaranteed

## PRODUCT STRENGTHS

- Specific to restore the watertightness of old roofs in pre-shaped bituminous layers
- Bituminous emulsion with high level of elasticity for highly deformable substrates when covering
- Ready-to-use, water-based
- Suitable for the containment of water, resistant to standing water, UV light and atmospheric agents
- It performs continuous waterproofing avoiding the discontinuity of pre-shaped layer systems and without using the flame



## AREAS OF USE

### Use

- Waterproofing in positive thrust of concrete and reinforced concrete structures and elements: coverings in general, flat and pitched roofs, floors, slabs, walls, foundations, plinths, gutter channels, chimney flashings, roofing details, chimneys, canopies, screeds, plasters, tanks, tankers, planters, hanging gardens, even in the presence of standing water.
- Protection for humidity control of concrete and reinforced concrete structures (horizontal, vertical, inclined surfaces) with high protection from carbonation (low CO<sub>2</sub> permeability).
- Repair of old pre-shaped bituminous layers.
- Bonding of solvent-resistant insulating panels on absorbent cement-based substrates
- Waterproofing of structures and elements under roofing tiles before fixing with polyurethane foam.
- Surfaces occasionally subject to foot traffic for maintenance work.

### Substrates:

- old pre-shaped bituminous layers, steel sheets, floors and timber boards
- concrete and prefabricated reinforced concrete or fresh concrete castings
- mineral screeds from Keracem® Eco range and cement-based screeds
- cement plasters and cement-lime mortar
- fibreglass after sanding down, fibre-cement slabs, external dry building systems
- aluminium, steel, iron, copper

### Do not use

- in case of unfavourable drying conditions or in case of impending rain
- in case of exposure to strong sunlight or on warm surfaces
- 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 insulating panels
- when high levels of acid and base resistance is required
- where heavy objects could be dragged
- on old PVC sheaths

## 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;
- screeds or cement-based plasters/renders after waiting for 7 days (in good season) per cm of thickness.

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, without superficial condensation (wait for the substrate to totally dry 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- peeling).

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.

### Preparation of substrates

Restore weakened or missing parts, or honeycombs, and fill any uneven surfaces with suitable products; do not use Bioscud BT to correct uneven areas and do not apply in high thicknesses.

Check the presence of suitable camber and rainwater collection and disposal systems.

### Preparation

The product is ready to use; if necessary, uniform consistency mixing from the bottom upwards using a low-rev ( $\approx 400$ /min.) helicoidal agitator.

Protect the product from frost; it must be stored, even on site, so as to avoid direct sunlight and heat sources.

### Application

Waterproof the entire perimeter of the surface by bonding bands of Bioscud TNT 20 cm high with Bioscud BT: take care of contacts with other surfaces whatever their orientation (columns, pillars, walls, ramps), thresholds, through elements, structures or systems anchored on 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 Neutro Color or make special pieces with Aquastop BT.

Waterproof the structural joints with suitable systems.

Apply Bioscud BT using a roller (average bristle 10-15 mm), brush, hard rubber float (recommended only for rough or porous substrates) or airless (dilute using water according to the equipment to be used, minimum 10%), taking care to completely cover all surfaces of bonded non-woven fabric; wait at least 12 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); 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/m<sup>2</sup> of product, net of the material used for bonding Bioscud TNT. Strictly follow the indications as to the minimum weight required to be applied; to check the applied weight, we recommend distributing the product cans to be applied on the surfaces at regular intervals of 5 or 18 m<sup>2</sup> per coat depending on the packaging.

The product hardens by evaporation of the water 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.

For all listed cases, apply two or more coats of Bioscud BT with total coverage  $\geq 2$  kg/m<sup>2</sup>.

**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). Mechanically remove any wrinkles, crimps, bubbles, excessive overlaps and imperfectly anchored edges; remove varnish or not perfectly anchored decorations. Restore the adhesion of corners, edges, overlaps, strips and debonded portions with Bioscud BT FIX. Remove any bubbling and fill uneven areas with suitable products; prepare the substrate depending on its type and apply Bioscud BT reinforced with Bioscud TNT in two coats on the exposed areas.

