

Technical Bulletin

Corporate: P.O. Box 397 • Fortson • Georgia • 31808 • 800-755-0825 • FAX 706-569-6704
Technical: 800-760-2861

MW# 112-010112

Topic: Owner's Responsibilities for Cleaning and Maintenance of Wall Systems

Related Technical Bulletins

Repairing Master Wall EIFS
Sealant Use
Window Considerations
EIFS Inspection Guidelines
Stucco Cracking
Fade Resistance
Efflorescence Considerations

All buildings require general maintenance. The amount of maintenance required depends on several factors such as climate, design and build quality. In general, a visual inspection should be conducted twice a year, usually spring and fall. This bulletin outlines some of the steps required in a visual inspection.

What is a Wall System?

A wall system or building envelope consists of all the building components. This typically includes the structural framing, wall cladding, windows, doors, penetrations such as pipes and vents and roof/wall connections. A wall system is more than a single component; it's how all the components work together.



What Type of Master Wall® Cladding Do I Have?

This is a simple question, but Master Wall® products can be used in a variety of ways. Determining what type cladding you have will help narrow the choices.

Your architect, builder or general contractor may be able to help. Your Master Wall® product warranty may hold the key. You may remember something from the building process that helps to identify what was used. The table on page 2 identifies some of the telltale signs to help narrow your choices.

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Common Wall Cladding Characteristics

System	General Characteristics	Comments
Aggre-flex EIFS	White insulation board either mechanically or adhesively attached to a substrate, thin base coat, orange or gray mesh. Sounds hollow when patted with the palm of your hand.	Commercial wall cladding
Aggre-flex Drainage EIFS	White insulation board mechanically attached over a water barrier to a substrate, thin base coat, orange or gray mesh. Sounds hollow when patted with the palm of your hand. Some form of drainage track at foundation.	Common residential or light commercial cladding
Master Wall® Cemplaster Fiberstucco or One Coat Stucco	Hard, gray base coat usually used with metal lath. Control joints are visible on the wall. About 3/8" to 3/4" thick. Sounds solid when patted with the palm of your hand.	Master Wall® warranted stucco product.
QRW1 Drainage EIFS	Yellowish insulation board mechanically attached over a water barrier to a substrate, thin base coat, orange or gray mesh. Sounds hollow when patted with the palm of your hand. Some form of drainage track at foundation.	Common residential or light commercial cladding
Rollershield Drainage EIFS	White insulation board adhesively attached to an orange or gray, roll-applied water barrier over the substrate, thin base coat, orange or gray mesh. Sounds hollow when patted with the palm of your hand. Some form of drainage track at the foundation.	Commercial Wall Cladding
Stucco Cement Board Coatings	Gray cement board mechanically attached over a water barrier to a substrate. Control joints are visible on the wall. Cement board is 5/16" to 5/8" thick with a thin base coat and orange or gray mesh. Sounds solid when patted with the palm of your hand.	Residential or commercial wall cladding
Uninsulated Finishes	Master Wall® coatings directly applied over a solid substrate such as brick or concrete block. Thinly applied, sounds solid when patted with the palm of your hand.	Decorative coatings used residentially or commercially
Superior Finishes over Stucco	Master Wall® finishes and possibly a primer applied over a field mixed stucco or another manufacturers one coat stucco. A very common application.	Common application for residential or commercial construction.
Soffit System	Thin base coat, orange or gray mesh directly applied over a substrate, usually gray, white or yellow in color. Sounds relatively solid when patted with the palm of your hand.	Commercial construction, sometimes used in residential
Insulated Concrete Forms	Thin base coat, orange or gray mesh directly applied over the ICF substrate, usually white in color. Sounds relatively hollow when patted with the palm of your hand.	Residential and commercial construction
Drainage DEFS (discontinued)	Thin base coat, gray mesh directly applied over a substrate and water barrier, usually yellow in color. Sounds relatively solid when patted with the palm of your hand.	Generally a low cost residential system

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Inspecting the Wall System

A thorough visual inspection of the wall system is your best defense against problems. In general you're looking for holes, breaks or cracks that could let water in. Bulk water in large quantities can cause problems over time. All the materials should be designed to shed water including quoins, window heads and brick ledges.

Beyond the visual inspection, there is non-destructive testing as well as destructive testing of specific components. These types of tests are best conducted by a professional building expert and are beyond the scope of this bulletin. An EIFS-specific inspection protocol is available in our Technical Bulletin MW#137-110101.



Cladding

Inspect the cladding for any punctures, breaks, cracks, wrinkles or blisters. Note their location.

