



## Technical Bulletin

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### MAINTENANCE INSTRUCTIONS FOR FABRAL METAL WALLS AND ROOFS

#### I. MAINTENANCE BY INSTALLER BEFORE LEAVING JOBSITE.

1. Remove metal filings from panels and flashings at the end of each day. Filings from drilling, grinding and cutting can start to rust overnight. At end of project, make a final check for any filings. If rust spots have already appeared they can be removed with a non-abrasive cleaner such as Soft Scrub. Do not use abrasive cleaners.
2. Touch-up paint should be used on scratches, but should be used sparingly and applied with a small artist's brush.
3. Clean or power wash panels as necessary after completion of project. This includes removing excess unsightly caulking.
4. Remove debris and crating materials from the sight.

#### II. ROUTINE MAINTENANCE FOR METAL WALL AND ROOFS BY OWNER, OR OWNERS AGENT, OVER LIFE OF BUILDING.

1. File all job records, including project plans, specifications, shop drawings, warranties (if any), etc. for future reference.
2. Set up maintenance and inspection schedule. Metal wall panels normally require little maintenance, but to ensure optimal serviceability, a routine inspection should be conducted at intervals no greater than once a year.

Note: Steep metal roofs can be slippery. A qualified metal roofing contractor may be required for roof inspections.

3. Keep gutters and downspouts clear of debris that can impede water drainage.
4. Remove immediately any vegetation or debris that may contact metal panels. This should include tree branches, leaves, weeds, grass, etc.
5. Clean metal panels as necessary with a 5% solution, in water, of commonly used commercial and industrial detergent. Use a cloth, soft bristle brush, or high pressure washer. Rinse completely with water. Tar, grease or oil may be removed by using denatured alcohol, isopropyl alcohol or mineral spirits followed by a water rinse. Proceed with caution as aggressive cleaning with the above-described procedures may damage the coating and thus void the warranty.



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6. Repair any damage that may have occurred to panels with caulking, touch-up paint, etc.
7. Correct any signs of corrosion or deterioration as necessary.

### III. ADDITIONAL ROUTINE MAINTENANCE FOR METAL ROOFS.

1. Eliminate any conditions that are causing water to pond and accumulate on roof panels.
2. Re-seal curbs, gutters, flashings, closures, penetrations, etc. as necessary to maintain the weather tightness of the system. Typically, a non-acid cured silicone caulk is best for such repairs. Owner may wish to hire a qualified, experienced metal roofing contractor for these repairs.



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**CARE AND MAINTENANCE  
OF  
Super Alurite® 25,  
Siliconized Polyester, TRINAR, POLYDURE AND REL-SHIELD FINISHES  
FOR  
BUILDING PANELS AND ACCESSORIES**

This technical bulletin is the attached actual Care and Maintenance for Building Panels and Accessories report from Akzo Coatings Inc.



## **CARE & MAINTENANCE**

of

**SUPER ALTIJRTTE® 25,**

**TR1NAR®, CERAM-A-STAR®,**

**REL-SBTELD®, CERAM-A-SIL®,**

**DEXSTAR®, and**

**POLYDUIRE® Finishes**

for

**Building Panels and Accessories**



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## **I. INTRODUCTION**

The factory applied white or color finish on our metal building panel has been specially designed to give many years of trouble free performance with little service or maintenance required. Still, the unpredictability of the environment or building service conditions may create the need to clean, repair, repaint or touch-up of the paint finish, This brochure is offered to guide such activities to maximize metal panel aesthetics and service life. It is important to read this brochure thoroughly and completely before attempting to clean, touch- up or repaint factory painted building panels

**IT IS THE USER OR HIS/HER AGENT'S RESPONSIBILITY TO SELECT MATERIALS AND IMPLEMENT PROCEDURES SPECIFIC TO THE SAFE, PROPER AND COMPLIANT USE OF CLEANING AGENTS, PAINTS AND SOLVENTS MENTIONED BELOW.**

Long life factory applied finishes are, by design, resistant to change and difficult to repaint successfully; especially when newly installed. Please pay special attention to **APPENDIX A**, the "Gray Tiecoat" section, of this brochure for application over newly installed panels. Do not hesitate to contact Akzo Nobel Coatings Inc.. Columbus. Ohio (614-294-3361) if you have questions not addressed below.

Factory painted aluminum substrates can also be refinished by following the same procedures offered here. Ignore procedure references to red rust when cleaning or otherwise preparing painted aluminum substrates for refinishing

## **II. CLEANING PAINTED SURFACES**

While factory applied finishes for metal building panels are so durable that they will last many years longer than ordinary paints, it is desirable to clean them thoroughly on a routine basis. Over time, dirt laden atmospheres or slight chalking, which is normal, may cause building panels to appear changed or discolored. A good cleaning will generally restore panel appearance and render repainting or other remedial action unnecessary.

