

CARE & MAINTENANCE

of

TRINAR®, CERAM-A-STAR®,

REL-SHIELD®, CERAM-A-SIL®, DEXSTAR®

and POLYDURE® Finishes

for

BUILDING PANELS AND ACCESSORIES

CONTENTS

		Page
I.	INTRODUCTION	
3		
II.	CLEANING PAINTED SURFACES	
	3-4	
III.	REPAINTING OF METAL BUILDING PANELS AND ROOFS	
	4-7	
	A. Surface Preparation	
	1. Dirt and Mildew	
	2. Surface Imperfections	
	3. Exposed Metal and Rusting	
	4. Testing for Adequate Intercoat Adhesion RECOATABILITY	
	5. Additional Surface Preparation Methods	
	a.) Xylene (Xylol) Wipe	
	b.) 400 Mesh Sanding and Power Washing	
	B. REPAINTING WITH CERAM-A-CRYL®	
	1. Mixing and Reduction	
	2. Application	
	3. Coverage	
	4. Clean-up	
IV.	TOUCH-UP WITH CERAM-A-CRYL® AIR DRY PAINT	
	8-9	
	A. Surface Preparation	
	B. CERAM-A-CRYL® Application	

C. Precautions and Other Recommendations

Appendix A. USE OF GRAY TIECOAT SYSTEM: VA0C22855 / UC0C25562 10

IN THE REPAINTING OF FACTORY FINISHED METAL BUILDING PANELS

Appendix B. Alternate "X-Cut" Intercoat Adhesion Test

13

Appendix C. Typical MSDS for Xylene (Xylol)

14

Appendix D. Typical MSDS for a CERAM-A-CRYL® Air Dry Coating 20

I. INTRODUCTION

The factory applied white or color finish on your 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 <u>are not</u> recommended for general cleaning of building panels. NEVER BLEND STRONG CLEANSERS AND BLEACH, except as detailed below.

 $\boldsymbol{B.}$ One cup of household ammonia dissolved into five gallons of room temperature water.

II. CLEANING PAINTED SURFACES (continued)

Work from top to bottom of the panel surface. Use a well soaked soft cloth, sponge, <u>very soft</u> bristle brush or low pressure spray washer. <u>Do not</u> 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 POLYDURE® finishes often require 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.

care_and_maintenance.doc 9/96

7

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 primer¹. 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 re-painted. 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.

 $^1\,$ Glidden Galvanized Metal Primer® 5229, PPG Galvanized Steel Primer® 6-209 or, equivalent primers specifically designed for adhesion to galvanized steel surfaces.

9

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

<u>NOTE</u>: 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 (Xylol) Wipe

Some **RECOATABILITY TEST** failures can be overcome if the surface area is

wiped with a clean rag "wet" with Xylene (Xylol) 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 (Xylol) 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 -- <u>DO NOT PROCEED!!</u> Contact your building erector, panel supplier or Akzo Nobel Coatings Inc. at 614-294-3361.

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 (Xylol) 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 loses 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. Clean-Up

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

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 primer¹ 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®'s, 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.

^{1.} Glidden Galvanized Metal Primer® 5229, PPG Galvanized Steel Primer® 6-209 or, equivalent primers specifically designed for adhesion to galvanized steel surfaces.

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.

care_and_maintenance.doc 9/96

Appendix A.

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

I. <u>INTRODUCTION</u>

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^{® 2,3} • CERAM-A-STAR^{® 2,4}

•CERAM-A-SIL® 2,4

• DEXSTAR^{® 2,3} • REL-SHIELD^{® 2,5}

POLYDURE^{® 2}

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.

- ³ contains 70% fluoropolymer resin: Kynar® 500, a registered trademark of Elf Atochem North

 America, or Hylar® 5000, a registered trademark of Ausimont, USA, Inc.
- ⁴ silicone protected polyester finishes
- ⁵ multi-mil plastisol finish

care_and_maintenance.doc 9/96

² registered trademarks of Akzo Nobel Coatings Inc.

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 UC0C25562, 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 CERAM-A-CRYL[®] finish coat should be applied within 48 hours after the TIECOAT has dried.

V. TIECOAT MIXING AND APPLICATION (continued)

C. Coverage

Theoretical coverage of **VA0C22855** and **UC0C25562** at 0.25 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 loses 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), MIBK (methyl isobutyl ketone) or Xylene (Xylol) to clean all equipment. **REFER TO MATERIAL SAFETY DATA SHEETS** FOR CAUTIONS WHEN USING THESE MATERIALS.

Appendix B.

Evaluating Surface Preparation and RECOATABILITY with the "X-CUT" INTERCOAT ADHESION TEST¹

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 manufacturer's 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 "Scotch" 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° 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

1.

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

rated INADEQUATE 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.

Paint Warranty (PDF?)

UNION CORRUGATING COMPANY TWENTY-FIVE YEAR LIMITED PAINT WARRANTY

UNION CORRUGATING COMPANY ("Union") extends the following limited warranty to Buyer for Warranted Finish used to coat coils of metal fabricated into components for prepainted metal buildings. It applies only to goods used on wood frame buildings and on architectural, commercial, pre-engineered or residential metal buildings, which are installed in the United States, Canada and Mexico. For warranty information on PerformaTM Steel Shingles, please see specific warranty document.

