



PRODUCT DESCRIPTION

AMPHIBIA 3000 GRIP is an EPDM PRE/POST-APPLIED waterproofing membrane, reactive to contact with water, SELF-REPAIRING, SELF-SEALING and SELF-FASTENING to the concrete.

This is composed of a co-extruded, multi-layer, polymer, continuous coat, with differentiated function for total water tightness of underground structures against water seepage.

It is composed of 3 layers with expansive capacity differentiated by the following features:

- **TIGHT BARRIER**, WATERTIGHT layer
- **CORE**, self-sealing and self-repairing super expansive safety layer, even in the event of a puncture
- **ACTIVE BARRIER**, hydro-reactive layer with controlled expansion, prevents side water seepage and seals the overlaps.

Moreover it is provided with a calibrated non-woven fabric on the inner face, side in contact with fresh concrete, which allows the mechanical adhesion of the membrane to the structure.



PRODUCT APPLICATION

- Waterproofing and protection of concrete underground structures such as residential and industrial buildings, shopping malls, public works etc...which require close and continuous contact between waterproofing product and structure (foundation slabs and walls, against slurry walls, piling or disposable formwork, internal tanking of existing structures)
- It can also be used in other structures such as channels, tanks, purification systems, tunnels, etc...
- Anti-damp protection for concrete structures built at ground level such as underfloor screeds

ADVANTAGES

- Absolute impermeability with no side seepage of water
- Immediate mechanical protection, self-repairing also in case of accidental perforations
- High resistance to hydraulic load
- High flexibility and capacity to bridge cracks
- Cold application with easy visual inspection of correct installation
- Self-sealing overlappings
- Total adhesion to the reinforced concrete structure
- Easy passage of connecting reinforcements
- Resistance to aggressive natural agents contained in the ground
- Also usable in the presence of salt water
- Water tightness of the system even when water is not constantly present
- Easy and quick application, easily adapts to the different configurations of the supports
- Enables to create the PROTECTIVE SCREED (recommended for large surfaces with exposure to



AMPHIBIA 3000 GRIP

processing for several days)

- Possibility of complete coupling with other Volteco waterproofing systems
- Protection against radon, methane and steam barrier
- Protection against roots

PREPARATION AND APPLICATION APPLICATION GUIDE - INTRODUCTION

Surfaces that are to be waterproofed can be damp, not necessarily clean but must not have great protrusions, cavities or continuous water flows that could compromise the continuity and sealing process of the overlaps.

Remove any stagnant water.

The sheets can be folded and cut in any direction.

The AMPHIBIA side stamped with "CONCRETE SIDE" is ALWAYS installed in contact with the concrete structure that needs to be waterproofed.

The overlaps between the sheets must be at least 25 cm from each construction joint.

Avoid cross overlaps.

Sealing of spacer-blocks

PRE-APPLIED application.

The formwork spacer holes need to be sealed with the relative plastic AMPHIBIA STOPPER in different shape according to their diameter:

- in case of tubes diam. 20-22 make an AKTI-VO 201 edge (see relevant technical data sheet) on the stopper fins near the disc
- in case of tubes diam. 24 make two adjacent AKTI-VO 201 beads on the stopper fins near the disc
- in case of tubes of different diameters or metal spacers on traditional wooden formworks, use AMPHIBIA 3000 STRIP fixed with BI MASTIC (see relevant technical data sheet).

POST-APPLIED application

- in the case of spacer tubes, depending on their type and diameter, plug the hole with the special AMPHIBIA STOPPER or specific plug supplied with spacers, or saturate the hole in the surface with BI MASTIC or SPIDY 15 (see relevant technical data sheet) in order to make the laying surface flat and free of holes

- in the case of metal spacers for traditional wooden formwork, cut them flush with the masonry and, if necessary, grout them with BI MASTIC or SPIDY 15 in order to make the laying surface flat and free of holes

Sealing overlappings

To prevent the overlaps of sheets from opening during subsequent processes (e.g. in the case of pre-applied installations: reinforcement installation and concrete casting), they must be sealed with suitable protection.

Wait 1-2 hours after applying AMPHIBIA 3000 GRIP before proceeding with sealing.

