



AMERICAN
BUILDINGS
COMPANY
A **NUCOR** COMPANY

Owner's Preventive Maintenance Manual



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Introduction

Items on your building, just as items around your home occasionally need attention to keep them working properly. The purpose of this manual is to offer suggestions of recommended maintenance steps designed to keep your building in proper working condition. If you have questions regarding the following maintenance suggestions, you may contact Customer Service at one of our Service Centers listed below:

American Buildings Company Atlantic Division

6115 Coca Cola Boulevard

Columbus, GA 31909

Phone: (706) 562-8020

American Buildings Company Midwest Division

901 West Main Street

El Paso, IL 61738

Phone: (309) 527-1500

American Buildings Company South Division

1150 State Docks Road

Eufaula, AL 36027

Phone: (334) 687-2032

American Buildings Company West Division

2260 Tenaya Drive

Modesto, CA 95354

Phone: (209) 236-0580

Section

1

1. Structural Steel

- 1.1 **Rusting** - Structural steel normally requires no maintenance except in the event of rust. In this case, clean the affected area and re-prime. American Buildings Company primer specifications can be obtained through your local American Buildings Company authorized Builder or our Customer Service Department.
- 1.2 **Loose Bolts** - Structural bolts normally require no maintenance except in instances where the structure is exposed to vibration, such as a building with an overhead crane. Bolts should be inspected at least once a year and per OSHA requirements. Crane bracing connections should also be inspected at least once a year and per OSHA requirements. Any loose connections should immediately be made tight. For guidance contact your local American Buildings Company authorized Builder or our Customer Service Department.
- 1.3 **Additional Loads** - The roof structure of your building has been designed to the specific load criteria specified in the order placed with American Buildings Company. Any changes or modifications to your building which add additional loads may adversely affect the building's load capacity. Before adding any loads to the building (sprinklers, piping, roof top units, cranes, etc.), call your local American Buildings Company authorized Builder or consult with a licensed structural engineer. In the event an authorized Builder is not available, call American Buildings Company Customer Service.
- 1.4 **Bracing** - The bracing provided to your building is of significant structural importance. All bracing which is in place after the erection of the building should remain in place. Never allow removal or relocation of any bracing unless reviewed by American Buildings Company.

2. Roof And Walls

2.1 **Roof And Walls In General** - You should never store material on the roof of your building. Your roof and wall panels should not come in contact with wood, lead, or copper. Panels should be kept clear of dirt and soil. Prolonged periods of exposure to air conditioning condensation and or water from outlets or sprinkler systems should not be allowed. Clean the roof and gutters of leaves or other debris which would trap or pond water on the roof. Local conditions govern the frequency of these cleanings; however, we recommend an inspection for damage and a cleaning at least once a year.

2.2 **Ice And Snow Buildup** - You need to be familiar with the roof live and snow load specified for your building. Any significant accumulation of snow and ice may threaten the structural integrity of your metal building system if it approaches or exceeds the design roof load capacity. In the event of severe winter conditions, the accumulation of snow and ice should be carefully monitored and frequent inspections made to detect any deflection of the roof system, damming or clogging of gutter systems, ponding of water or unusual drift conditions.

Excessive ice and snow should be removed in accordance with MBMA guidelines. The removal of ice and snow should be performed by properly trained personnel or a qualified design professional in order to avoid damage to the roof or the structure. Appropriate precautions should be taken to minimize the risk of injury on the roof during hazardous conditions. MBMA snow removal guidelines can be obtained through your local American Buildings Company authorized Builder or American Buildings Company Customer Service Department.

If any evidence of structural distress is noticed, immediately contact American Buildings Company, your Builder, or consult with a licensed structural engineer.

2.3 **Roof Traffic** - Roof traffic can lead to leaks.

- If routine traffic is unavoidable, have your builder install a walkway for use with your roof panels.
- Avoid stepping on the ridge.
- Avoid stepping on panel and flashing laps.
- Avoid walking near roof curbs or other roof penetrations
- Avoid stepping on panel ribs
- Avoid stepping on valleys
- Do not step in or on gutters or the gutter hanging system
- Do not step on or near skylights

2.4 **Foliage** - While bushes and trees enhance the appearance of any building, their contact can produce scratches in the paint surface which will eventually cause problems. Keep bushes and trees trimmed back from the panel surfaces.

