

## MATERIALS SELECTION

To assure consistent color on a project, the variables that determine mortar color (mortar materials, conditions, preparation, installation, and cleaning) must be controlled.

Initial selection of mortar color may be made on the basis of color charts or mortar samples that are typically available from manufacturers of white and colored cements and pigments. However, final selection of mortar should be determined on the basis of evaluation of a sample or mock-up panel constructed using the exact units, mortar materials, water amount mixing procedures, workmanship, tooling technique, and cleaning procedure that is intended for use in the final project. Another consideration is to construct the mock-up or sample panel in the same weather conditions as expected during the actual installation. The purchaser (owner) and provider (mason) should review the sample panel together and establish a clear understanding of expectations of masonry and mortar appearance. The sample panel should be retained for reference until the masonry is completed and accepted by the owner.

Refer to TCC Technical Notes on *Evaluating Colored Masonry Mortars* and *Use of Colored Masonry Mortars* available online at [www.tccmaterials.com/resources/technical-information](http://www.tccmaterials.com/resources/technical-information).

## WHITE MORTARS

Always use clean, potable water when mixing. White mortar is made with white Portland cement, lime, and silica sand. White cements for masonry should meet the same ASTM specifications as their gray counterparts. Portland cement should meet the requirements of ASTM C 150 for Type I Portland cement, although Type II or Type III cements are sometimes used in mortar. Silica sand should meet all appropriate ASTM specifications.

Silica sand is a natural, mined product that varies in shade and color. The raw materials supplier makes no warranty as to color, and there is no color specification for silica sand. Further, there may be color/shade variations from one load of silica sand to the next. A jobsite mock-up is an industry acceptable method for comparing color and texture when using white mortar, but due to the inconsistency of silica sand raw material, it is impossible to assure color/shade match from bag to bag.

As with gray or colored mortar, white mortar should meet the requirements of ASTM C 270 for the type (N, S, or M) designated. Buff or brown sands will impart an undertone of color to the mortar. This sand color may become more pronounced over time as sand particles are exposed on the surface of the mortar joint due to the erosion of the white mortar paste. Also, when cleaning white mortar be sure not to remove white paste.

## COLORED MORTARS

Mortar color is so sensitive to pigment content that proportioning is best accomplished by using factory preblended mortars, such as Spec Mix®.

Integrally colored mortar may be obtained through the uses of pigments. The color of the mortar joints will depend not only on the pigment, but also on the cementitious materials, sand, water-cement ratio, and tooling. Always use clean, potable water in mixing.

Re-temper white or colored mortar cautiously to avoid color changes. Water content and stiffness of mortar during tooling affect color. Different joint finishes can be selected to provide a desired appearance in the completed masonry. Concave or V-Joints are preferred for optimum weather resistance. Excessive or lack of joint finishing will affect color.

Special care must be taken with white or very light-colored mortars to assure that joint surfaces are not discolored with metallic deposits from the jointer. The mason should use ceramic, stainless steel, or plastic jointers when working with such mortars. **Additionally, the use of colored mortars less than 2% in color is not recommended due to the potential of color inconsistencies which can occur.** For more information, refer to TCC's *Less than 2% Color Mortar Disclaimer*.

### Additional considerations for colors:

- Submit color chart or sample chip set for color selection.
- Submittals are for general indication of color and may vary somewhat from mortar finished in the field.
- Maintain consistent water-to-cement ratio for mortar throughout installation.
- Do not re-temper or add additional water to colored mortar.

- Tool all mortar joints at the same degree of hardness and moisture.
- On the project location, demonstrate each condition required on the project using materials, workmanship, joint retreatment, and cleaning techniques to be used throughout the project.
- Provide a full-scale mock-up panel constructed at least one month prior to installation of other CMU or brick work to allow mortar to cure before observation.
- Approved mock-up panel will establish the minimum standard for workmanship.
- Approved mock-up panel shall not be demolished or removed from the jobsite until the work has been completed and approved.

