BLOCK USA "BEST PRACTICES" TO ENSURE A QUALITY SPEC-BRIK PROJECT

Natural Salts in Color Customized Masonry Units (CCMU) will cause efflorescence when excessive moisture is introduced to the units.

PRE CONSTRUCTION –

A. At Block

1. Block USA uses the highest quality most economical and consistent materials available for manufacturing of CCMU's.
2. Our unique four day curing process provides consistent moisture content.
3. Our mix design is designed to consistently maximize quality in color, water repellency and strength.
4. All Block USA CCMU's are wrapped to minimize external water penetration.
5. Whenever possible Block USA uses company owned vehicles to ensure timely and professional delivery.

B. At Jobsite Storage

1. CCMU's should be laid in wall ASAP
   - CCMU's laid one month after date of manufacturing risk less efflorescence than CCMU's laid 3 months after the date of manufacturing.
2. Keep CCMU's **COVERED AT ALL TIMES** to prevent rain penetration that will cause efflorescence.
3. Block USA recommends the erection of a Sample Panel for color verification of units and mortar as well as good workmanship practices.

CONSTRUCTION -

C. At Blocklaying

1. Keep WALLS COVERED AT END OF EACH DAY AND/OR DURING RAIN to prevent efflorescence and color variation caused by moisture of the CCMU's.
2. Dry Block® mortar admixture is chemically matched with the Dry Block® block admixture and should be used in mortar to ensure the highest level of water repellency of CCMU masonry wall.
3. Block uses Dry Block® in the manufacturing of all CCMU's. Dry Block® is a registered trademark of WR Grace and Company. Block USA is a licensed supplier of Dry Block® mortar admixture and can supply it with your CCMU shipments.
4. Use proper flashing to prevent moisture penetration.
5. Flashing must be located properly – wherever moisture vapor or water can potentially move into CCMU's.
6. EIFS must be flashed.
7. Weep holes must be located 16" on center.
8. All head joints must be full with no "bugholes" –
   - This will restrict water penetration into CCMU's.
9. Use only concave or (V) configuration of mortar jointing DO NOT USE A RAKE JOINT – IT COLLECTS MOISTURE.
   - Tooling of soft mortar lightens the color and conversely mortar that is too hard darkens the color, per *Aberdeen's Magazine of Masonry Construction*. It is generally recommended that joints be tooled when mortar reaches "thumbprint hardness". If a joint is tooled too soon, shrinkage cracks at the mortar/block interface are likely to occur and the color becomes very light. If the joint is tooled too late the color becomes very dark and the mortar will not be plastic enough to seal properly against the masonry units.
10. Block USA recommends grouting of the CCMU should be of a low slump. Excessive water in the concrete can "bleed thru" the CCMU and cause efflorescence. If a higher slump, more flowable mix is required, Block USA recommends the use of a super plasticizer admixture.
11. Use a DRY saw blade to cut special sizes of CCMU's. **DO NOT USE WATER**
12. Block USA recommends using white mortar sand with light colored CCMU's to best avoid mortar color change.
13. Extend roof drains away from the side of the building to keep water from running down CCMU.
14. Brush walls down at the end of the day with a stiff bristled, non-metallic brush to prevent mortar from drying on the face of the block.

Block USA can supply NCMA TEK Notes – go to our website www.specblockusa.com

POST CONSTRUCTION – AFTER BLOCKLAYING COMPLETION

D.CLEANING:

CCMU'S must be cleaned properly including mortar droppings, mortar splatters and efflorescence. Improper cleaning materials and/or methods will also harm water repellency.

1. **DO NOT USE WATER PRESSURE OVER 50 PSI** — using high pressure will most likely cause efflorescence, streaking and color variation. **USE OF PRESSURE HIGHER THAN 50 PSI RELIEVES BLOCK USA OF ANY LIABILITY.**
2. Block USA highly recommends that you use "Prosoco's Custom Masonry Cleaner" to clean CCMUs. Depending on size of job, Prosoco will provide a field representative on jobsite to help personnel clean block properly. Your Block USA Representative can help supply you with this cleaning agent and it can ship with your CCMUs to jobsite.
3. Consistent application of water and cleaner on the wall system will ensure consistent color after completion of cleaning – inconsistent application will cause color variation.

E.EFFLORESCENCE STAINING

1. Keep all sprinklers from causing water to contact CCMUs.
2. Wet mud or bark will cause efflorescence staining of CCMU – Block USA recommends hay or straw placed at foundation to prevent.
3. Staining below window sills, metal brackets, and vents that attach to the walls, etc., can be avoided by having projections carried out at least one inch from the face of the wall with a drip notch or groove on the underside in order to keep water from running back under sill and down the face of the wall and onto metal devices or other stain producing items attached to wall. These items should be insulated from the visible portion of the wall by a non-staining durable gasket material having a drip to divert potential staining material away from the wall.

F.COLOR VARIATION

1. Block USA uses the most economical high-quality consistent aggregates available for manufacturing of CCMUs. These are all natural mined materials and are subject to variation.
   - Solid units – due to moisture – may appear darker than cored units.
   - Large segments of smooth block units will accent color and texture variation of the natural materials more than split face units.
   - Special care should be taken to lay CCMU in the same direction / orientation to maintain proper shade and texture appearance.
   - Due to changes in mined material, color variation should be expected in CCMUs produced at different times. Ex: additions, change order, etc.
   - Block USA does not manufacture each order at the same time but will generally produce the order according to size over a two weeks manufacturing cycle.

G.WATER REPELLENCY

Water Repellency should not be confused with waterproof. Block USA's CCMUs are water repellent using Dry Block®. Particularly in the Southeast, west and southwest facing walls are subject to extra moisture from natural flows of the JET Stream. Therefore, Block USA recommends that all exterior walls be treated with a sealer to provide the highest level of water repellency.

H.SEALER

The use of any sealer on block surface should be carefully considered. If the sealer is applied to a wall that still contains the basic ingredients for efflorescence (moisture) the resulting problems could be severe. As the salt solution attempts to migrate toward the surface most of the salts become trapped in the concrete pores just inside the sealer. The result is an interior crystalline buildup called sub florescence which can exert considerable pressure and spall the unit face. If required the following should be considered:

- Block sealer shall not be applied until the wall has dried out a minimum of 72 hours without rain and there is no visible sign of efflorescence on the wall.
- Make sure to apply materials in accordance with manufactures printed instructions.
  Commentary: Sealers can discolor CCMUs.

1. Apply a second coat of sealer to masonry surfaces that are porous.
2. All windows must be covered and all cars removed before spraying as glass and finished metal can be damaged. Sealers are extremely hard if not impossible to remove from glass.

CONTACT YOUR BLOCK USA REPRESENTATIVE FOR A LIST OF RECOMMENDED SEALERS.