- **EIFS** (Aggre-flex, Aggre-flex Drainage, Commercial Drainage EIFS, QRW1 Drainage EIFS, Rollershield EIFS)
 - Temporarily seal holes in the Master Wall® Cladding with DAP® ALEX® Painters Caulk (<http://www.dap.com/>) or similar product. Schedule a permanent repair with a Master Wall® Certified Applicator following the recommendations of our Technical Bulletin MW#129-030101.
 - Cracks, bulges, wrinkles and blisters typically indicate structural movement. Temporarily seal the opening with DAP® ALEX® Painters Caulk or similar product. Once the cause of the movement is isolated (consult a professional), the cladding can be repaired following the Technical Bulletin MW#129-030101.
- **Stucco** (Master Wall® Cemplaster Fiberstucco, Finishes over Stucco/One Coat Stucco)
 - Hairline cracks are somewhat typical for stucco and are generally caused by shrinkage. They should be noted, but are not a structural concern. If objectionable it can be painted with a quality 100% acrylic elastomeric paint (see painting).
 - Structural cracks are usually 1/16" or larger. Some type of structural condition usually causes these cracks. Consult a professional for recommended repairs. The cracks may be temporarily sealed with DAP® ALEX® Painters Caulk or similar product while repairs are scheduled with a stucco applicator.

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Sealants

Inspect the sealants for any deterioration, breaks, cracks or blisters. Note their location for future repair. Sealants should be visible and are generally wide. They are used to bridge the gaps between the wall cladding and other wall system components such as windows, doors, pipes, lights and vents. See Master Wall® Technical Bulletin MW#131-030104 for recommended sealants.

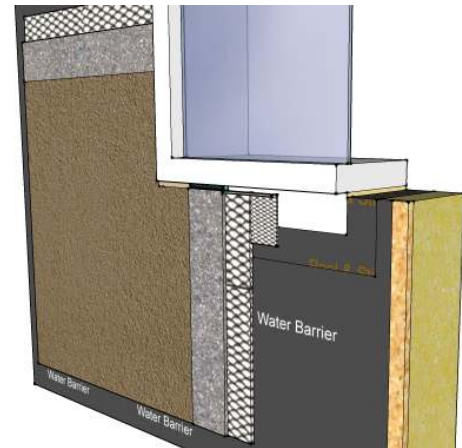
In stucco systems, sealant should also be visible at the ends and butts of control joints (V-grooves).

Sealants should be properly designed and professionally applied. Reference Technical Bulletin MW#149-020104 for typical sealant joint designs.

Windows & Doors

Inspect the windows and doors for signs of leakage and deterioration. Make sure gaskets are in good condition, any weep holes are clear and any debris is removed from the units on a regular basis. Check with the window/door manufacturer to determine any manufacturer-specific maintenance requirements. Master Wall® Technical Bulletin MW#132-060101 identifies some of the problem areas in window construction.

Buildings in coastal areas will require special attention. Most window and door units are under-designed for the climate and can leak into the building. Most building codes now require the use of hurricane-rated components.



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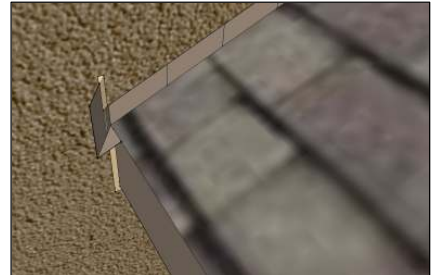
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Flashing and Sheet Metal

Flashing and sheet metal are used to either protect water sensitive materials such as wood or to direct rainwater away from the building. Flashing and sheet metal should be checked for deterioration and leaks – especially at the seams. Clear away any debris and check the following:

- Check head flashing at the tops of most windows and doors. They are usually used with most systems, but sometimes not with the Aggre-flex System. Confirm flashing requirements with the window/door manufacturer if in doubt.
- Where the roofing material meets the wall a flashing is normally used. The most common is step flashing, small pieces of metal installed under asphalt shingles. Metal roofs usually use a continuous flashing. Where the roof ends a “kick out” flashing should be visible. This flashing directs water away from the building.
- The flashing in roofs should be visible. Usually the siding is kept up 1” to 2” but this can vary depending upon locally accepted practices.
- Flashing behind decks should be visually inspected and cleared of debris. Decks installed without flashing need to be corrected. Consult with your builder or architect for a determination.
- On commercial buildings, metal parapet caps should be inspected to make sure they are sloped, draining water to the interior of the building, and sealed at the seams to prevent water entry. Also, the face edge of the cap should be sealed to prevent any wind-driven rain.



Chimneys

Inspect chimneys to make sure it provides a watertight seal. Step flashings should be visible around the chimney and a cricket installed to divert water away from the chimney stack.



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Other Penetrations

Penetrations such as electrical boxes, hose bibs, dryer vents, downspout cleats, and other terminations to make sure they are sealed. Correct any deficiencies using an approved sealant.