## CLEANING COLORED MORTAR

Refer to TCC Technical Note *Washing of Masonry Walls*. Washing a wall while mortar is still fresh can smear pigment and cement across the face of masonry units and make cleaning more difficult.

When it comes to cleaning masonry, less is better. Careful workmanship includes implementing skills that minimize mortar droppings and smears on the face of the masonry. Covering the tops of walls at the end of each work day will prevent rain from entering walls and help to reduce the possibility of efflorescence.

### Additional considerations for cleaning:

- Use the least aggressive cleaning techniques as possible. Pre-qualify the procedure on the mock-up panel and a small test area of the building. Verify that the cleaning procedure is consistent with the recommendations of the masonry unit supplier and pigment manufacturer.
- After cleaning at trial area, allow the area to dry, then closely examine the mortar joint surfaces to ascertain that the procedure has not etched the surface.
- For light colored mortar and masonry units (white, beige, cream, yellow, buff, etc.), it may be advisable to use a less aggressive cleaning product.
- Before additional cleaning, allow masonry to continue curing for at least

three weeks in hot weather or four weeks in cold weather.

- If proprietary cleaning agents are used, test in a small, inconspicuous wall area and check effects prior to proceeding. Follow directions from cleaning manufacturer. In most cases, it is advisable to pre-wet the wall area prior to applying the cleaning product. Begin cleaning at the top and work down. Thoroughly rinse walls with clean water following application.
- It is not recommended to use undiluted muriatic or hydrochloric acid cleaner on colored CMUs or mortar. When acid-based cleaning solutions are used, the mortar should be allowed to cure at moderate temperatures for about one week prior to cleaning.

## PRODUCT ALTERATIONS

Any additional material added to the mix on the jobsite by a contractor (admixture, pigments, etc.) would be an alteration of the mix design. This would add a variable to the mix which would be out of the control of TCC Materials.

## LIMITATIONS

TCC preblended mortars should be installed in accordance with the provisions of the local building code and applicable ASTM Standards. Good workmanship, coupled with proper detailing and design, assures durable, watertight construction.

## WARRANTY

Seller warrants that its product will conform to and perform in accordance with the product specifications. The foregoing warranty is in lieu of all other warranties, express or implied, including, but not limited to merchantability and fitness for a particular purpose. Because of the difficulty in ascertaining and measuring damages hereunder, it is agreed that seller's liability to the buyer at no point for any particular project shall exceed the total purchase price of said product.



# White or Colored Mortar Disclaimer

Manufacturing disclaimer & limited warranty

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## WHITE OR COLORED MORTAR LIMITED WARRANTY

*Seller warrants that its product will conform to and perform in accordance with the product specifications. The foregoing warranty is in lieu of all other warranties, express or implied, including, but not limited to, merchantability and fitness for a particular purpose. Because of the difficulty in ascertaining and measuring damages hereunder, it is agreed that seller's liability to the buyer at no point for any particular project shall exceed the total purchase price of said product.*

*This warranty supersedes any other written or verbal warranty or agreement.*

## WARRANTY CLAIMS AND PROCESSING POLICY

All claims made on product sold through distribution will be resolved by TCC Materials through the purchasing customer account. For products sold via dealer network, TCC Materials will work with the dealer to process the credit, not directly with the contractor/homeowner.

## ACCEPTANCE OF POLICY AND WARRANTY

I have read and understand TCC Materials' White or Colored Mortar Disclaimer & Limited Warranty which reviews the color selection/submittal process, mixing instructions, mock-up panel criteria, and cleaning recommendations.

The most current version of this policy and warranty is listed online at [www.tccmaterials.com/resources/technical-information/](http://www.tccmaterials.com/resources/technical-information/) or available through your sales representative.

I agree to review the most current version for changes and updates to this document before each project or season. Additionally, this can be sent to customers to have on hand for future reference.

Customer signature: \_\_\_\_\_ Date: \_\_\_\_\_

Sales representative signature: \_\_\_\_\_