

# MANUFACTURED STONE MORTAR

# 4D

**A DURABLE, POLYMER-MODIFIED MORTAR DESIGNED TO PROVIDE OPTIMUM BOND WHEN INSTALLING MANUFACTURED STONE VENEERS**

**MANUFACTURED STONE MORTAR** is a select blend of aggregates, Portland cement, dry-polymers and special additives designed to provide optimum bond and durability when installing a variety of light weight, manufactured stone veneers over properly prepared substrates.

## USES and ADVANTAGES

- Easy to use...just add water.
- Polymer-modified.
- Suitable for interior or exterior applications.
- Water-resistant.
- Superior bonding and flexural strengths.

## SURFACE PREPARATION

Manufactured Stone Mortar may be used to install stone veneers over a variety of properly prepared substrates, however, **always follow stone manufacturer's specific instructions regarding proper preparation and installation.**

All substrates must be structurally sound and clean. Remove all dirt, dust, spalling or loose concrete, oil, grease, wax, mildew, efflorescence, curing compounds, form release agents, paint or any other foreign material which might effect the bond. **SEE WARNING ON BACK PAGE REGARDING PAINT REMOVAL.** Verify that the surface is flat, free of defects or planar irregularities. If the surface is extremely dusty, porous or if there is any question of bonding, prime the entire area with Umaco Bond All Exterior.

### Masonry and Concrete Surfaces

Masonry and concrete surfaces must be flat and free of defects. Uneven or pitted concrete and masonry joints must be struck flush with Umaco U-Trowel

Basecoat to produce a smooth, level surface. U-Trowel Basecoat must cure for a minimum of at least 24 hours before installing manufactured stone veneers. Read U-Trowel Basecoat data sheet for full instructions regarding proper preparation and application.

### Plywood Sheathing

Manufactured stone veneers may be applied over properly fastened exterior grade plywood only after a basecoat of 3.4 lb (or heavier) galvanized wire lath (embedded in Umaco U-Trowel Basecoat) has been applied. Read U-Trowel Basecoat data sheet for full instructions regarding proper surface preparation and application. U-Trowel Basecoat must cure for a minimum of 24 hours before installing manufactured stone veneers.

**Always perform a spot test (of sufficient size) prior to application in order to ensure compatibility between Manufactured Stone Mortar and the substrate as well as to confirm that the appearance and performance are acceptable.**

## MIXING

In a clean container or mixer, add 50 pounds of Manufactured Stone Mortar to approximately one gallon of water. Mix thoroughly to a thick and creamy consistency. Avoid over mixing as this will cause air entrainment which will shorten the pot life of the material. Allow the mixture to soak for approximately 5-10 minutes, remix then apply. If the mixture needs to be adjusted, add up to one pint of water. **As with any Portland cement-based material, mixing liquid should be kept to a minimum to avoid decreasing strength and adhesive properties.**

## APPLICATION

In hot weather or when the stone is being applied to very dry wall surfaces, the wall surface must be dampened prior to installing stone veneers. Allow the surface to dry for a few minutes to eliminate excess water.

### Standard Installation

Apply the stone from the top working down. This helps keep the stone clean. Dampen the back of each stone before applying the mortar. Using a mason's trowel, apply a 1/2" thick even layer of Manufactured Stone Mortar to the entire back of each stone. Press the stone firmly in place on the prepared wall surface, squeezing the mortar out around the edges. Using a gentle wiggling movement while pressing the stone will ensure a good bond.

### Dry Stacked Installation

Apply the stone from the bottom up. Dampen the back of each stone before applying the mortar. Remove excess water. Apply Manufactured Stone Mortar generously to the back of each stone to allow ample mortar to squeeze out around all the edges of the stone as it is being pressed on to the wall. After setting each stone, remove any excess mortar and fill all voids along the stone's exposed edges. This seals the edges and also allows tighter fitting of the following applied stones. Prior to setting each stone, apply a thin bead of mortar with a grout bag to the edges of all previously installed adjacent stone.