Annual washing with a mild detergent, as explained below, is recommended to maintain the original finish appearance of factory finished building panels. Mild solutions of household soap and water will usually produce the desired results. Either of the following solutions are recommended.

- A. One cup of Tide or other common non-abrasive detergent which contains less than 0.5% phosphate, dissolved into five gallons of warm water; or,

**NOTE: The use of detergents containing greater than 0.5% phosphate are not recommended for general cleaning of building panels. NEVER BLEND STRONG CLEANSERS AND BLEACH, except as detailed below.**

- B. One cup of household ammonia dissolved into five gallons of room temperature water.



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### **II. CLEANING PAINTED SURFACES (continued)**

Work from top to bottom of the panel surface. Use a well soaked soft cloth, sponge, **very soft** bristle brush or low pressure spray washer. **Do not** use scouring powders, industrial strength cleaners or solvents, since these chemical agents may damage the film. However, household cleaners containing small amounts of solvent, such as Fantastic may often be used successfully. If mildew or other fungal growth is observed and cannot be removed as above, mix one gallon of household bleach in five gallons of water along with one cup of mild soap (e.g. Ivory liquid) to aid wetting. Do not allow the cleaning solution to dry on the panel being cleaned.

The final step of any cleaning procedure is a thorough clear water rinse to remove dirt and/or cleaning agent residue. Such residues may affect repaint adhesion or otherwise damage the paint finish

It is recommended that you “test clean” a small area to be certain that satisfactory results are achieved with whatever combination of cleaning solutions and procedures you use before starting on the entire area or building.

### **III. REPAINTING OF METAL BUILDING PANELS AND ROOFS**

It is necessary to properly clean and prepare factory painted building panels prior to “field” painting. Field painting of TRINAR®, CERAM-A-STAR®, CERAM-A-SIL®, DEXSTAR®, REL-SHIELD IV® and POLYDUR® finishes often requires special considerations. This entire section must be carefully read before attempting field repainting of building panels.

#### **A. Surface Preparation**

The following five field painting considerations must be addressed before the process can begin

##### **1. Dirt and Mildew**

Dirt, loose chalk and mildew must be removed as outlined above in Section II, “Cleaning Painted Surfaces”. Heavier or more stubborn dirt accumulations not removed by Section II methods necessitate the use of more aggressive cleaners. A dilute solution of household Spic & Span® detergent, one cup in five gallons of warm water is recommended.

**NOTE: Detergents containing greater than 0.5% phosphate are very aggressive and recommended for use only on panel surfaces to be field painted. Do not use such detergent solutions for routine cleaning.**

Always rinse surfaces thoroughly with clear water to remove residual cleaning agents used in the cleaning or surface preparation process. Residual cleaning agents act as contaminants and will damage adhesion of any field applied paint system.



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## **III. REPAINTING OF METAL BUILDING PANELS AND ROOFS (continued)**

### **2. Surface Imperfections**

Edges of minor scratches on existing finish, which have not penetrated to expose the metal, substrate should be lightly sanded or “feathered” to provide a smoother surface for touch-up repair in the field. Care must be taken that any surface preparation procedure not expose previously unexposed metal substrate. Unpainted ferrous substrates are vulnerable to oxidation, i.e. red rust corrosion. Deep scratches or other major imperfections that expose large areas of bare metal or are severely corroded should be replaced.

### **3. Exposed Metal and Rusting**

Exposed or bare metal must be treated to retard metal corrosion. If you choose to paint over rusted panels remove all traces of red, white, or black rust (corrosion products) by scraping or vigorous wire brushing. Care must be taken to avoid removal of the mill applied protective metal alloy layer. Lightly sand or “feather-smooth” edges of the area to be repainted. Clean or remove all loose debris. Any exposed metal should be covered with a high quality bare metal primer<sup>1</sup>. Be sure to follow any additional instructions offered by the manufacturer of whatever bare metal primer you used. Allow sufficient primer dry time before final topcoat application.

### **4. Testing for Adequate Intercoat Adhesion -- RECOATABILITY**

Without proper and sufficient intercoat adhesion, eventual separation of paint from the substrate. i.e. delamination or peeling may occur The following is just one of a number of equally satisfactory repaint intercoat adhesion test procedures.