2.5 **Annual Joint and Fastener Inspection** - Once a year, inspect the joints of the roof weather resistant membrane for displaced sealants and loose fasteners. Should repair be required, an experienced sheet metal mechanic should take the connection apart, clean out existing sealant, install new tape mastic and/or butyl sealant to form a continuous gasket and reattach the connection using new and/or larger premium roof fasteners as necessary. Care should be taken to ensure the new gasket is in the old screw line.

3. Panel Finishes

Before large scale use of any of the following processes, always test in a small inconspicuous area.

- 3.1 **Routine Washing** - Galvalume or painted roofing or siding should be washed with soap and water as necessary to maintain appearance. A 5% solution of commonly used non-abrasive commercial and industrial detergents will not harm your panel surface. Always rinse thoroughly with water. Do not use wire brushes, steel wool, sandpaper, abrasives or similar cleaning tools, which will mechanically abrade the coating surface. Use a cloth, sponge or a soft bristle brush for application. Cleaning should be done in the shade or on a mild cloudy day, do not clean in direct sunlight.
- 3.2 **Rust** - Once a year inspect the panels for rust. Should any rust or rust stains be found, determine the source, and remove it. During installation, techniques in cutting and drilling of pre-painted steel panels can cause rust spotting. Hot filings from drilling or self-tapping screws, or chips from metal saws or cutting discs may embed themselves in the paint finish. These chips can then rust and form unsightly red spots in the coating, giving the visual impression that the substrate may be rusting. The rust stain can generally be cleaned off with one of the following: soap and water, mineral spirits, or Soft Scrub® bathroom cleaner.
- 3.3 **Paint Scratches** - Field applied, air dry and touchup paints have faster fade rates than factory-applied PVDF (SmartKote®) and Siliconized Polyester (SP-COOL™) paint finishes. Consequently, it is recommended that small scratches that do not penetrate the zinc aluminum coating or the zinc coating (i.e. no apparent rust) do not require touchup paint. If touchup is required by the owner or architect, touchup should be performed using an artist paint brush applying color matched touchup paint obtained from a reputable supplier that provides custom color matching from a panel or trim sample. Touchup paint should be applied without surface preparation other than cleaning. Touchup paint should be an acrylic lacquer, fast drying paint for exterior applications. The surface should be properly prepared and free of contamination (including dust, dirt, oil, grease and oxidation). The touchup paint should be equivalent to PPG®, ACR-100.

Air dry acrylic products may possibly be obtained through Sears®, PPG®, Glidden®, Sherwin-Williams®, Benjamin Moore®, your local paint store, your local automotive paint store or any supplier that provides a

custom color matching service.

- 3.4 **Mildew Removal** - Mildew can be expected in areas of high humidity. Mildew is more of an appearance problem than an actual threat to the paint finish. Mildew can be removed by using a basic solution of the following:

- 1/3 cup of detergent
- 2/3 cup trisodium phosphate
- 1 quart sodium hypochloride, 5% solution
- 3 quarts of water

Rinse with clean water immediately after use.

- 3.5 **Non Water Soluble Deposits On Siliconized Polyester Cool Coatings** - Strong solvent and abrasive type cleaners should be avoided, as they may damage the finish. Mineral spirits applied only to those areas that are contaminated can remove caulking compounds, oil grease, tars, etc. Always follow the use of mineral spirits with detergent cleaning and clear water rinsing.

- 3.6 **Non Water Soluble Deposits On SmartKote PVDF Finishes** - Solvents that may be used to remove these items from SmartKote PVDF panel finishes include:

- 3.6.1 **Alcohols** - No permanent effect on SmartKote PVDF

- Isopropyl (Rubbing) Alcohol
- Methanol (Wood Alcohol) - Note: Methanol is toxic
- Denatured Alcohol (Ethanol)

- 3.6.2 **Petroleum Solvents** - No permanent effect on SmartKote PVDF

- VM&P Naphtha
- Mineral Spirits
- Turpentine (Wood or Gum Spirits)

- 3.6.3 **Aromatic and Other** - Use with caution on SmartKote PVDF

- Xylol (Xylene)
- Toluol (Toluene)

Limit contact time to 5 minutes maximum and test before using. Using petroleum solvents, alcohols and aromatic solvents may void finish warranties.