**If any Manufactured Stone Mortar gets on the stone face, do not wipe it off as it will smear and stain the stone. Allow the mortar to set until dry and crumbly and then brush it off with a dry whisk broom.**



60 REAR NEWHALL STREET

PHONE: 978-453-8881

LOWELL, MA. 01852

FAX: 978-453-2416

## **GROUTING**

Use a grout bag to fill the joints with mortar, filling in all voids, being careful not to smear any grout on to the face of the stone. **Any mortar that gets on the stone should be allowed to set until dry and crumbly and then brushed off with a dry whisk broom.** When the mortar joints become firm, use a wooden or metal striking tool to rake the joints out to the desired depth while at the same time forcing the mortar into the joints so as to thoroughly seal the stone edges. Do not work the joints too soon or the mortar will smear. After working the joints, use a whisk broom to smooth the joints and clean any loose mortar. **Do not use wet brushes or sponges to wipe the joints or faces of the stone. Do not use wire brushes or muriatic acid.**

## **COVERAGE**

For Standard Installation, approximately 12 to 15 square feet per each 50 lb of Manufacturer Stone Mortar.

## **PRECAUTIONS**

- Follow stone manufacturer's specific instructions regarding proper preparation and installation.
- Clean all tools with water immediately after use.
- Surface and ambient temperature must be at least 50 degrees F during application and must remain so for a minimum of 48 hours.
- Do not use where cool and damp conditions exist for prolonged periods of time. These conditions will retard the setting and curing times.
- Protect from rain and freezing until completely dry.

## **Applicable ASTM Standards:**

### **ASTM C-91**

Standard specification for masonry cement.

### **ASTM C-109**

Standard test method for compressive strength of hydraulic cement mortars

### **ASTM C-144**

Standard specification for aggregate for masonry mortar.

### **ASTM C-150**

Standard specification for Portland cement.

### **ASTM C-207**

Standard specification for hydrated lime for masonry purposes.

### **ASTM C-270**

Standard specification for mortar for unit masonry.

### **ASTM C-595**

Standard specification for blended hydraulic cements.

### **ASTM C-1329**

Standard specification for mortar cement.

## **WARNING!**

Do not take internally. Contains Portland cement and Silica sand. May be irritating to the eyes and nose. Prolonged inhalation may cause lung injury. Avoid eye contact or prolonged contact with skin. Wash hands thoroughly with water after handling. In case of eye contact, flush with plenty of water for at least fifteen minutes. If irritation persists, consult a physician immediately. Dust masks, eye protection and gloves are recommended when using this product. Read Material Safety Data Sheet (MSDS) before using this product which may be obtained from your retailer or by calling 978-453-8881.

24 Hour Emergency Medical/Spill Information (Chemtrec): 800-424-9300

**KEEP OUT OF THE REACH OF CHILDREN!**

**WARNING!** If you scrape, sand or remove old paint, you may release lead dust or fumes. **LEAD IS TOXIC. EXPOSURE TO LEAD DUST OR FUMES CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE.**

Before you start, find out how to protect yourself and your family by contacting the USEPA National Lead Information Hotline at 1-800-424-LEAD or log onto [www.epa.gov/lead](http://www.epa.gov/lead). Wear a properly fitted respirator and prevent skin contact to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Follow these instructions to control exposure to other hazardous substances that may be released during surface preparation.

For technical assistance call 978-453-8881

[www.umaco.com](http://www.umaco.com)

## **LIMITED WARRANTY**

*The manufacturer guarantees its products to be free of defects and the extent of its liability is limited to the purchase price of the materials only, if proved to be defective.*

*Improper mixing, incorrect application or other factors beyond the control of the manufacturer or its dealers may produce unsatisfactory results and cannot be held to be the manufacturers or its dealers responsibility. There are no other guarantees either expressed or implied.*

03-01-05

- Concrete Patching and Repair Products
- Masonry Waterproofing Products
- Acrylic Admixtures and Bonding Agents



- Decorative Masonry and Concrete Coatings
- Traditional and Synthetic Stucco Systems
- Flooring Underlayments and Resurfacers