### **RECOATABILITY TEST**

Clean or otherwise prepare a small area, representative of the entire surface to be repainted. Apply a coat of the desired field repaint enamel according to instructions provided by the manufacturer. Allow the test area to dry -- at least overnight. After drying, use approximately eight inches of gray ‘duct’ tape and firmly smooth about 3-5 inches of the tape onto the repainted area while holding the remaining free end of the tape. Rapidly pull and remove the applied tape, attempting to remove the recently applied coating. If any paint adheres to the tape, then additional surface preparation and/or the ‘intercoat adhesion TIECOAT’ must be used. See Appendix A. for TIECOAT application guidelines.

<sup>1</sup> Glidden Galvanized Metal Primer 5229. PPG Galvanized Steel Primer 6-209 or equivalent primers specifically designed for adhesion to galvanized steel surfaces.



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### III. REPAINTING OF METAL BUILDING PANELS AND ROOFS (continued)

**NOTE:** It is the sole responsibility of the person doing the painting to ascertain if procedures employed achieve acceptable intercoat adhesion and satisfactory results. Akzo Nobel Coatings Inc. cannot be held liable should intercoat adhesion failure or any other unsatisfactory condition result from field coating application to factory painted panels.

#### 5. Additional Surface Preparation Methods

##### a.) Xylene (Xvlol) Wipe

Some **RECOATABILITY TEST** failures can be overcome if the surface area is wiped with a clean rag "wet" with Xylene (Xvlol) to remove organic residues not removed by detergent or clear water rinsing. Rags used for this purpose must be CLEAN and changed frequently. Upon completion of the Xylene (Xylol) Wipe procedure re-test the surface for **RECOATABILITY** before application of the desired finish coat.

**NOTE:** Familiarize yourself with personal safety and environmental precautions associated with handling and use of Xylene (Xylol) solvent. **IT IS THE USER'S RESPONSIBILITY TO REQUEST INFORMATION (Material Safety Data Sheet) FROM THE SUPPLIER SPECIFIC TO THE SAFE, PROPER AND COMPLIANT USE OF THIS SOLVENT. Enforce NO SMOKING and remove all possible sources of ignition when Xylene (Xylol) is in use.**

##### b.) 400 Mesh Sanding and Power Washing

If unacceptable **RECOATABILITY TEST** results persist, even after detergent washing and Xylene (Xvlol) wiping, it will be necessary to "rough-up" the surface with a 400 mesh abrasive cloth or a green 3M ScotchBrite abrasive pad. With proper caution, professional power washing methods may also be employed. However, it remains the contractor's responsibility to test for and ascertain the suitability of any power washing process on a small area before treating the entire area. It is imperative that either process not, by itself, damage or remove the factory finish to expose bare metal.

**NOTE:** Step III. 5. b.) is not recommended -- nor should it be necessary -- for REL-SHIELD plastisol coatings.

**If unsatisfactory RECOATABILITY TEST results persist -- DO NOT PROCEED! Contact your building erector, panel supplier or Akzo Nobel Coatings Inc. at 614-294-3361.**



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## **B. REPAINTING WITH CERAM-A-CRYL®**

### **1. Mixing and Reduction**

After the building panels have been properly prepared, they must be coated within twenty-four (24) hours with Akzo Nobel's CERAM-A-CRYL® Repaint Enamel. CERAM-A-CRYL® coating materials must be thoroughly mixed before using. Mechanical mixing is recommended to assure proper combination of paint ingredients.

Viscosity of CERAM-A-CRYL® coatings, as supplied, must be reduced for proper application. Proper spray viscosity can be achieved by adding approximately one quart of Xylene (Xv101) per gallon of CERAM-A-CRYL® color coating. A slower evaporating solvent such as Solvesso 100® or Enjay 100® may be used if warm weather conditions, i.e. above 80 F, are present. More or less solvent may be added, at the discretion of the painting contractor, depending on ambient temperature conditions and the specific application equipment available at the jobsite. Again, mix thoroughly before use.

### **2. Application**

The surface to be painted must be completely dry prior to painting. Painting should not be attempted in the early morning hours while overnight dew remains on panel surfaces. Avoid painting when ambient temperatures are below 50°F. Apply a uniform coating thickness of 1.0 mils of dry paint film.

### **3. Coverage**

Theoretical CERAM-A-CRYL® coverage at 1.0 mil of dry film is 400-500 square feet per gallon. However, due to inefficiencies of some application equipment and the spraying method, coating losses of up to 50% can result. Therefore, for planning purposes, actual CERAM-A-CRYL coverage may range from 200-250 square feet per gallon. Care should be taken to order sufficient CERAM-A-CRYL® finish coat to complete the job.

### **4. Cleanup**

Use Xylene (Xv101), with all cautions offered above, to clean equipment.