See options in the following layout.

| Product | Definition | Type of protection | Fields of application |
|---|---|--|--|
| <i>Amphibia Safety Tape</i> | Adhesive tape to protect the overlaps | Acrylic adhesive + film | <ul style="list-style-type: none"> • In foundation beds with Amphibia application before concreting |
| <i>Bi Mastic + Amphibia Lap Seal</i> | High performance elastic adhesive mastic for joining overlaps + Butyl adhesive tape for overlap gas-tightness | Modified silanol adhesive + butyl adhesive with film | <ul style="list-style-type: none"> • To protect overlaps when used against gas ingress, in particular radon and methane gas (see fig. 8) |
| <i>Bi Mastic (See related technical data sheet)</i> | High performance elastic adhesive mastic for joining overlaps | Modified silanol adhesive | <ul style="list-style-type: none"> • In case of pre-applied installation with Amphibia installed against retaining walls/provisional structures and wherever tenacious adhesion of overlaps is required • In case of pre-applied installation with Amphibia installed within the formwork, combined with stapling if needed • in case of masonries or horizontal structures with post-applied Amphibia installation |

Laying the product under slabs (pre-applied installation)

Even out the installation surface with lean concrete casting which must be sufficiently smooth and



AMPHIBIA 3000 GRIP

uniform.

Apply AMPHIBIA 3000 GRIP with the non-textile surface facing upwards, with staggered joints and overlapping the edges by 5 cm.

Begin application by laying AMPHIBIA 3000 GRIP H.90 along the entire perimeter lengthwise on the formwork, securing it at the edge of the formwork by means of a stapler (staples with 6-7 mm long points) and overhanging it 5 cm beyond the level of the finished bed.

Seal vertical overlaps against formwork with BI MASTIC, if necessary supplementing the fixing with staples.

Reinforce the corners with AKTI-VO 201 or BI MASTIC.

Then complete applying AMPHIBIA 3000 GRIP, sealing all the overlaps between the sheets with AMPHIBIA SAFETY TAPE.

Use BI MASTIC wherever a more tenacious adhesion of the overlaps is needed (Fig. 7).

Laying the product on vertical surfaces

- PRE-APPLIED (For walls at a height to be built through installation in formwork): apply a strip of AMPHIBIA 3000 GRIP to the raft foundation toe, up to the external limit of the reinforced concrete wall which will be built, sealing the overlaps with BI MASTIC and joining it to any AMPHIBIA 3000 GRIP from the slab using the specific corner profile AMPHIBIA PRESSURE CORNER 90° (Fig.1), following application of an AKTI-VO 201 strip or alternatively BI MASTIC (see relevant technical data sheets) in the underlying overlap between the two sheets.

Fasten the AMPHIBIA PRESSURE CORNER 270° corner profile (Fig. 2) to the external limit of the future wall, above the freshly-applied AMPHIBIA strip, by applying an AKTI-VO 201 edge or alternatively BI MASTIC as the application area.

Install the formwork outside the profile (FIG. 3) and proceed to apply AMPHIBIA 3000 GRIP on the formwork, with the non-woven textile surface stamped with "CONCRETE SIDE" facing the casting to be executed, pre-cutting it to the size required to cover the wall.

Overlap the joints between sheets by 5 cm and seal them with BI MASTIC, with possible integration of overlap fastening via stapler (staples with 6-7 mm length tips).

Reinforce edges with AKTI-VO 201 or BI MASTIC and seal each through-body with AKTI-VO 201.

Connect the AMPHIBIA 3000 GRIP foot to the AMPHIBIA PRESSURE CORNER 270° corner profile along the adhesive side of the profile (Fig. 4).

Then lay the reinforcements, internal formwork and the relative casting.

After removing the formwork, seal the spacer holes (see introduction) with AKTI-VO 201 combined with the designated plastic AMPHIBIA STOPPER or with AMPHIBIA 3000 STRIP in the case of metal spacers on traditional wooden formwork.

- PRE-APPLIED (For walls to be built against diaphragms, piling, sheet piles retaining walls or existing structures): even out the surfaces by eliminating rough parts and large cavities to achieve a sufficiently flat installation surface. To this end, it is also possible to use panels in rigid non-biodegradable material.

In case of water inflow filtering through temporary works, seal with TAP 3/I-PLUG mortars or set up temporary drainage systems behind the waterproofing.

Pre-cut the membrane to the size required to cover the wall.

Install AMPHIBIA 3000 GRIP with the non-textile side stamped with "CONCRETE SIDE" facing the concrete casting to be executed.

Reinforce edges with AKTI-VO 201 or BI MASTIC and seal each through-body with AKTI-VO 201.

Join at the foot of the wall with the AMPHIBIA 3000 GRIP coming from the bed.

Overlap all of the joints between sheets by 5 cm and seal them with BI MASTIC (Fig. 5).

Then lay the reinforcements, formwork and related concrete casting.

- POST-APPLIED: create a connecting fillet at the foot of the wall with SPIDY 15 (see the related technical data sheet), preventively cleaning the base and removing any loose cement portions.