Other Considerations

A lot of keeping a home or building in good condition is common sense. Make sure sprinklers aren't directed against the structure. Make sure the ground slopes away from the building. Don't pile mulch against the side of the home and leave a clearance of about 6" to 8" between the siding and grade. Check the roof and gutters for debris and deterioration.

On some older homes, the wall cladding may have been run below grade. Our Technical Bulletin MW#128-010101 discusses some of the options.

Cleaning

Master Wall® coatings are called "Superior Finishes". They are a 100% pure acrylic based textured coating and are available in a variety of standard and custom colors and five different textures. Depending upon the texture and climate regular cleaning may be necessary.

The easiest method is to use a garden hose to spray the wall and clean the surface. A mild household detergent such as Simple Green may also be diluted in water and the surface scrubbed with a soft bristle brush to remove stubborn dirt. Pressure washers may be used provided they are 2500 psi or less with a large spray fan pattern and always kept moving, keeping at least two feet from the surface.

Mold and mildew are usually green, pink or black in color. It will typically grow in areas that receive minimal sunlight and/or poor air circulation or appear due to environmental conditions. A mixture of one part household bleach to three parts water and possibly a little household detergent usually removes the growth. Always pre-wet the wall surface prior to applying the bleach and water solution and do not allow it to stand on the wall for a prolonged period prior to rinsing. Flowers and shrubbery may be affected by the solution and it is recommended that the vegetation be watered and protected. Always use safety goggles, gloves and protective clothing when using a bleach solution.

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Stains that are exceedingly stubborn will probably require a specialty cleaner. This would include very stubborn dirt, mold, mildew, sprinkler rust stains, tar and efflorescence. Specialty chemicals are available from these companies:

Envyss, LLC	800-877-3339	EIFS Cleaner
Pro So Co Inc.	800-255-4255	EIFS Clean N Prep
ShoreBest Corporation	800-860-4978	Multiple EIFS Cleaning Products
Wind-Lock Corporation	800-872-5625	Multiple EIFS Cleaning Products

Maintenance Products

There are a variety of products available that help with wall system maintenance. Below is a listing of products and their use:

Master Wall Inc.®	<i>Clearshield</i>
ShoreBest Corporation	<i>2650 EIFS Protective Clear Coat</i> <i>2660 EIFS Graffiti Remover*</i>
Wind-Lock Corporation	<i>Titan Penetrating Sealer</i>

*See Technical Bulletin MW#155-090104 for additional information

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Painting

Painting the finishes are not normally necessary but it can be done using a high quality 100% pure acrylic paint. Do not use an oil or solvent-based product over Master Wall® products.

Master Wall® does make *Roller-flex*, which is a warranted by us. Owners can also use compatible 100% pure acrylic paints. Owners of stucco may wish to use an elastomeric paint, which bridges minor cracking.

The use of another manufacturer's compatible paint product will not affect the Master Wall® warranty, however, non-Master Wall® coatings would be warranted by the respective manufacturer, not Master Wall Inc.®

Compatible Paint Products

Manufacturer	Paint Product	Elastomeric Product
Master Wall Inc.®	Roller-flex	Elasto-flex
Glidden Company	Glidden® Stucco & Masonry Paint	N/A
Pittsburgh Paints	SUN-PROOF® Latex Exterior House and Trim Flat	Perma-Crete® Elastomeric Coating
Porter Paints	ACRI-PRO 100® Flat Exterior Acrylic	Perma-Crete® Elastomeric Coating
Sherwin Williams	A-100® Exterior Flat Latex	ConFlex XL™

As always, follow good painting practices and manufacturer's instructions. Finish corner to corner and backroll for best results. Due to the texture of the finish, two coats of paint are normally required.

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Bi-Annual Inspection Checklist

Date: _____

Wall Cladding

Wall Cladding Type: _____
Punctures, cracks, breaks, wrinkles or blisters?
Mold and/or Mildew?
Soiled, needs cleaning?

Sealants

Cracking within sealant?
Sealant Separated from Cladding?
Sealant separated from other surface?
Blisters within sealant?
Properly installed?

Windows and Doors

Windows/Doors are leaking?
Weep holes are functioning properly?
Sealant at jamb and sill intersection functioning properly?
Mold and/or mildew on windows?

Roofs, Flashing and Sheet Metal

Are sheet metal and flashings directing water to the exterior of the wall cladding?
Roof diverter flashing installed as needed?
Parapets damaged or leaking?
Chimney crick installed as required?
Roof and flashing free of debris?
Gutters clean?

Penetrations

Penetrations properly sealed?
Penetrations properly functioning
(if applicable)?

Other Considerations

Sprinklers directed away from the building?
Grade slopes away from building?
Clearance between siding and grade?

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