

# INSTALLATION GUIDELINES CLAY-TITE™ - BACKFILLED WALLS

This document has been created as an addendum to our CLAY-TITE technical data sheet to provide information regarding the application of CLAY-TITE bentonite waterproofing membrane when installed on backfilled walls. Following are the typical installation instructions recommended by W. R. MEADOWS. It is important to review each application as there may be situations that may require this procedure to be modified based on the project requirements. If this situation arises, please contact W. R. MEADOWS Technical Service.

## PRODUCTS REQUIRED

- CLAY-TITE waterproofing membrane: dual layer waterproofing membrane consisting of virgin HDPE (20 mil), sodium bentonite, and a protective layer consisting of a non-woven polypropylene
- CLAY-TITE MASTIC: to be used in situations below the water table or when temperatures are going to be below 40° F (4° C)
- CLAY-TITE ADHESIVE: water-based acrylic adhesive for seams/waterstop to be used when above the water table and temperatures are above 40° F (4° C)
- WATERSTOP EC: regular version waterstop containing bentonite
- WATERSTOP EC PLUS: combination of hydrophilic rubber and bentonite for use in applications below the water table
- CLAY-TITE GRANULAR PACK: 30 lb. (13.6 kg) bags of bentonite for coves and other detailing
- PMPC TAPE: to be used to tape over all exposed fasteners and seams
- MEL-DRAIN™ drainage board
- TERMINATION BAR

## LIMITATIONS

- CLAY-TITE products are required to be installed in situations where a minimum compaction/confinement of 24 psf (117.18 kg/m<sup>2</sup>) can be achieved.
- Do not install CLAY-TITE products over areas where standing water, snow, or ice is present.
- For areas in which the ground water has a high sodium level (sea water or brackish water), contact W. R. MEADOWS Technical Services prior to installation. CLAY-TITE HSR from W. R. MEADOWS can be used in this installation. A water test may be needed to determine the suitability of the membrane for use in specific ground conditions.

## STORAGE

- Protect from moisture.
- Store on a skid or pallet and cover with polyethylene or tarp.
- Do not double stack pallets.
- Prevent hydration of bentonite until the membrane is installed and under recommended compaction.

## SUBSTRATE PREPARATION

Concrete surface should be clean, dry, smooth, and free of any substances that will prevent placement of CLAY-TITE or affect its performance.

CLAY-TITE can be installed over damp surfaces or green concrete.

## DETAILING

### INSIDE AND OUTSIDE CORNERS

1. Install a continuous 2" (50 mm) cant of CLAY-TITE GRANULAR PACK at all vertical/horizontal joints, which includes the wall/footing joint.
2. Install a continuous 1" (25 mm) cant of CLAY-TITE MASTIC at all vertical inside corners.



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## PENETRATIONS

1. Fill voids with concrete grout or CLAY-TITE MASTIC and trowel around penetration, ensuring all areas are completely filled.
2. Cut CLAY-TITE strips 6" (152.4 mm) wide to wrap the pipe and cut flanges across this strip to aid in wrapping the strip around the penetration and fasten into place.
3. Install WATERSTOP EC or WATERSTOP EC PLUS (below water table) around penetration and press into installed CLAY-TITE membrane.

## CONSTRUCTION JOINTS

1. Install WATERSTOP EC or WATERSTOP EC PLUS (below water table) a minimum of 2" (50.8 mm) from face of wall.
2. Prior to installation, apply CLAY-TITE MASTIC in all areas to receive WATERSTOP EC.
3. Remove release paper to expose adhesive on WATERSTOP EC.
4. Fasten with nails and washers every 12" (300 mm) O.C.
5. For subsequent applications of WATERSTOP EC, butt ends of waterstop together to ensure continuity.

## MEMBRANE INSTALLATION

1. CLAY-TITE can be installed vertically or horizontally with the bentonite side towards the concrete substrate and the HDPE side facing out.
2. Mechanically affix CLAY-TITE across the top using TERMINATION BAR and fasteners every 12" (300 mm) O.C.
3. Lap all seams a minimum of 1 ½" (38 mm). If CLAY-TITE is installed in the horizontal direction, ensure that seams are shingled in a manner to shed water.

4. Ensure seams do not occur at inside and outside corners and have them a minimum of 12" (304.8 mm) from these areas.
5. All seams should be nailed every 24" (609.6 mm) O.C. with a nail and fastener and then stapled in between the nails every 6" (152.4 mm) O.C.
6. Apply CLAY-TITE MASTIC over all fasteners.
7. Tape all seams with PMPC TAPE centered over the seam joint and roll press into place.

## PROTECTION

1. Prior to backfilling and to provide a positive drainage system, install MEL-DRAIN 5035 drainage board according to installation instructions.
2. Backfill immediately using care to avoid damaging waterproofing membrane system.
3. Compact backfill to ensure compression/compaction of 24 psf (117.18 kg/m<sup>2</sup>).