- 3.6.4 ***Ketones, Esters, Lacquer Thinner*** - Use very cautiously on a SmartKote PVDF surface. Limit contact time to one (1) minute maximum and test before using. American Buildings Company is not responsible for damage caused by unrestricted use. Use of Ketones, Esters and Lacquer Thinner may void finish warranties.

Do not use acetone paint remover, Methyl Ethyl Ketone, or Methyl Isobutyl Ketone on SmartKote PVDF surfaces. Continued contact with these products could result in loss of gloss or other blemishes detrimental to the aesthetics of the job.

Most organic solvents are flammable and/or toxic and must be handled accordingly. Keep away from open flames, sparks, and electric motors. Use adequate ventilation, protective clothing, and goggles. Refer to warnings provided on the individual products.

- 3.6.5 ***Sealant Removal*** - Precautions should be made to prevent sealants from getting on the painted surface as they may be difficult to remove. They should be removed promptly with a solvent such as alcohol or a naphtha (SmartKote PVDF Finish Only) type of solvent. Caution: It may be possible for solvents to extract materials from sealants which could stain the painted surface or could prove harmful to sealants. Test a small area first.

4. Trim

Gutters And Downspouts - Clear all debris (leaves, dirt, etc.) from gutters and downspouts as required. Local conditions govern the frequency of these cleanings; however, we recommend an inspection for damage and a cleaning at least once a year.

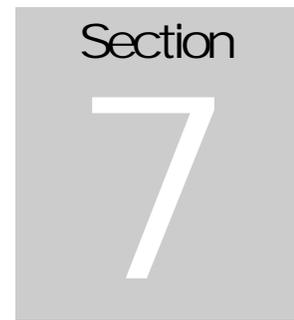
4.1 **Damaged Trim** - Replacement trim can be obtained through your local American Buildings Company authorized Builder.

5. Accessories

- 5.1 **Walk Doors** - Walk doors should be checked periodically to assure tightness of locksets, closure hardware and door hinges. Any loose bolts or screws should be tightened. Any moving parts that start to stick or squeak should be properly oiled.
- 5.2 **Windows** - Caulking in windows will deteriorate over time, usually resulting in window leakage. If this happens remove the old caulk and apply new caulk in its place. Windows that become hard to slide should have the track area thoroughly cleaned and a light coat of grease applied to the tracks.
- 5.3 **Overhead Doors** - Periodically check the attachment bolts around an overhead door and tighten as required. Call the door manufacturer should the door get out of alignment or the mechanical parts within the door become hard to operate.
- 5.4 **Sliding Doors** - Periodically clean the sliding door tracks and oil the rollers to help assure ease of use.
- 5.5 **Roof Vents** - Hard to operate roof vents are usually the result of pulleys and damper rods needing lubrication or the chains and cords not being on track. Check operating hardware and oil and grease as needed.
- 5.6 **Louvers** - The operating hardware within a louver occasionally needs to be cleaned and a new light coat of oil or grease applied. This will improve the ease of operation.
- 5.7 **Roof Curbs** - Heavy vibration from a mechanical unit can cause water leakage around a roof curb. Should this occur, check the sealant and fasteners around the curb. Any loose fasteners should be tightened or replaced with the next largest size. Any sealant or mastic that has deteriorated should be removed and replaced with new. If possible, isolate the unit from the curb to minimize vibration to the curb.
- 5.8 **Windows, doors, vents, and louvers** should be checked yearly for loose fasteners and any moving parts lubricated as necessary.

