



platon

KEEP IT DRY.

Interior water and moisture control

The solutions discussed in this document are suggestions only. They have proven effective in practice, however, under no circumstances will any liability will be accepted by Armtec for the effectiveness of the remedies discussed in any given situation.

If a basement has moisture entering through walls or floor, covering it with any kind of wall finishing material or carpet is likely to make it worse unless the water is dealt with first. Wet carpet and moisture under wall coverings are excellent places for mold and mildew growth that can lead to health problems. Generally, when the relative humidity (RH) is above 60 to 70 percent, problems occur with mold and mildew growth.

Analysis - Step 1

A great number of basement water problems can be solved by handling rainwater and surface drainage properly using gutters and downspouts with extenders or splash-blocks to carry the water away from the foundation. Sloping the grade away from the house, which may require hauling fill to the site, is very important. This should be done before any below-grade drainage system is installed, since the above-grade corrections may solve the problem. Even if a drainage system is required, removing water at the source as much as possible is necessary.

Analysis - Step 2

Is the water problem minor?

A - the walls are damp but there is little or no water running onto the floor

B - there are visible, leaking cracks in the wall but only a few cups of water accumulate on the floor after a heavy rain

C - there are hairline cracks in the floor that show dampness after a heavy rain

Minor water problem solutions

A - If the walls are damp install a Platon subfloor and then line the walls with Platon to isolate the living space from the dampness.

B - if there are visible, leaking cracks in the wall divert the water under the floor slab (see next section), then install a Platon floor.

C - If there are hairline cracks in the floor that show dampness after a heavy rain, a Platon subfloor will protect the floor covering

Is the water problem major?

A - the walls are wet and there is water running onto the floor

B - there are visible, leaking cracks in the wall and gallons of water accumulate on the floor, especially after a heavy rain and they may still leak days later.

C - water comes up through cracks in the floor after a heavy rain

Major water problem solutions

A - For wet walls, excavation, installation of Platon on the exterior of the foundation with a new footing drain is the best (albeit expensive) solution

B - Alternatively, an interior perimeter drain with Platon covering the walls should be considered.

C - Water coming up through cracks in the floor after a heavy rain indicates a high water table and steps must be taken to remove water under the slab (interior drain and sump pump)

Damp walls and Minor Water problems

Provided no water comes up through cracks in the basement floor, (high water table) a cracked wall that leaks occasionally can be remedied:
(The basement in these photographs had studded walls so a section of framing was removed to expose the leaking wall crack)



Step 1 - Drill a 1" diameter hole through the floor into the crushed stone under the slab, about 12" from the wall (to miss the footing).



Step 2 - Chisel a channel along the wall and out to the hole so that water from the crack always runs into the hole.



Step 3 - A "dam" of caulking provides extra insurance.



Step 4 - A strip of Platon is applied to the wall and over the hole in the floor to contain moisture. The open edges are sealed with butyl rubber caulking and Platon Molding.

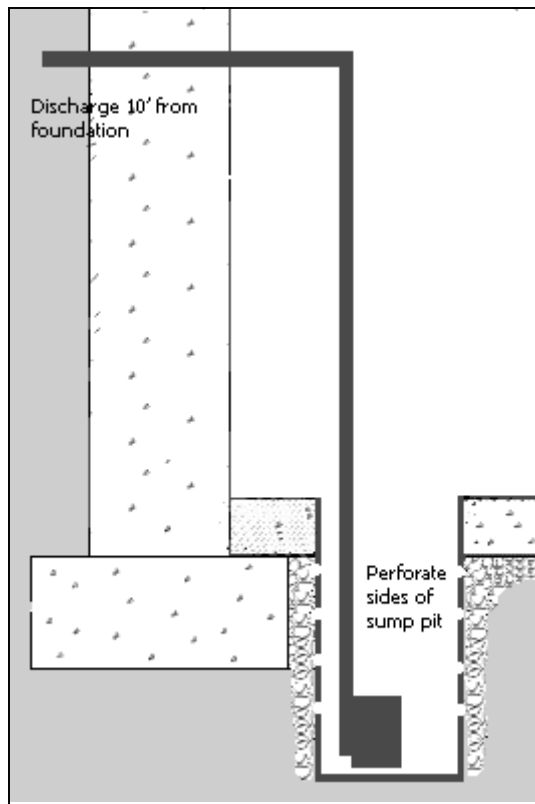


A Platon and OSB subfloor is then installed to cover the entire floor.

If you are going to turn your basement into living space and your basement walls are unfinished, it makes sense to cover the floor with Platon, dimples down, with a 4" lip up the outside walls. Install an OSB or plywood subfloor over the Platon (see flooring section). Install Platon on the outside walls, dimples toward the wall, sealing the top with Platon molding or the Platon Speedstrip. Tuck the lower edge behind the 4" lip. Seal any seams (EG. the 4" Platon lip to the wall Platon) with duct tape. Frame the walls on top of the Platon subfloor. The entire room, insulation and framing will be isolated from dampness in the concrete and rot and mold problems will be minimised.

