



APPLICATION INSTRUCTIONS

TREMproof AMPHIBIA™

Below Slab-On-Grade

1. PURPOSE

- 1.1 The purpose of this document is to establish uniform procedures for installing TREMproof Amphibia membranes below slab-on-grade.
- 1.2 The techniques involved may require modifications to adjust to job site conditions. Tremco recognizes that site specific conditions, weather patterns, contractor preferences and membrane detailing may require deviation or alteration from these prescribed installation procedures. When such circumstances exist on a project, Tremco recommends that the local Tremco Sales Representative or Technical Services be contacted for assistance as required.

2. PURPOSE

- 2.1 This document will provide the necessary instructions for the application of TREMproof Amphibia membranes to qualify for the manufacturer's warranty.

3. POSSIBLE SYSTEM COMPONENTS

- 3.1 Recommended materials and their use are as follow. For more information on the following materials, please contact your local Tremco Sales Representative or visit our website for product specific data sheet and application instructions at www.tremcosealants.com.

- TREMproof Amphibia Waterproofing Membrane
- Tremco BG Grip Tape
- AKTI-VO 201 Hydro-Reactive Mastic, or other approved materia
- Superstop Waterstop
- Paraterm™ Bar
- Parastick N Dry®
- Paraprimer®
- Paragranular®
- Paramastic®
- Dymonic® 100 Sealant
- TREMDrain® Series Drainage Mat

4. LIMITATIONS

- 4.1 Due to the variables present when installing shotcrete, all shotcrete applications must be first reviewed and approved by Tremco prior to installation.
- 4.2 TREMproof Amphibia should not be installed over stagnant or ponding water, snow, ice, frost, or contaminated substrates.
- 4.3 Reinforced concrete structures need to be designed to withstand hydrostatic pressures.

5. STORAGE

- 5.1 Store in a dry place protected for UV and humidity, preferably in a horizontal position. Do not double stack pallets.

6. SUBSTRATE PREPARATION

- 6.1 TREMproof Amphibia can be installed in conjunction with any of the four typical slab-on-grade systems with equal performance. These include simple slabs, mat slabs on grade, mat slabs with protection slabs over top, and mat slabs with mud slabs beneath.
- 6.2 Waterproofing best-practices dictate that in hydrostatic conditions, Amphibia should be installed beneath foundation elements like footers, structural mat slabs, and/or but not limited to grade beams. On projects where hydrostatic conditions will not occur, Amphibia should be installed on top of or around structural foundation elements. Please consult your Tremco Sales or Technical Representative for questionable conditions prior to installation.
- 6.3 The subgrade should be prepared by either compacting the original earth, compacting a granular base (typically No. 57 Stone, or, average particle size of $\sim 3/4$ "), or by installing a mud slab, meeting a minimum modified 85% proctor density per the engineer's design.
- 6.4 All geotechnical, drainage, annular/equipment spaces, or other ancillary elements that will reside beneath the slab to be waterproofed shall be completed prior to the installation of Amphibia. Examples include pilings, sump pits, elevator pits, or other elements that would typically be constructed prior to placement of a structural mat slab.

7. DETAIL WORK

- 7.1 All penetrations shall be secured prior to detailing. For single pipe penetrations, refer to Tremco details. Multiple penetrations shall be spaced a minimum of 6" (15 cm) apart to allow for proper detailing. If 6" (15 cm) spacing is not available, contact Tremco for a job-specific recommendation. If sealed or cored pipes are present, contact Tremco.
- 7.2 For structural subgrade penetrations (like pile caps/heads), please refer to Tremco's detail drawings for treatment options.
- 7.3 Following good concrete industry practices, a waterstop should be used at all construction cold joints. Install Superstop a minimum of 2" (5 cm) from face of wall or floor slab. It is recommended to apply Paraprimer to clean surface prior to adhering Superstop on vertical surfaces. Primer is also recommended for horizontal surfaces. Remove release paper from Superstop to expose adhesive. Butt ends together and fasten with nails and 1" (2.5 cm) washer every 12" (30 cm) O.C. if installing in keyways. When attaching to thru wall or slab penetrations, please consult Tremco's library of detail drawings; some applications require secondary fastening (i.e.—a wire or zip tie securing the Superstop around the penetration if applicable).

8. MEMBRANE APPLICATION

- 8.1 TREMproof Amphibia shall be installed with the white, non-woven "fleece" fabric layer facing the installer. Pre-cut the membrane to the size required – the sheets can be folded and cut in any direction.
- 8.2 All seams for below slab on grade applications should be overlapped a minimum of 2" (5cm). Gub a 1/2" (12mm) bead of Dymonic 100 sealant between the overlaps. The membrane features a red printed dashed line, which is 2" (5cm) from the sheet edge for quick reference when installing. Installation of Dymonic 100 sealant between the overlaps will ensure the highest performing seam. For applications where Amphibia is being installed directly over soil, granular fill, or the absence of a mud slab, this seam treatment is mandatory. For applications where Amphibia is being installed over a mud slab, this seam treatment is optional. The seam shall then be compressed with a 2"x2" (5cm x 5cm) steel seam roller using pressure sufficient to adequately flatten/spread the sealant bead, taking care not to completely drive sealant out of overlap. The Tremco BG Grip Tape should be adhered to the white, non-woven "fleece" fabric layer facing the installer and pressed or rolled down to ensure full adhesion. The white fleece Grip side must be clean, dry, and free of debris prior to installation of BG Grip Tape. Care must be taken to minimize wrinkles, fishmouths, or other irregularities in the adhered tape to maximize seam performance.
- 8.3 Seams should be allowed to cure in accordance with Tremco's published Dymonic 100 instructions prior to concrete placement. Dymonic 100 generally cures at a rate of 3/32" per day at 75 °F (24 °C) and 50% RH. It will skin in 2 hrs. and be tack free in 6 to 8 hrs. The cure time will increase as temperatures and/or humidity decrease. A typical rule of thumb is one additional day for every 10 °F decrease in temperature.
- 8.4 If additional seam strength is required for horizontal installations to receive concrete, the use of soil nails and/or crown/carton staples is permitted. The number of additional mechanical fasteners should be minimized to ensure the highest system performance. Carton staples should have 1-1/4" wide crowns and 5/8" or 3/4" long legs. Carton stapler should be setup to curl staple legs creating a clinch-fit connection between adjacent membrane sheets.

- 8.5 For non-continuous pours, ensure that Amphibia sheets extend 12' to 18" beyond the termination of any placement. This will ensure that a sufficient length of membrane is accessible for subsequent tie-in or termination procedures.
- 8.6 Please refer to Tremco's detail drawings for various penetration detailing options.
- 8.7 Terminate around perimeter or tie-in to wall application of system. Ensure that the Amphibia extends 12" to 18" beyond the termination of the concrete placement. Please refer to Tremco's detail drawings for various termination and/or tie-in options.
- 8.8 If required, install the proper TREMDrain drainage mat. This should be done in accordance with the associated application instructions, which are available on Tremco's website. Contact your Tremco Sales Representative or Technical Services for assistance in making the proper selection for the application.
- 8.9 Concrete Placement
 - 8.8.1 Repair any damaged TREMproof Amphibia prior to concrete placement, after steel reinforcement is tied in place. Since damage severity and type can vary greatly from job to job, please contact your local Tremco Sales or Technical representative for a case-specific repair recommendation.
 - 8.8.2 Concrete to be placed should not be dropped from higher than 4' (1.2M) directly on TREMproof Amphibia. Tremco highly recommends that concrete be placed or pumped onto membrane as close to the surface as possible to minimize the chance of damage.

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