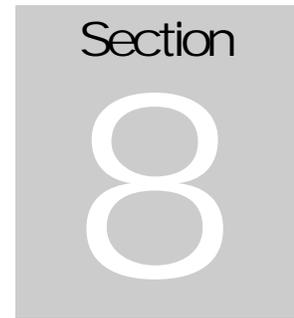
6. Insulation

- 6.1 **Insulation Facings** - Insulation facings should be monitored continuously and a thorough inspection made once a year. Any holes or tears in the facing should be repaired with patch tape as supplied by the insulation supplier. Remember, even a perfectly installed vapor barrier is not a perfect vapor barrier.
- 6.2 **Condensation** - If your building is experiencing excessive condensation, consult your HVAC contractor to assure that humidity levels are as projected. Also, have your building contractor check to make sure there are no obvious openings in the insulation splices.
- 6.3 **Loose Insulation** - Insulation tearing loose at various locations within the building (particularly at the eave or base) might not be the result of poor insulation but rather a strong negative pressure inside the building resulting from an improperly balanced HVAC system or an extra exhaust fan added after the erection of the structure. This, combined with a strong wind outside the building will often result in the insulation coming loose in these areas.



7. Replacement Parts or Service

Replacement parts or service can be obtained through your local American Buildings Company authorized Builder. In the event an authorized Builder is not available, contact American Buildings Company Customer Service. When calling, have the original job number, year built, name of the project and original Builder's Company name handy. This will help us identify and locate your specific building records and aid us in supplying replacement parts.



8. Field Painting / Touchup Procedures

8.1 Field Touchup Procedures - Pre-Painted Secondary, General Application

To touchup the red oxide primed secondary members, use a direct to metal enamel from a reputable paint supplier. This is to be applied to the members in the prescribed method listed on the data sheet. After this application, the members can be recoated with medium oil solvent base alkyd coating.

Apply the topcoat to a small area, wait 24 hours, then do a "crosshatch" check for adhesion. If adhered, complete the application.

8.2 Field Painting Structural Steel With A Finish Coat

Always test paint in an inconspicuous area to insure good results before painting entire structure. American Buildings Company offers two types of primary structural primers, Standard and Universal. Standard Primer is a high solids, haps free, medium dry alkyd primer. Universal Primer is a high solids, haps free fast dry phenolic modified alkyd primer.

Standard and Universal Primer product specifications can be obtained through your local American Buildings Company authorized Builder or your American Buildings Company Customer Service Department.

Any alkyd, acrylic or water based latex paints may be used to top coat Standard and Universal Primers. Typical enamels that contain mineral spirits or VM and P Naphtha solvents may be used to top coat Standard and Universal Primers. Do not use primers or top coats that either contain greater than 10% aromatic solvents or that contain acetate solvents to top coat Standard Primer.

Epoxy and ketone based coatings can not be used to top coat Standard Primer. Epoxy and ketone based coatings are typically chemically compatible with and can be used to top coat Universal Primer. However in most cases, other factors such as primer integrity, base steel preparation and inter coat adhesion must be considered. Please note that most epoxies require the unprimed steel to be cleaned to levels cleaner than required for normal shop primers. If top coating with epoxy or ketone based coatings is required, it is recommended that you contact your paint supplier. Your paint supplier can determine chemical compatibility, inter coat adhesion, and proper preparation requirements necessary for use with the desired top coat and how those requirements correlate to Universal Primer.

8.3 Field Touchup Procedures – Siliconized Polyester Cool Coatings – General

Field applied, air dry paints and touchup paints have faster fade rates than factory-applied Siliconized Polyester paint finishes. Long term differential fading and re-painting expectations should be taken into consideration when touching up factory painted panels. Field repair of any factory-applied Siliconized Polyester surface should be attempted only by a skilled professional and should be accomplished using only a good quality exterior grade air dry product.

Large or small areas that require spray application

Mask area to be repaired to eliminate any over spray of air dry material to existing structures.

Sand entire part to be repaired with fine sandpaper until surface is smooth and all nicks and scratches have been removed. Wipe sanded part clean with a Toluol dampened lint free cloth. If sanded to bare metal, pre-treat the metal prior to painting to ensure proper adhesion of the air dry system. Pre-treats may be obtained from your local automotive spray paint dealer. Be sure to use the proper cleaner and treatment for the specified metal substrate.

