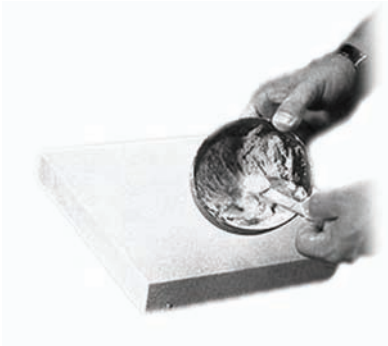


## Basic Patching Procedure

**Step 1:** Mix ACS provided ingredients to desired consistency. (consistency of putty usually works best)



**Step 2:** Pre-wet area to be patched

**Step 3:** Apply patch mix to stone.



**Step 4:** Shape mix to surface of stone.



**Step 5:** Allow mix to set completely.

**Step 6:** Smooth rough edges with finish grade sandpaper.

## PATCHING KNOWLEDGE

The best insurance against chipped stone is care in handling and protection of the unit after installation. Even with all of the special care and protection, building stone still becomes chipped from time to time and a certain amount of patching is to be expected.

Any chip obvious from a 20' distance should be patched. Chips measuring 1/4" and less across the face should not be patched and are usually left alone. Stone units with chips larger than 8" square should be replaced, unless the damaged portion can be salvaged and expoxied back to the unit. Most cracks can be patched if the units are reinforced.

Climatic conditions must be taken into consideration before patching is to commence. Do not patch stone in freezing weather or if a freeze is anticipated within 24 hours. On hot sunny days patching should be done during the morning hours where the Cast Stone is shaded or at temperatures less than 90 degrees Fahrenheit. Patches should be covered with a damp cloth and plastic sheet to prevent the cement from hydrating too quickly.

Only material provided by ACS should be used for patching. Experimental batches should not be used in an effort to obtain an instant color match.

Acrylic latex bonding agents may be used, but not in place of water. Use as a wetting agent; less than a tablespoon per handful of patching material. Stones which were acid etched at the factory will require the same treatment applied to the patch.

A properly executed patch will not match in color immediately. Dry cast products will appear lighter where repaired; wet cast products may appear darker. Patches that match immediately or in two or three days have a tendency to change color later on after weathering. Through curing, weathering and ultraviolet light, the patch will eventually return to the original stone color. This process could take 3 months to a year or longer depending on the climatic conditions and exposure to the weather.

**Patches which cannot be seen from a 20' distance when viewed in good typical lighting should be accepted.**

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**ACS color matched mortar is recommended for patching.**



# Patching & Cleaning Guide



## CLEANING KNOWLEDGE

During construction, prevention against staining is mandatory and becomes the best solution for a clean finished project. Every effort should be taken to protect the Cast Stone during storage, setting, and after installation. Storage of Cast Stone should be above ground on non-staining planks or pallets. The storage site should be away from heavy construction traffic. Cast Stone stored for an extended period of time should be kept on pallets or non-staining planking and covered with non-staining tarpaulins. After setting, columns, pilasters, entry jambs, window sills and all stone with projecting profiles should be protected with non-staining material during the remaining construction.

Regardless of the degree of care exercised during construction, a final wash down will be needed and, normally, whatever is specified to clean the brickwork will adequately clean the Cast Stone. A variety of commercial cleaners are available and most contain detergents combined with mild solutions of phosphoric and/or muriatic acids. Extreme care should be taken when applying acidic cleaners to areas where joints are left open or where sealant is used as jointing material. The sealant manufacturer should be contacted to ascertain compatibility with cleaning materials. Acids left behind on the stone or masonry may cause corrosion problems later on.

The most common stains due to construction are dirt and mortar. Dirt can be removed by scrubbing with a mild detergent and water. Mortar stains require brushing a solution of one part hydrochloric acid to six parts water on the stain. Soak the stone with water prior to adding any acid solution to prevent surface burning. Consult the brick supplier prior to applying acids to trim items. Insure that lower stone courses are frequently drenched with water because as acid is rinsed down the wall it can gather strength when reapplied. Take necessary steps to protect windows, door, and grade materials.

When unusual stains are encountered, the same procedures which are recommended to clean concrete will normally clean Cast Stone. The Portland Cement Association publishes a guide for the removal of stains in concrete. The most important step to stain removal is identifying the stain and its cause. There are degreasers and paint removers readily available. Any treatment should be tested on a small inconspicuous area prior to cleaning the main units.

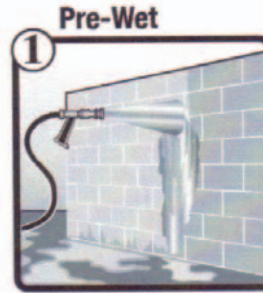
Dunnage materials used in the packing and transport of Cast Stone can leave stains (or clean spots) after becoming wet. Wood packaging products can transfer resins to the surface which may be easily removed. However, solid dunnage made from fresh timber can cause dunnage marks which become difficult to remove. Packing and dunnage materials should always allow the exposed surfaces to breathe, especially when stones are palletized or placed into storage shortly after manufacture. This will avoid color differentials due to moisture becoming trapped on the surface of the stone.

**Power washing and sandblasting are not recommended procedures for cleaning Cast Stone. Metal fiber brushes are not to be used for scrubbing Cast Stone.**

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## Basic Washing Procedure

**Step 1:** Pre-wet the surface to be cleaned with clean water.



**Step 2:** Apply the cleaner to the surface as instructed by manufacturer.



**Step 3:** Allow the cleaner to set on surface as instructed by manufacturer.



**Step 4:** Rinse the surface with clean water.



**ACS highly recommends the following solvents!**

Recommendations provided by:



AMT Laboratories  
3741 Greenway Circle  
Lawrence, KS 66046  
Phone: 888.376.3600  
Fax: 785.830.9176

### Recommendations

New Construction Cleaning Type S Mortar (14 Day Cleaning)	Protective Water Repellents	Graffiti Control	Stain Repellency
Sure Klean® Vana Trof® (1:8) OR Enviro Klean® Safety Clean (1:3)	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control OR Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II OR Sure Klean® Weather Seal Siloxane PD OR Sure Klean® Weather Seal SL100 Water Repellent OR Stand Off® SLX100 Water & Oil Repellent OR Consolidex® Saltguard® WB	<b>Graffiti Repellents</b> Sure Klean® Weather Seal Blok-Guard® & Graffiti Control OR Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II  <b>Graffiti Removal</b> Sure Klean® Fast Acting Stripper OR Defacer Eraser® Graffiti Wipe	<b>Stain Repellent</b> Stand Off® Stone, Tile & Masonry Protector (STMP) OR Stand Off® SLX100 Water & Oil Repellent  <b>Maintenance Cleaner</b> Enviro Klean® 2010 All Surface Cleaner (1:10)