Pre-cut the membrane to the size required to cover the wall.

Apply AMPHIBIA 3000 GRIP with the printed side facing the operator.

Overlap the joints between sheets by 5 cm and seal them with BI MASTIC.

Mechanically secure the top edge of the membrane to the wall using the AMPHIBIA PRESSURE LINE metal profile (Fig. 5).

Connect AMPHIBIA 3000 GRIP at the edge of the foundation nut with AMPHIBIA from the slab by means of the AMPHIBIA PRESSURE CORNER 90° metal angle profile fixed with nails (Fig. 6) after laying a curb of AKTI-VO 201 or alternatively BI MASTIC in the underlying overlap between the two sheets.

Reinforce the corners with AKTI-VO 201 or BI MASTIC and seal each bushing body with AKTI-VO 201, integrating pieces of membrane on the bodies.

Protect AMPHIBIA 3000 before backfilling (see "Warnings").



Watch the product video

YOUTUBE VIDEOReferences available at www.volteco.com**WARNINGS - IMPORTANT NOTES**

Compact and homogeneous concrete castings, which will form the structure, adequately sized for the operating and hydraulic loads, will have to be poured, both horizontally and vertically, on AMPHIBIA 3000 GRIP (pre-applied installation)

Protect AMPHIBIA 3000 GRIP with 250 g/m² non-woven textile or with polystyrene/polyurethane insulating panel and **backfill with soil, compacting in layers in order to obtain a uniform confinement of the membrane.**

Every joint (expansion, rotation, translation) must be sealed with suitable profiles for VOLTECO joints. Do not apply the product if the temperature is higher than +35 °C or lower than +0 °C.

In case of pre-applied horizontal installation, the exposure to heavy rain, where no suitable protective screed has been put in place, can lead to the formation of gel on the surface, making it slippery.

AMPHIBIA 3000 GRIP is a professional product. VOLTECO always recommends checking the technical data sheet before use.

We recommend having installation carried out by qualified installers.

For special design or execution situations, contact the Volteco Technical Service.

PACKAGING AND STORAGE

| - | AMPHIBIA 3000 GRIP H. 1.80 | AMPHIBIA 3000 GRIP H. 0.90 |
|-----------------|--|--|
| Roll dimensions | m 1.80 X 20 (in 70.87 X 787.40) | m 0.9 X 10 (in 35.43 X 393.70) |
| Equivalent area | 36 m ² (387.5 ft ²) | 9 m ² (96.9 ft ²) |
| Roll weight | 59 kg (130 lbs) - Tolerance +/- 5% | 15 kg (33 lbs) - Tolerance +/- 5% |

ACCESSORIES

| | |
|--|--|
| <i>Amphibia Pressure Line</i> | - |
| <i>Amphibia Pressure Corner</i> Coated on surface at 90°/270° with AMPHIBIA 3000 | Steel straight profile coated on one site with Amphibia 3000 Length = 1.5 m (59.06 in) Height = 5 cm (1.97 in) Package = 10 pcs |
| <i>Amphibia Safety Tape</i> | Adhesive tape to protect overlaps Package = 25 m roll (984.25 in) |
| <i>Amphibia Lap Seal</i> | Butyl adhesive tape for overlap gas-tightness Package = 10 m roll (393.70 in) |
| <i>Amphibia Stopper</i> | Protective stopper to close formwork holes Package = bag 50 pcs |
| <i>Bi Mastic</i> | High performance deformable adhesive mastic |

**ACCESSORIES**

-
Package = 10 unipack box

The products must be stored in a dry place protected from sun and humidity.
PREFERABLY HORIZONTALLY.
DO NOT STACK THE PALLETS.

PHYSICAL AND TECHNICAL SPECIFICATIONS

| Specification | Standards | Values AMPHIBIA 3000 GRIP |
|---|--|---|
| Visible defects | UNI EN 1850-2 | No visible defect |
| Straightness | UNI EN 1848-2 | 70 mm |
| Mass per unit area | UNI EN 1849-2 | 1.6 ± 0.2 kg/m ² |
| Thickness | UNI EN 1849-2 | 1,6 ± 0,2 mm * 1,4 mm membrane only |
| Water tightness | UNI EN 1928 B (700 KPa/24 hrs) | No passage |
| Impact resistance | UNI EN 12691 | Method A: 300 mm Method B: 1750 mm |
| Resistance to chemical agents and water tightness | UNI EN 1847 (CaOH ₂ - 28 days) UNI EN 1928 B | Test Passed |
| Resistance to artificial ageing and water tightness | UNI EN 1296 (12 weeks 70°C) UNI EN 1928 B | Test Passed |
| Tearing strength | UNI EN 12310-1 | Longitudinal: >450 N Transversal: >450 N |
| Tensile strength | UNI EN 12311-2 (A method) | Longitudinal: >300 N/50mm Transversal: >250 N/50mm |
| Elongation at breaking point | UNI EN 12311-2 (A method) | Longitudinal: > 500% Transversal: > 500% |
| Water vapour permeability | UNI EN 1931 | Sd: 412 m Flow: 1.12 E-9 (kg/m ²)*s |
| Resistance to static load | UNI EN 12730 (method B/24 h) | 20 kg |
| Shear resistance of joints with BI MASTIC | UNI EN 12317-2 | 472 N |
| Fire resistance | UNI EN 13501-2 | Class E |