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### **IV. MINOR SCRATCH TOUCH-UP WITH CERAM-A-CRYL® AIR DRY PAINT**

#### **A. Surface Preparation**

##### **1. Surface Scratches**

The area to be painted needs to be clean, dry, free of dirt and lightly sanded with #400 mesh sandpaper to assure adhesion and smooth scratch edges.

##### **2. Deeper Scratches**

Exposed or bare metal, visible to the unaided eye, should be sanded lightly, and coated with a high quality primer<sup>1</sup> to achieve proper adhesion and retard metal corrosion. Follow application and dry time instructions supplied with the primer. Allow sufficient time for primer to dry thoroughly before applying CERAM-A-CRYL® touch-up.

#### **B. CERAM-A-CRYL® Application**

##### **1. Brush**

CERAM-A-CRYL® coatings are formulated for fast drying and not ideally suited for brush application in large areas. However, they can be used successfully for spot or scratch touch-up repair and for small area painting. Apply CERAM-A-CRYL without reduction, as you would any other brushable coating. Work quickly to smooth out brush marks before the coating dries. Use Xylene (Xylol) for clean-up.

**Enforce NO SMOKING and remove all possible sources of ignition when Xylene (Xylol) or CERAM-A-CRYL® coatings are use.**

##### **2. Aerosol Spray**

- a.) Aerosol spray application of CERAM-A-CRYL® coatings for touch-up repair of minor “pencil point wide” scratches is not recommended. There is a tendency, with paint applied from aerosol cans, to “over-repair” and cover a wider than necessary area
- b.) Paint supplied in aerosol spray cans usually settle and separate and therefore must be agitated properly and thoroughly mixed before use.
- c.) For best results, apply multiple light coats of paint allowing one-minute interval between coats until the desired hiding and color are achieved.
- d.) Read and follow instructions on aerosol or other paint container labels for application temperature, storage, and container disposal guidelines.

<sup>1</sup> Glidden Galvanized Metal Primer® 5229. PPG Galvanized Steel Primer. 6-209 or equivalent primers specifically designed for adhesion to galvanized steel surfaces.



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### **V. PRECAUTIONS AND OTHER RECOMMENDATIONS**

CERAM-A-CRYL® coatings contain petroleum distillates. Wash hands thoroughly after use. Keep all containers away from heat, sparks and flame. Use only with adequate ventilation. Avoid breathing CERAM-A-CRYL® vapor or mist and prolonged or repeated contact with skin

Keep closures tight and containers upright to prevent leakage. In case of spillage, absorb and dispose of all materials in accordance with applicable government regulations.



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## Appendix A

### **USE OF GRAY TIECOAT SYSTEM: VA0C22855 / UC0C25562 IN THE REPAINTING OF FACTORY FINISHED METAL BUILDING PANELS**

#### **I. INTRODUCTION**

Factory finished metal panels do not readily accept field painting when panels are new or not sufficiently weathered. An Akzo Nobel TIECOAT system is available to facilitate adhesion between properly prepared but unweathered factory finishes and Akzo Nobel CERAM-A-CRYL®, AIR DRY TOUCH-UP Color Coatings or TRINAR® ADS air dry coating systems.

**IT REMAINS THE USER'S OR HIS/HER AGENT'S RESPONSIBILITY TO SELECT MATERIALS AND IMPLEMENT PROCEDURES SPECIFIC TO THE SAFE, PROPER AND COMPLIANT USE OF CLEANING AGENTS, PAINTS AND SOLVENTS MENTIONED BELOW.**

The Akzo Nobel TIECOAT system consists of two liquid components that **must be** mixed:

- A. Gray TIECOAT PRIMER, VA0C22855 and,**
- B. PRIMER CONVERTER, UC0C25562**

#### **II. AKZO NOBEL TRADENAMES**

Akzo Nobel tradename factory finishes designed to be compatible with this TIECOAT system include:

- TRINAR®<sup>2,3</sup>
- CERAM-A-STAR®<sup>2,4</sup>
- CERAM-A-SIL®<sup>2,4</sup>
- DEXSTARK®<sup>2,3</sup>
- REL-SHIELD®<sup>2,5</sup>
- POLYDURE®<sup>2,5</sup>

#### **III. SURFACE PREPARATION**

Any building panel surface weathered or unweathered must be properly prepared before it is repainted. Procedures defined in **Section III. "REPAINTING OF METAL BUILDING PANELS AND ROOFS, part A., Surface Preparation"** are recommended for all field painting situations including situations when Gray TIECOAT Primer System, VA0C22855 with UC0C25562, is to be used.