**Smooth sheaths:** 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); in the presence of old well-anchored organic or aluminium-based varnishes apply Bioscud Primer ( $\approx 50$ -100 ml/m<sup>2</sup>) avoiding accumulation of water.

Apply two or more coats of Bioscud BT; near any cuts, holes, heavily deteriorated areas reinforce with Bioscud TNT.

**Slated sheaths:** perform a thorough dry cleaning by removing the poorly adhered flakes. Apply one coat of Bioscud BT diluted using water to 50% to fix superficial flakes. Apply two or more coats of Bioscud BT; near any cuts, holes, heavily deteriorated areas reinforce with Bioscud TNT.

**Surfaces in concrete and reinforced concrete, exterior foundation walls, foundations:** on highly compact surfaces such as prefabricated and quartz cement floorings, apply Bioscud Primer (approx. 200-300 ml/m<sup>2</sup>) avoiding accumulation of water. On poorly dusting substrates apply one coat of Bioscud BT diluted using water to 50% (coverage equal to  $\approx 300$  g/m<sup>2</sup> not to be considered in the verification of the total weight to be applied). Apply two or more coats of Bioscud BT.

**Exterior foundation walls:** mechanically break any metal spacers and carry out the preliminary treatment, cutting of the spacers and passivation with Bioscud BT FIX; repair uneven areas with suitable products. Provide adequate separation and mechanical protection systems before filling (waiting time  $\geq 48$  hrs).

**Planters and hanging gardens:** apply Bioscud BT reinforced with Bioscud TNT added to the first coat when it is still fresh, provide a sliding layer (high density PE or PP) and a separation layer (non-woven fabric 300 g/m<sup>2</sup>) before filling (waiting time  $\geq 48$  hrs); in the presence of tall trees, provide anti-root fabric.

**Tanks and tankers for water containment:** carry out the preliminary treatment of any metal spacers. 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  $\geq 15$  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 sewage is permitted provided the pH requirements are met.

## INSTRUCTIONS FOR USE

**Cement-based screeds:** apply one coat of Bioscud BT diluted using water to 50% (coverage equal to  $\approx 300 \text{ g/m}^2$  not to be considered in the verification of the total weight to be applied). In the presence of fractionizing joints and/or cracks, carry out the mechanical excavation, remove dust and seal with Neutro Color; bond 20 cm-wide strips of Bioscud TNT with Bioscud BT near any joint and sealed crack. 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 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 until the total quantity required is reached.

**Galvanized or pre-varnished metal substrates (with a well-anchored final layer):** seal any overlaps, areas of movement, irregularities or constructive defects using Neutro Color. Prepare these areas by bonding Bioscud TNT with Bioscud BT. Apply two or more coats of Bioscud BT. On oxidised galvanized substrates remove the 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 Neutro Color. Sand the impregnated or painted surfaces and perform a thorough cleaning with Keragrip Eco Pulep. Apply Bioscud Primer ( $\approx 250 \text{ ml/m}^2$ ) preventing accumulation of water. Apply Bioscud BT in two or more coats providing for the addition of Bioscud TNT to the first coat when it is still fresh over the entire surface.

### Cleaning

The removal of the fresh product is carried out with water, to reuse rolls and brushes soak them in water to avoid drying the product. For the final cleaning of tools use a solvent such as turpentine.

## SPECIAL NOTES

In the presence of substrates with high residual humidity ( $\geq 5\%$  measured with a 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  $15 \text{ m}^2$  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 climatic conditions of high humidity and/or low temperature drying times are lengthened, delaying foot traffic and significantly increasing the risk of being washed away in case of possible rainfall or in the presence of condensation; to decrease drying times, apply in several coats of max  $0.5 \text{ kg/m}^2$ .

In case of constant foot traffic, apply Bioscud Traffic only if Bioscud BT has been reinforced with Bioscud TNT.

**Covering:** to reduce the absorption of heat, to protect-decorate the waterproofing layer and ensure greater durability, apply, after 10 - 15 days, Bioscud, coloured rainproof waterproofing protection for flat and pitched roofs, bituminous layers and external surfaces, flexible, resistant to UV light, atmospheric agents and standing water. Bioscud can suffer, over time, the phenomenon of "alligatoring" caused by the different coefficient of thermal expansion with respect to the underlying Bioscud BT; the phenomenon does not affect the watertightness but exclusively the aesthetic properties and can be restored with the ordinary maintenance of Bioscud.