If water comes up through the floor

Wet cracks in the floor indicate a **high water table**. Drainage below the floor slab is needed.



- If you have a sump pit and pump and your floor exhibits leaks, try drilling some 3/8" dia. holes 4" to 5" below the lip of the sump pit. This will drain the gravel bed found below most concrete floor slabs into the sump pit.

- If you do not have a sump pit and pump, consider installing one. Choose a suitable location (utility area?), break a hole in the concrete floor and dig a pit for the sump liner. *(There should be a layer of crushed stone under the concrete slab.)*

Perforate the sides of the sump liner with 3/8" holes, set it in the hole and use crushed stone to backfill. Install the pump and discharge at least 10' from the house.

Test the system for a time before cementing in the pit in case an interior perimeter drain tile is required.

Assuming water no longer comes up through the floor, it is still strongly recommended to use Platon over the concrete to protect the floor covering. (See Flooring section)

If there are still problems with water coming up through the floor, consider:

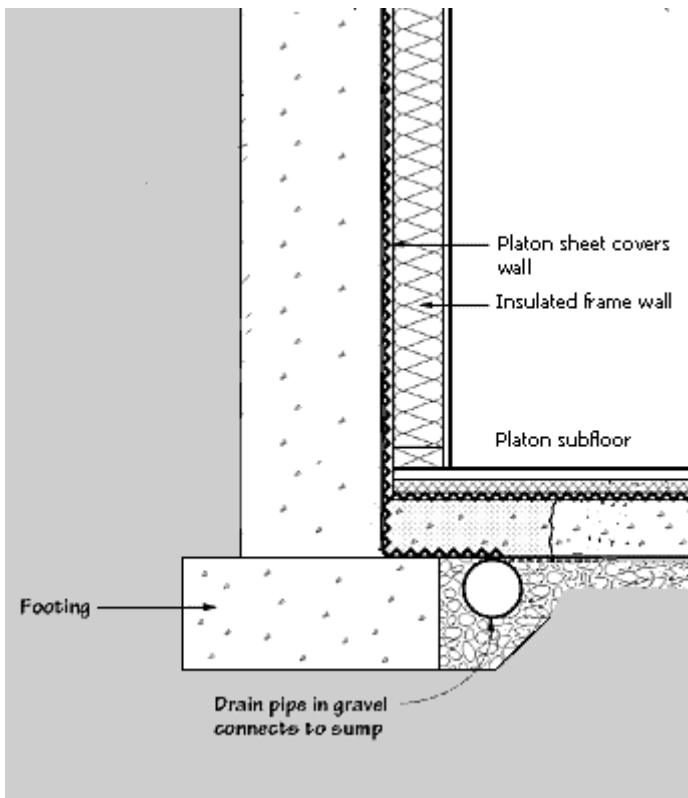
A - An interior perimeter drain (see section below) or

B - Placing Platon, dimples down, over the entire floor with a 4" lip on all outside walls. Pour 3" of concrete over the Platon. The air gap between the existing and new floor is drained into a sump pit with pump. *(You lose headroom and all utilities have to be raised as well.)*

Interior Perimeter Drain

- If the walls are wet or there are visible, leaking cracks in the wall and gallons of water accumulate on the floor, or there is a high water table and water comes up through cracks in the basement floor, consider installing an interior perimeter drain and sump pit.

(In high water table situations, consider an additional drain tile across the basement as well as around the perimeter)



Step 1 - Break out a 16" wide strip of the concrete floor around the perimeter of the basement to expose the footing and soil under the slab.

Step 2 - If you don't have an existing one, install a sump pit and pump beside an outside wall. The pump should discharge at least 10' from the house.

Step 3 - Dig a trench beside the footing, install 4" perforated drain tile and cover with crushed stone level with the top of the footing.

Step 4 - Install Platon, dimples toward the wall, along the outside walls, using the Platon Speedstrip to seal the top edge. Drape the lower edge over the footing and drain tile. Crease the Platon at the footing to insure a good fit.

Step 5 - Pour new concrete to replace that which was removed.

Step 6 - Install a Platon subfloor and frame on top of the subfloor.

Alternative - *(For water leaking through walls, not for high water table situations)*

Cut a 2" notch along all outside walls (Use a diamond blade and lots of water to keep down the dust!) The notch is drained into a sump pit or floor drain.

Cover the floor with Platon, dimples down, with a 4" lip up the outside walls (the notch is covered as well). Install an OSB or plywood subfloor (see flooring section).

Install Platon on the outside walls, sealing the top edge with the Platon Speedstrip and tucking the lower edge behind the 4" lip. Seal the opening between the Platon lip to the wall Platon with duct tape.

Frame the walls on top of the Platon subfloor.