



INSTALLATION GUIDELINES

Blindside Lagging Applications

TripleSeal is the ultimate multi-layered waterproofing system. Bentonite clay is laminated on both sides of a virgin HDPE membrane and covered with a thin scrim of polypropylene to protect the bentonite from exposure to the elements. Swelling of the bentonite clay will form a waterproof seal on both sides of the HDPE sheet. TripleSeal is designed for the toughest projects such as blindside or under floor applications, even under hydrostatic conditions. Because both bentonite and the virgin HDPE membrane are very stable, TripleSeal waterproofing provides ongoing protection for your building.

GENERAL INSTRUCTIONS

- a. Protect TripleSeal from rain and elements—keep covered until installed.
- b. Ensure storage area is free from standing water and is properly drained.
- c. TripleSeal may be installed over uncured, damp or frozen surfaces.
- d. Use a safety knife to cut and trim the TripleSeal.
- e. Contact TEGRASEAL whenever conditions of acid, alkali, or salt brine exist.
- f. TripleSeal requires confinement on both sides of the membrane to form the waterproof barrier. TripleSeal should have a reasonably flat and structurally sound surface to form waterproof seal against (e.g. a split concrete slab, or concrete on the inside and HDPE/drainage board on the lagging side).

PREPARATION:

1. Steel piles and wood lagging
 - a. Remove all sharp protrusions, mud, debris, ice or any other materials that would interfere with TripleSeal's performance.
 - b. Cover any exposed reinforcing steel.
 - c. Flatten the nails from the lagging boards.
 - d. Fill irregularities and voids between the lagging boards with concrete grout, plywood, TegraSeal Mastic or Granular Pack (Detail 0702-60).
 - e. Cover lagging boards and soldier piles vertically with drainage layer or with 20 mil HDPE and 4" overlap (Detail 0702-02).
2. Utility Penetrations. (Detail 0702-40)
 - a. Fill voids with concrete grout, TegraSeal Granular Pack and/or Mastic.
 - b. For drainage board, cut circle in barrier the size of utility penetration. For HDPE backing, cut star shape or 8-piece pie shape into membrane. Ensure a tight fit around the utility penetrations.
 - c. Trowel TegraSeal Mastic to fill voids and to cover penetration.
 - d. Cut TripleSeal strip: 6" wide to wrap the pipe with 2" overlap. Every 1", cut 3" flanges across the TripleSeal strip (Figure 1).
 - e. Wrap the strip around the pipe with flanges spreading out on the membrane.
 - f. Hold the collar with pipe clamp, Seam Tape or fasteners.
3. Integrate below-slab, below-footings, and/or other structures waterproofing membranes with lagging wall membrane to create the complete waterproofing envelope (Details 0702-10, 0702-11).

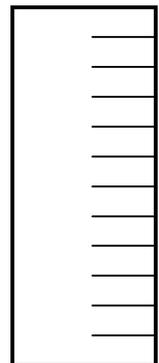


Figure 1

TRIPLESEAL INSTALLATION:

4. Install TripleSeal horizontally (Detail 0702-10).
 - a. Hang TripleSeal with nails and washers 24" O.C. within 1" from the horizontal seam.
 - b. Stagger and overlap seams at least 4".
 - c. Secure vertical edge every 20" O.C.
 - d. Secure horizontal overlaps with staples every 6".
5. Overlap the seams at least 4" (Detail 0702-10, 0702-11). Fasten as described previously.
6. Use double layer of TripleSeal membrane horizontally over construction joints (Details 0702-20, 0702-21) and vertically at the corners (Detail 0702-22).
7. Complete installation at utility penetrations (Detail 0702-40)
 - a. Cut out a circle the diameter of the pipe in the center of a 2' x 2' square of TripleSeal.
 - b. Cover the pipe penetration with the TripleSeal square (if necessary, cut slit in center circle) and fasten.
 - c. Fill voids with TegraSeal mastic or granular packs
8. Lagging Tiebacks (Details 0702-41).
 - a. Thoroughly coat all tieback penetrations with TegraSeal Mastic.
 - b. Fill TegraSeal Tieback Cover with TegraSeal Mastic.
 - c. Fasten the Tieback Cover over tie-backs with nails.

Note: Contact TegraSeal Technical Service for alternative tieback designs.
9. Soldier Piles (Details 0702-01, 0702-41).
 - a. Cut a hole for each tie-back in the vertical TripleSeal sheet.
 - b. Hang TripleSeal down the soldier pile, matching the Tieback Cover with the holes, while ensuring a 4" overlap with horizontal membranes and a 4" shingle overlap on vertical sheets.
 - c. Secure with nails.
 - d. Fill voids (particularly around the Tieback Covers) with TegraSeal Mastic or Granular Pack.
10. Terminations
 - a. At grade: Finish Tripleseal and the drainage sheet/HDPE layers with a continuous strip of TegraSeal Termination Bar nailed every 12" O.C. and optional flashing (Details 0702-30).

Note: Make certain that waterproofing extends up to or above finish grade.
 - b. Intersecting deck: Finish TripleSeal with a 6" overhang of horizontal membrane past the construction joint (Details 0702-30, 0702-33).

CONCRETE:

11. Shotcrete walls: Concrete spray must not be directed towards the membrane seam. Shotcrete must be sprayed in a direction closing all overlap seams.
12. Poured walls: Concrete should not be dropped from higher than 3 feet (1.22 m).