<sup>2</sup> registered trademarks of Akzo Nobel Coatings Inc

<sup>3</sup> contains 70% fluoropolymer resin: Kynar® 500, a registered trademark of Elf Atochem North America, or Hylar® 5000, a registered trademark of Ausimont. USA. Inc.

<sup>4</sup> silicone protected polyester finishes

<sup>5</sup> multi-mil plastisol finish



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### **IV. SAFETY AND GOOD PRACTICE**

Coatings and solvent materials described in this-section are petroleum derivatives and should only be used in well ventilated areas and away from open flames or sparks. Avoid skin contact and breathing vapors or mists from any of the liquid materials herein described. Wash hands thoroughly after use Refer to appropriate Material Safety Data Sheets for more detailed cautions and information.

### **V. TIECOAT MIXING AND APPLICATION**

#### **A. Mixing and Reduction**

After the building surface has been properly prepared, it must be coated within 24 hours with Akzo Nobel TIECOAT. VA0C22855 VA0C22855 must be thoroughly mixed, activated and reduced to spray application viscosity before use. For optimum application viscosity and activation, mix one pint of C PRIMER CONVERTER K-125, to two (2) quarts of VA0C22855 Gray Primer. Mechanical mixing is recommended

#### **B. Application**

The prepared surface must be completely dry prior to TIECOAT application. Painting should not be attempted in the early morning hours while overnight dew remains on panel surfaces. Avoid painting at temperatures below 50°F Apply a uniform coat of 0.25 mils (0.00025 inches) dry paint film thickness.

**NOTE: Due to the very thin film and critical need for uniformity, TIECOAT must be spray applied. However, even when properly mixed and applied, this TIECOAT system will not provide complete surface hiding. Avoid excessive or heavier than recommended coating application. Excessive wet thickness usually results in runs and sags which can negatively affect final appearance and adhesion.**

**NOTE: The TIECOAT mixture of Gray Primer and Converter has useable “mixed life” of eight hours. While the mixture remains a thin liquid, its effectiveness as a TIECOAT diminishes with time.**

**NOTE: Allow a minimum of two hours dry time before painting over the TIECOAT. The CER4M-A-CRYL® finish coat should be applied within 48 hours after the TIECOAT has dried.**



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### V. TIECOAT MIXING AND APPLICATION (continued)

#### C. Coverage

Theoretical coverage of VA0C22855 and UC0C25562 at 025 mils of dry film is 650-700 square feet per gallon of mixture. However, due to inefficiencies of some equipment and the spraying method, coating losses of up to 50% can result. Care should be taken to order sufficient TIECOAT to complete the job.

#### D. Clean-up

Use MEK (methyl ethyl ketone), MBK (methyl isobutyl ketone) or Xylene (Xvlol) to clean all equipment. **REFER TO MATERIAL SAFETY DATA SHEETS FOR CAUTIONS WHEN USING THESE MATERIALS.**



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## Appendix B

### **Evaluating Surface Preparation and RECOATABILITY with the “X-CUT” INTERCOAT ADHESION TEST<sup>1</sup>**

#### **I. INTRODUCTION**

The following is a test to determine the intercoat adhesion of a repaint material (CERAM-A-CRYL®) or high-quality latex house paint) to a well-prepared factory- applied coating. It is imperative that intercoat adhesion be tested and proven prior to any repainting.

#### **II. EQUIPMENT**

- A. Razor-sharp utility knife (in good condition)
- B. Office quality “Scotch” tape

#### **III. PROCEDURE**

**STEP- 1:** After properly cleaning and preparing a test area of the surface to be repainted, apply CERAM-A-CRYL® or high-quality latex house paint to a 4” x 4” area according to the manufacturers instructions Allow repainted area to dry completely before proceeding

**STEP- 2:** Use the utility knife to cut a two-inch “X” into the repainted test area.

**STEP- 3:** Place a three-inch strip of tape over the “X” and rub 10 times with heavy pressure, leaving a half-inch of tape free for easy removal

**STEP- 4:** Remove the tape by pulling it back over itself at a 180 deg. angle

**STEP- 5** Examine the tape and the panel for any signs of repaint material removal

#### **IV. EVALUATION OF TEST RESULTS**

If the tape removes more than 1/16” of the repaint material from the “X” cut, or **if any material is removed from the test area, the adhesion of the repaint material must be rated INADEOUATE for repainting**. Do not proceed to repaint the entire area since long- term adhesion failures are likely. Further clean or otherwise prepare the surface for painting then, repeat this intercoat adhesion test until satisfactory results are obtained

1 This test is adapted from ASTM D3359-90 (Test Method A)