The reinforcement with Bioscud TNT, applied on the first wet coat of Bioscud BT and completely covered with the second coat, significantly increases shear strength and Crack Bridging performances of the waterproofing, reducing the criticalities of the substrates. The durability of applications may be expanded by installing a reinforcement or increasing the number of 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 according to the methods indicated.

## ABSTRACT

*Waterproofing of the wall-floor joints and of the fractionizing-expansion joints – Supply and laying of polyester staple fibre non-woven fabric for the Bioscud TNT reinforcement, to be bonded with rainproof, thixotropic bituminous waterproofing protection for roofs, bituminous layers and concrete products, elastic, resistant to UV light, atmospheric agents and standing water such as Bioscud BT by Kerakoll Spa (seal in advance the joints with a single-component bituminous elasto-plastic thixotropic solvent-based adhesive sealant, for bonding and waterproof sealing on concrete, glass, metals, wood, porcelain tiles, PVC such as Bioscud BT FIX by Kerakoll Spa).  
Waterproofing of the substrate – Supply and laying of certified rainproof, thixotropic bituminous waterproofing protection for roofs, bituminous layers and concrete products, elastic, resistant to UV light, atmospheric agents and standing water Bioscud BT by Kerakoll Spa.*

## TECHNICAL DATA COMPLIANT WITH KERAKOLL QUALITY STANDARD

Appearance	black paste
Chemical nature	bituminous emulsion
Mineralogical nature of inert material	silicate - crystalline
Apparent volumetric mass	≈ 1.05 ± 0.05 kg/dm <sup>3</sup>
Solid content	≥ 54% ± 2%
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	16 / 4 kg buckets
Dynamic viscosity	≈ 20.000 mPas · sec (S06 30 rpm at +20° C)
Only to be used:	
- temperature	from +5 °C to +35 °C
- humidity	≤ 80%
Waiting time between 1 <sup>st</sup> and 2 <sup>nd</sup> coat	≥ 12 hrs
Minimum thickness required	≥ 1 mm dried product corresponding to ≈ 2 kg/m <sup>2</sup> fresh product
Interval before normal use	≈ 48 hrs / ≈ 15 days (stagnant water)
Coverage	≈ 2 kg/m <sup>2</sup>

Values taken at +23 °C, 50% R.H. and no ventilation.

## PERFORMANCE

<b>HIGH-TECH</b>		
Elongation at break	≥ 1000% ± 200%	ISO 527-1
Cold flexibility	-10 °C	UNI 1109
Adhesion to sheet-metal	≥ 0.8 MPa	EN 1542
Water-resistance	≥ 1 bar	UNI EN 1928
CO <sub>2</sub> permeability	S <sub>D</sub> > 50 m	EN 1062-6
Permeability to water vapour	class II; 5 m ≤ S <sub>D</sub> ≤ 50 m <sup>2</sup>	EN 7783-1 EN 7783-2
Capillary absorption and water permeability	w < 0.1 kg/m <sup>2</sup> h <sup>0.5</sup>	EN 1062-3
Direct tensile adhesive strength concrete products	> 0.8 N/mm <sup>2</sup>	EN 1542
Exposure to environmental atmospheric agents	no visible defect	EN 1062-11
Crack Bridging:		
- at +23 °C	class A5	EN 1062-7
- at 0 °C	class A5	EN 1062-7
- at -5 °C	class A5	EN 1062-7
Working temperature	from -10 °C to +90 °C	
Conformity	PI-MC-IR	EN 1504-2(C)

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**
- abide by any standards and national regulations
- protect from rain and condensation for 48 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](mailto:globalservice@kerakoll.com)

The Rating classifications refer to the GreenBuilding Rating® Manual 2013. This information was last updated in November 2020 (ref. GBR Data Report - 1220); 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.



**KERAKOLL**  
The GreenBuilding Company

KERAKOLL S.p.a.  
Via dell'Artigianato, 9 - 41049 Sassuolo (MO) Italy  
Tel +39 0536 816 511 - Fax +39 0536 816 581  
[info@kerakoll.com](mailto:info@kerakoll.com) - [www.kerakoll.com](http://www.kerakoll.com)