

FOUNDATIONS

WATERPROOFING AND DAMPPROOFING

Dampproofing is a water-resistant coating designed to shed water and resist soil moisture. It's the default for any poured concrete wall below grade. But on sites with slow-draining soils or high water tables, or where site drainage is unreliable, a waterproofing system designed to resist water under hydrostatic pressure will be needed.

Dampproofing

DAMPPROOFING

A simple dampproof coating is sufficient where positive drainage is reliable, the seasonal water table never rises above the footing, or the basement is not living space.

Dampproofing Concrete Block Basements

Spray-applied waterproofing and some waterproofing membranes can be applied directly to concrete block. However, dampproofing should be applied over parging.

Parging Concrete Block

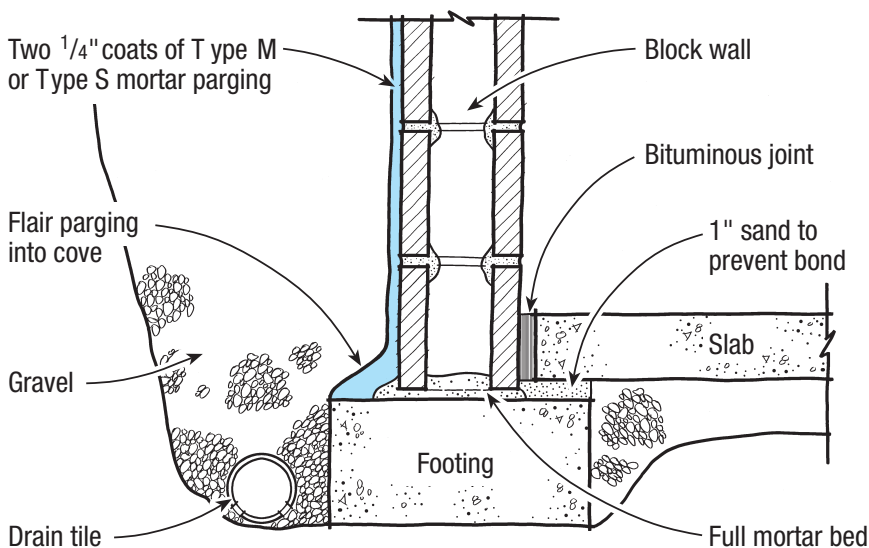
Before parging walls, brush off any dirt and dampen wall with a water spray (do not soak).

To parge walls, trowel on two coats of Type M or S mortar. Each coat should be at least 1/4 in. thick, for a total minimum thickness of 1/2 in. Roughen the first coat with a brush when the wall is partially dry to ensure good bonding.

Allow the first coat to harden for 24 hours before applying the second coat. Cure the topcoat for 48 hours before applying dampproofing.

Form the parging into a cove where the wall meets the footing to direct water away from the joint (**below**).

FIGURE: PARGING FOR CONCRETE BLOCK FOUNDATION



Parging should be applied to block foundations before applying a dampproof coating. At the bottom of the wall, flare the parging into a cove to shed water from the footing/wall joint.

FOUNDATIONS: WATERPROOFING AND DAMPPROOFING

WATERPROOFING

Apply waterproofing products in the following situations: When soils are slow draining; basement walls are below the water table; drainage is unreliable; or the basement encloses habitable space (**below**).

Waterproofing

FIGURE: TYPES OF WATERPROOFING

Type	Pros	Cons	Comments
Liquid Membranes	Quick application, low in-place cost	Possible inconsistency in coverage, 60-mil min. required	Follow manufacturer's recommended procedures carefully for voids and joints. Cement cove or fillet may be needed at footing-wall corner. Monitor coverage.
Sheet Membranes	Consistent thickness, easy patching of holes, "fish-mouths," puckers, and wrinkles	High cost, tricky to use (sticks to everything)	Many details to learn -- surface preparation, priming patching, joint treatment, terminations, lap joints, penetrations, and corners
Cementitious Waterproofing	Easy to use, readily available	No elongation -- will not accommodate joint or crack movement	Use acrylic additive for better bonding and durability
Bentonite Clay	Nonhazardous, nonpolluting, easy and quick to apply, can go on at low temperatures	Cannot be inspected for integrity (seal forms after backfilling)	"Pumped-in" bentonite retrofits are of dubious value

Availability and installation methods of waterproofing materials vary widely. While waterproofing will resist standing water in occasional extreme situations, no waterproofing system is designed to work without proper foundation drainage

Drainage Panels

Some waterproofing systems employ a dimpled or expanded-fiber geomat fastened against the foundation, either with or without an additional coating material applied to the foundation wall. These drainage panels provide an immediate break in hydrostatic pressure, carrying water from the backfill into the perimeter drains.