Additional specifications (Not requested for CE marking)

| Specification | Standards | Values |
|--|-----------------|---|
| Resistance to lateral water migration | DIN EN 12390-8 | 700 kPa |
| Resistance to hydrostatic pressure | ASTM D 5385 | 700 kPa |
| Overlap resistance to hydrostatic pressure | ASTM D 5385 | 700 kPa |
| Radon diffusion coefficient | ISO/TS 11665-13 | Membrane: 3.5 E-11 m ² /s Overlap: 2.8 E-11 m ² /s |
| Methane transmission rate | ISO 15105-1 | Membrane: 348 ml/m ² x d Overlap: 394 ml/m ² x d |
| Resistance to root penetration | EN 14416 | Test Passed |

National approvals**Certificate**

| | |
|---|---|
| Rapport d'enquête technique (FR) | SOCOTEC FRANCE S.A. Report (ETN) n° 220268080000023 (15/03/2023) |
| BBA Technical approval for construction | BBA Agrément Certificate 20/5771 of 13/09/2024 |
| Attestation of conformity | DUBAI CENTRAL LABORATORY Report n° VA20060085 of 06/09/2020 |

Specification**Certification**

| | |
|--|---|
| Environmental Product Declaration 0298 (EPD) | EPDItaly 0298 (30/05/2027) www.epditaly.it |
|--|---|

The quoted data are obtained in a laboratory at +20°C and 60% RH.

SAFETY

Refer to the related Safety Data Sheet.



AMPHIBIA 3000 GRIP

| | |
|--|--|
| CE | VOLTECO S.p.a Via delle Industrie, 47 - 31050 Ponzano Veneto (I) |
| 17 DOP 0029 EN 13967:2012 1370-CPR-1294 AMPHIBIA 3000 GRIP Flexible membranes for waterproofing - Plastic and rubber waterproof membranes including plastic and rubber membranes intended to stop rising damp from the ground | |
| Reaction to fire: Class E Water tightness: Test passed (24h/700 kPa) Tearing strength (longitudinal): > 450 N Tearing strength (transverse): > 450 N Impact resistance: Method A: 300 mm - Method B: 1750 mm Tensile strength (longitudinal): >300 N/50 mm Tensile strength (transverse): >250 N/50 mm Resistance to static load: 20 kg Durability - Water tightness after exposure to chemical substances: Test passed Durability - Water tightness after artificial ageing: Test passed Joint strength: 472 N Hazardous substances: See SDS | |

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LEGAL NOTES

Note for buyer/installer:
 This document prepared by Volteco S.p.A. is provided as an aid and guideline for the buyer/installer.
 This does not take into consideration the details of each single operational context, for which Volteco S.p.A. will not be held liable.
 This does not change and does not extend the obligations of Volteco S.p.A.
 It may vary and the installer is therefore required to update his/her information prior to each application by referring to www.volteco.com.
 The above clarifications extend to the pre-post-sales technical/commercial information of the commercial network.

