

## **Good Masonry Practices**

Best masonry practices always requires the building team to keep in mind the effects of water penetration. Water penetration can cause problems from freeze thaw, to mold and efflorescence. Water penetration can be minimized by the following things:

**Water repellancy** - A water repellent wall will require high quality masonry workmanship along with an integrally water repellent block and mortar that has a water repellent additive. Using a water repellent block without having a water repellent mortar will not produce a water repellent wall. A surface applied sealer may also be added as a secondary layer of protection.

**Proper proportions** - Care should be taken to accurately and consistently measure the proportions of sand to mortar. A shovel of dry sand can have much less volume than one shovel of damp sand. Too much, as well as too little can cause problems. In general, you will want to use 2-1/2 to 3 parts sand to 1 part masonry cement.

**Proper Type of Joint** - The mason must use adequate head and bed joints and they shall have no voids. The joints must also be compressed and sealed by using a convex type of jointing tool that leaves no ledge on which water can accumulate. The joint should be consistently tooled when the mortar is thumb print hard.

**Flashing & Weeps** - Flashing and weeps shall be used above all window and door openings and bond beams as designed by the architect. They should also be used at the bottom of the wall in attempt to force water to the outside of the building. Flash pans are a good method of directing water from the cavity of the wall to the outside of the building.

The following link will take you to their website <http://www.mortarnet.com/bfoverview.htm>

**Control Joints** - Masonry walls tend to contract once laid and therefore require vertical control joints that will accommodate this movement. These joints should be filled with foam backer rod and then filled with a high quality caulk of an appropriate color. Your architect will be able to plan the proper placement of these joints. A general rule of thumb is that the distance between control joints should not be more than 3 times the height of the wall and should not exceed 40 feet if the horizontal reinforcement is placed every 16".

**Protection** - Cover the unfinished top portion of the wall so that rain can not enter the cavity of the block wall. This should be done before leaving the job at night.

**Cleaners** - Use only proprietary cleaners specially blended for cleaning concrete blocks. Select the proper cleaner for the color of block you are cleaning. Some colors require special cleaners. Always wet the blocks before cleaning so that cleaner is not absorbed into the block body. Always test the cleaner in an inconspicuous place first. Be consistent in the amount of time the cleaner is on the wall. The greatest danger is of removing too much of the cement paste covering the aggregate particles which will change the color of the wall by exposing the aggregate more in some places than others. Always follow manufacturers instructions for using the cleaner.

**Sealers** - Use only breathable sealers that are approved for concrete masonry. Sealers can enhance the color of your block and add an extra layer of protection from nature's elements.

**Aesthetics** - Protect the wall from stains by spreading a protective layer such as straw on the ground to stop rain from splashing mud on the blocks. Also protect lower layers from mortar splatters from subsequent layers above. Don't allow hard water to be consistently be sprayed on the wall from nearby sprinkler systems, as rust stains can be hard to remove. Note to the owner: A newly constructed masonry wall will look significantly different than it will after the wall has a chance to age a bit. New blocks and mortar may remain damp and dark for weeks after construction. The wall should be allowed to thoroughly dry before judging its finished look.