Prime entire part uniformly using a good grade of commercially available zinc chromate acid etched primer to achieve a smooth, consistent film with complete hiding of the metal, dry film of 0.40-0.50 mils.

It is not necessary to prime parts that do not show bare metal. If it is necessary to prime the parts, then follow the recommendations of the primer's manufacturer for reduction application techniques. For large areas, you may choose to use a Binks type spray gun with a cup reservoir. For smaller areas, you may use an artist's air brush.

If priming was necessary, the primer should be tack-free and ready to topcoat in four (4) to six (6) hours or as recommended by the manufacturer. If handling is necessary prior to top coating, overnight dry time is recommended.

Topcoat using a good exterior grade acrylic paint of the same gloss range as that of the surrounding area. Correct spray viscosity is dependent upon the application equipment selected and the recommendation of the air dry paint manufacturer. Some degree of trial and error may be necessary to achieve the desired appearance depending upon the conditions where the repair is being performed.

Product Sources

Air dry acrylic products may be obtained through Sears, PPG, Glidden, Sherwin-Williams, Benjamin Moore, your local paint store that does custom matching, or your local automotive paint store if you have a color chip for them to match.

8.4 *Field Touchup Procedures – SmartKote Finish – General*

Fluoroceram Ads is a Kynar based air dry field repair touchup for Fluoroceram (P70) baked finishes. Fluoroceram Ads is supplied as a solution coating ready for on-site application.

Although Ads has excellent exterior exposure qualities and is the best method for repairing Fluoroceram (P70), it may be deemed more practical to remove large panels such as curtain wall and have an applicator to spray with the Fluoroceram (P70) baking finish. This would ensure uniform weatherability and better color match.

Large or small areas that require spray application

Mask area to be repaired to eliminate any over spray of material to existing structures. Sand entire part to be repaired with fine sandpaper until surface is smooth and all nicks and scratches have been removed. Wipe sanded part clean with a Toluol dampened lint free cloth. If sanded to bare metal, pre-treat the metal prior to painting to ensure proper adhesion of the Ads. Pre-treatment may be obtained from your local automotive spray paint dealer or from: Bulk Chemicals, Mohrsville, PA 19541; McGean-Rohco, Cleveland, OH 44109; Parker-Amchem, Madison Heights, MI 48071. Be sure to use the appropriate cleaner and treatment for the specified metal substrate.

Prime entire part uniformly with Fluoroceram Ads Primer 727 line to achieve a smooth, consistent film with complete hiding of metal (dry film thickness of approximately 0.2-.4 mils). It is not necessary to prime parts that do not show bare metal.

For priming large areas, use a Binks (or equivalent) hand spray gun with a cup reservoir equivalent. For smaller areas, you may use an artist's air brush or Crown spray tool #8010 with #8011 power pack aerosol from Crown Industrial Products, Hebron, IL 60034.

Primer will be tack-free and ready to topcoat in 1 to 2 hours. If handling is necessary prior to topcoating, overnight dry time is needed.

Topcoat with Fluoroceram Ads, using the same type of equipment as was used for the primer, to a dry film thickness of 1.0-1.5 mils. To spray Fluoroceram Ads, you may need to thin slightly with Methyl Isobutyl Ketone (MIBK).

If this spray is too wet, use Methyl Ethyl Ketone (MEK) as a quicker dry alternative. If cob webbing of spray occurs, reduce viscosity approximately one-third more with additional solvent.

Correct spray viscosity is dependent upon the application equipment selected; therefore, some degree of trial and error may be necessary. Improper reduction will result in unacceptable appearance. Dry time - 1 to 2 hours tack free, overnight to handle.

Typical properties of Fluoroceram Ads primer and topcoat along with performance properties are attached.

Product Sources

Fluoroceram Ads primer and topcoat can be purchased from your nearest BASF Corporation division listed below:

Batavia Coatings Facility	Decatur Coatings Facility	Colton Coatings Facility
1500 Lathem Street	IPSCO Rd. Decatur Ind. Park	1231 South Lincoln Street
Batavia, IL 60510	Decatur, AL 35602	Colton, CA 92324
(708) 879-6800	(205) 355-5440	(714) 825-6292