



## CLAY-TITE™ Waterproofing Membrane

DATA SHEET NO. 5123-075

### DESCRIPTION

CLAY-TITE is a dual layer waterproofing consisting of virgin HDPE (20 mil), sodium bentonite, and a protective layer consisting of a non-woven polypropylene. The HDPE provides the first layer of waterproofing, while the bentonite's self-sealing capabilities ensure positive puncture protection under hydrostatic conditions. The polypropylene fabric protects the bentonite from direct installation of shotcrete.

### USES

Designed for use below-grade, CLAY-TITE is equally effective in installations where the waterproofing is pre-applied prior to pouring of the concrete or when used for standard applications. CLAY-TITE can be used in both vertical and horizontal applications.

### FEATURES/BENEFITS

- Provides a tough, durable waterproof seal.
- Self seals under hydrostatic conditions.
- Outstanding performance when used in high water head conditions.
- Can be installed in almost all weather conditions.
- Can be installed on green or damp surfaces.

### PACKAGING

1.1 m x 6.6 m (3.5' x 21.5') or 7 m<sup>2</sup> (75 SF) standard rolls.

### STORAGE AND HANDLING

Protect from moisture. Store on skid or pallet; cover with polyethylene or tarp.

### APPLICATION

**Surface Preparation** ... Surface must be smooth, sound, and void-free prior to installation of CLAY-TITE. All openings >25.4 mm (1") must be detailed using plywood, grout, or alternate method to provide a sound substrate. Remove all sharp protrusion greater than 6.4 mm (1/4").

For areas in which the ground water has a high sodium level (sea water or brackish water), contact W. R. MEADOWS technical services for recommendations. CLAY-TITE HSL from W. R. MEADOWS may be required in this installation. A water test may be needed to determine the suitability of the membrane for use in specific ground conditions.

**Blindside Installation** ... Ensure that surface to be waterproofed is sound and void-free. The use of MEL-DRAIN 5035 from W. R. MEADOWS is recommended for all applications. Mechanically attach MEL-DRAIN to soil retention. CLAY-TITE can be installed either vertically or horizontally with the HDPE surface towards the drainage board. Mechanically affix CLAY-TITE across the top every 508 mm (20"). Lap all seams a minimum of 101.6 mm (4"). If installed in the horizontal direction, ensure that seams are shingled in a manner to shed water. All seams should be nailed every 0.6 m (2') and a staple placed between the nails. Apply CLAY-TITE MASTIC from W. R. MEADOWS over all fasteners. For detailed instructions, refer to CLAY-TITE BLINDSIDE INSTALLATION GUIDELINE available at [www.wrmeadows.com](http://www.wrmeadows.com).

**Backfilled Wall** ... Install CLAY-TITE with the bentonite side towards the concrete. At the top of the membrane, affix TERMINATION BAR from W. R. MEADOWS. All lap seams must overlap at least 101.6 mm (4"). Make sure to shingle all overlaps to shed water. Mechanically attach all seams at 0.9 m (3') on center and apply a 101.6 mm (4") strip of MEL-ROL® from W. R. MEADOWS on joint. For detailed instructions, refer to CLAY-TITE BACKFILLED WALL INSTALLATION GUIDELINES available at [www.wrmeadows.com](http://www.wrmeadows.com).

**Underslab** ... CLAY-TITE is designed to act both as a waterproofing and vapour barrier membrane when installed underslab. Place membrane bentonite side up on the mud slab or over compacted sub-grade. Overlap and stagger seams at least 101.6 mm (4"). Protect from flooding prior to pouring of concrete. Refer to ACI 302.1R-04: Chapter 4 – Site Preparation and Placing Environment for sub-grade preparation. For detailed instructions, refer to CLAY-TITE UNDERSLAB INSTALLATION GUIDELINES available at [www.wrmeadows.com](http://www.wrmeadows.com).

Under constant hydrostatic head conditions, all joints and seams are to be detailed using CLAY-TITE BITUMINOUS MASTIC from W. R. MEADOWS in place of CLAY-TITE MASTIC.

**Penetrations and Protrusions** ... Fill void around penetration with CLAY-TITE GRANULAR PACK from W. R. MEADOWS or CLAY-TITE BITUMINOUS MASTIC. Trowel CLAY-TITE BITUMINOUS MASTIC covering the penetration. Using a 152.4 mm (6") cut strip of CLAY-TITE, form a collar around the penetration and hold in place with fasteners. Install WATERSTOP EC from W. R. MEADOWS around the penetration.

Continued over ...

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**TECHNICAL DATA**

PROPERTY	TEST METHOD	TEST RESULTS
Membrane		White 20-mil Virgin Resin HDPE
Bentonite		Sodium Montmorillonite
Weight		4.89 kg/m <sup>2</sup> (1 lb./ft. <sup>2</sup> )
Puncture Resistance	ASTM E154-88, Section 10	77.3 kg (170 lb.)
Tensile Strength, Membrane	ASTM D638	MD: 25.2 MPa (3660 psi) TD: 25.2 MPa (3650 psi)
% Elongation at Break	ASTM D638, Type I dogbone	>700%
Crack Bridging		3/8" (9.6 mm) Crack
Puncture Resistance	ASTM E 154	> 934 N (> 210 lb)
Resistance to Hydrostatic Head	ASTM D751, Procedure A	52.9 m (174') of water
Water Vapor Permeability	ASTM E96-80	0.53 x 10 <sup>-13</sup> cm/sec 0.84 ng/ m <sup>2</sup> .s.Pa 0.033 Perms (grains/ft. <sup>2</sup> * hr * inHg)
Toxicity		Low. Do not ingest.
Staining		No known incompatibilities
Chemical Resistance		Extremely high resistance to chemicals and gases.
Freeze/Thaw Cycles		No effect before or after installation.
Installation Temperatures	ASTM D746, ASTM D1238	-40° - 65.5° C

**PRECAUTIONS**

CLAY-TITE installation must be confined by a minimum of 24 lb./ft.<sup>2</sup>. Keep CLAY-TITE dry; protect from exposure to the elements. Do not install in areas of ponding water or ice. For installation temperatures below 40° F (4° C), use CLAY-TITE BITUMINOUS MASTIC in place of CLAY-TITE MASTIC.

**MASTERFORMAT NUMBER AND TITLE**

07 17 16 - Bentonite Composite Sheet Waterproofing

**LEED INFORMATION**

May help contribute to LEED credits:

- EAp2: Minimum Energy Performance
- EAc2: Optimize Energy Performance
- MRc9: Construction and Demolition Waste Management

For most current data sheet, further LEED information, and SDS, visit [www.wrmeadows.com](http://www.wrmeadows.com).