ANNEXES



AMPHIBIA 3000 GRIP

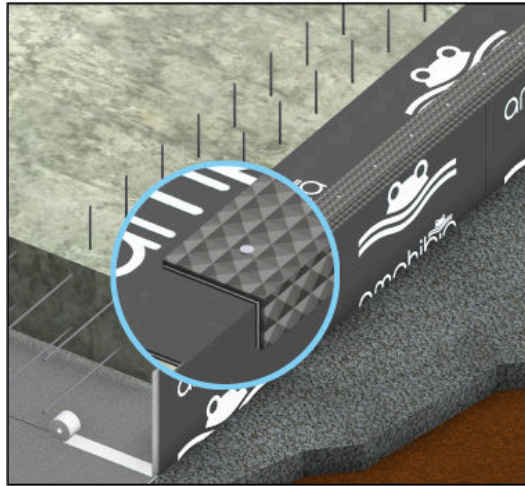


FIG. 1

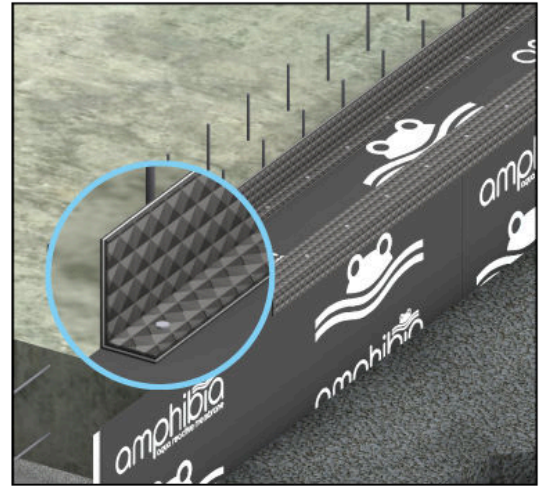


FIG. 2

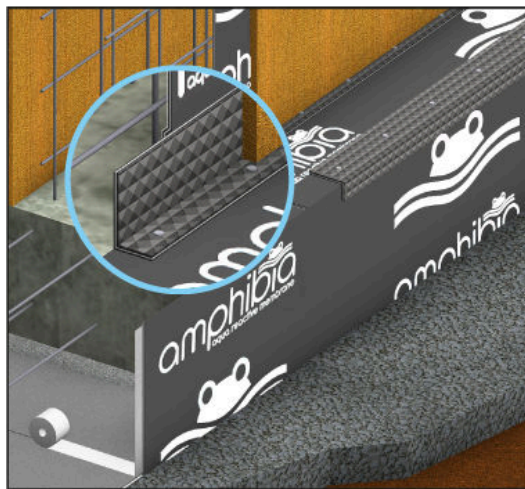


FIG. 3

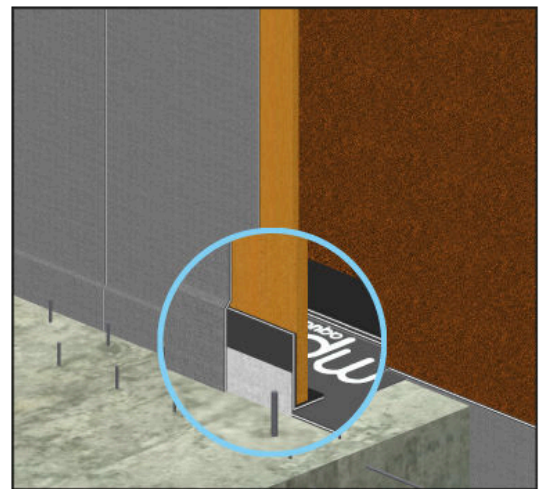


FIG. 4

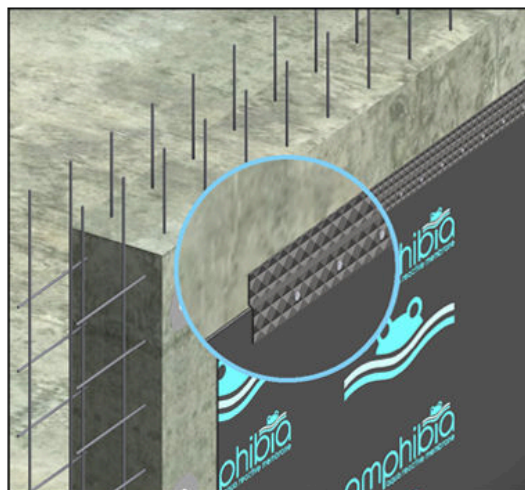


FIG. 5

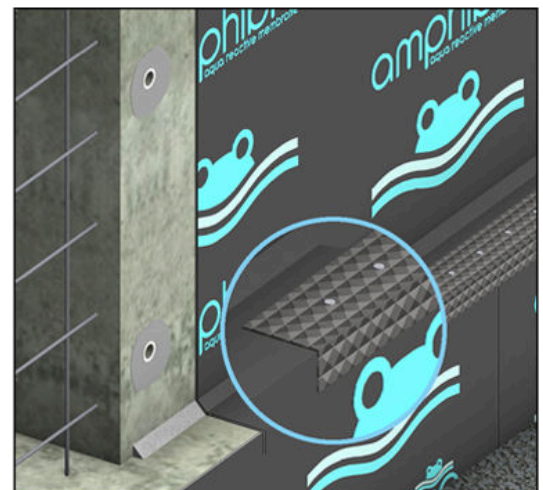


FIG. 6

