



INSTALLATION GUIDELINES

Under Slab Applications

TripleSeal is the ultimate multi-layered waterproofing system. Bentonite clay is laminated on both sides of virgin HDPE membrane and covered with a thin scrim of polypropylene. This system forms three distinct and separate waterproofing layers. It combines the swelling properties of bentonite clay with the strength and protection of virgin HDPE sheets 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 flat and structurally sound surface to form waterproof seal against (e.g. a split concrete slab, or concrete above and HDPE on grade below).
- g. If inclement weather is expected before the slab is poured, spray on TegraSeal WaterPellent to cover bentonite and delay the bentonite layer from premature activation.

PREPARATION:

1. Prepare substrate/base/substratum/subgrade
 - a. Level and compact the original earth, or a granular base.
2. HDPE vapor barrier. (Detail 0704-10)
 - a. Cover compacted base with 10 or 20 mil HDPE. If aggregate base, use 20 mil HDPE. If clean earth fill, 10 mil HDPE is acceptable.
 - b. Cut HDPE around any penetrations.
 - c. Over lap seams 3-4”.
 - d. Staple the seam every 6”-12”.
3. Mud Slab (an alternative installation, if specified)—Install as recommended by the Architect and Engineer. (Detail 0704-10)
4. Utility Penetrations. (Detail 0704-50)
 - a. Pour cant of TegraSeal Granular Pack around the penetration.
 - b. Cut TripleSeal strip: 6” wide to wrap the pipe with 2”overlap. Every 1”, cut 3” flanges across the TripleSeal strip (Figure 1).
 - c. Wrap the strip around the pipe with flanges spreading out on the membrane.
 - d. Hold the collar with pipe clamp or Seam Tape and/or fasteners.
 - e. Trowel TegraSeal Mastic to fill voids and to cover penetration.

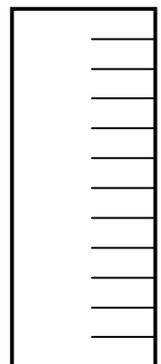


Figure 1

TRIPLESEAL INSTALLATION:

Integrate the below-slab waterproofing membrane with other structures waterproofing membranes to enclose the entire waterproofing envelope

5. Tie-in under slab to backfilled wall with footings (Detail 0704-20)
 - a. Footings- wrap inside the forms for the footing with 20 mil HDPE.
 - b. Wrap TripleSeal membrane up the footing above the form to provide for proper tie-in to vertical membrane. Overlap the seams 4" as a shingle.
6. Tie-in mud slab to lagging walls (Detail 0704-21)
 - a. Extend membrane upward on the lagging wall a minimum 6" or above the cold joint from mud slabs to provide for proper overlaps with the vertical membrane.
7. Tie-in under slab to lagging walls with footings, (Details 0704-22).
 - a. Footings- hang the 20 mil HDPE down the lagging wall and inside the forms for the footings.
 - b. Concrete piling (if applicable)- Cut hole in 20 mil HDPE tightly around the piling. Pour cant and fill void area around piling with TegraSeal Granular Pack and/or TegraSeal Mastic.
 - c. Wrap the form with TripleSeal membrane, extending up the lagging wall above the cold joint and up the footing above the form. Overlap the seams 4"

Cover the entire floor with TripleSeal membrane

8. Over subgrade
 - a. Install HDPE vapor barrier over stable, smoothed and compacted subgrade up to the footing. Over lap seam 6" and staple down.
 - b. Pour TegraSeal Granular Pack bentonite cant along vertical to horizontal transition.
 - c. Install TripleSeal membrane along the footings extending up the vertical surface.
 - d. Install TripleSeal membrane with minimum 3" overlap, stagger sheets; securely fasten seams with staples every 6" on center.
9. Over Mud slab
 - a. Pour TegraSeal Granular Pack bentonite cant along vertical to horizontal transition.
 - b. Install TripleSeal membrane along the footings extending up the vertical surface.
 - c. Install TripleSeal membrane with minimum 3" overlap, stagger end laps; securely fasten seams with staples every 20" O.C. and staple 6" O.C.

Complete details.

10. Expansion Joints
 - a. use double layer of TripleSeal at mid-floor expansion joints (Detail 0704-40).
11. Complete installation at utility penetrations and floor drain (Detail 0704-50, Detail 0704-51).
 - 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).
 - c. Fill voids with mastic or granular packs
12. Terminations at vertical surfaces with a continuous strip of TegraSeal Termination Bar nailed every 12" O.C. (Details 0704-30).

CONCRETE:

13. Concrete should not be dropped from higher than 3 feet (1.22 m).