SECTION A: TERMS

Although it is recognized by UNION CORRUGATING and Buyer that most coatings, including warranted finish, will fade and change in appearance to some degree over a period of time in outdoor installations, and that such changes may not be uniform between surfaces not equally exposed, Union warrants that the goods covered by this warranty will resist natural weathering to the extent that they will conform to the performance standards listed below during a period of 25 years after coating for film integrity and a period of 20 years after coating for both chalking and color change, provided that all conditions of this warranty are first met. Provisions (1) through (3) below apply to buildings installed north of the 15° parallel of latitude in the northern hemisphere. Only provision (1) applies to buildings installed south of this latitude:

- Warranted Finish will not peel, crack, check, or flake to an extent that is apparent on ordinary outdoor visual observation; and
- Vertical installations of Warranted Finish will not change color more than 5 NBS (Hunter) units, and non-vertical
 installation: will not change color more than 7 NBS (Hunter) units following field installation. Color
 measurements are to be made per ASTM D 2244 and only on clean surfaces after removing surface deposits and
 chalk per ASTM D 3964; and
- 3. Vertical installations of Warranted Finish will not chalk more than a number 8 rating, and non-vertical installations will not chalk more than a number 6 rating, when measured per ASTM D-4214, Method A.

EXCEPTIONS:

This is an anti-weathering limited warranty and does not apply to other causes of degradation, including;

- 1. Warranted Finish which has suffered scratching or abrasion or impact by a hard object; has been abused, altered, modified, used in a manner not originally intended or stored contrary to instructions of UNION CORRUGATING, or good industry practice; is damaged due to moisture entrapment during transit or storage; is stored or installed in a way which allows for standing water on the coating or in any chemically aggressive environment containing fumes, ash, cement dust, carbon black, salts or other chemicals, whether naturally occurring or caused by man; is stored or installed in an environment that includes a high degree of humidity, sand, dirt, or grease, whether naturally occurring or caused by man; is stored or installed in a way which allows contact with animals and/or animal waste or its decomposition products; is stored or installed in an area, or in such a way, that damage can occur due to poor air circulation; is stored or installed in areas which are subject to fallout from copper, lead, nickel or silver mining or refining operations; has suffered any damage caused by acts or God, radiation, falling objects, explosion, fire, riots, civil commotions, acts of war or other external forces;
- 2. Warranted Finish which suffers from cut edge exposure; corrosion of the substrate; or the development of any other condition between the coating and the substrate which causes the coating to degrade or delaminate, including any failure or deficiency in the cleaning process or pretreatment;
- 3. Warranted Finish which is installed within 1000 meters of a salt water or other marine environment;
- 4. Union Corrugating Company products with a gray backer or which are identified as "#2" or as "seconds" on a Union Corrugating Company invoice are not warranted.

SECTION B. DISCLAIMER OF OTHER WARRANTIES

THE LIMITED WARRANTY DESCRIBED IN THIS DOCUMENT SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

SECTION C. REMEDY FOR CLAIMS:

Buyer's remedy for any breach of this warranty by Union is recovery of all or part of the cost of materials to replace or refinish, at Union's option, the defective portion of the field installation as set forth in the allocation schedule below. Buyer shall be liable to Union and any other third parties for all installation or other labor charges in connection with any replacement or refinishing. UNION SHALL NOT IN ANY EVENT BE LIABLE FOR ANY INSTALLATION, LABOR, OR OTHER COSTS. Refinishing shall be done in accordance with standard industry practice to provide a uniformed appearance with the remainder of the installation. After replacement or refinishing, the repaired area shall be deemed to have been installed as of the original installation date for purposes of the application of this warranty to the repaired area.

Buyer must provide Union with at least two competitive bids for replacement or refinishing of materials, whichever is elected by Union. Union may authorize Buyer to proceed under one of the bids and will pay Buyer its share of the approved bid price upon receipt of a full and final release of Union from any further liability for the failure under repair. Union also reserves the right to reject those bids and to call for the materials of any party to make repairs.

SECTION D: LIMITATIONS OF REMEDIES:

THE PARTIES AGREE THAT THE BUYER'S SOLE AND EXCLUSIVE REMEDY AGAINST UNION SHALL BE FOR THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PORTION OF THE WARRANTED FINISH AS PROVIDED IN SECTION D ABOVE. THE BUYER AGREES THAT NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY, OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO HIM.

SECTION E. CLAIMS:

In the event of any claim under this limited warranty, Buyer must demonstrate to Union's satisfaction that the failure was due to a breach of this limited warranty. Buyer has the responsibility to provide written notice containing particulars sufficient to identify the Buyer and all reasonably obtainable information with respect to the time, place and circumstance, including a video and/or photographs of the claimed defective coating for Union's inspection. Such records shall at a minimum include the date of purchase, the place of purchase, and Union's invoice. These items shall be given by the Buyer to Union within thirty (30) days of receiving notice of the claimed violation of this Limited Warranty. The Buyer will arrange for Union to have, during normal business hours, complete access to the Warranted Finish in question. The Buyer shall further provide access to Union to any information and personnel having knowledge of or information pertaining to the claimed violation of this Limited Warranty. It is a condition to any obligation of Union under this limited warranty that the Buyer shall have fully paid the agreed contract price for the products with Warranted Finish sold by Union to Buyer.

SECTION F. MERGER CLAUSE:

ANY AND ALL REPRESENTATIONS, PROMISES, WARRANTIES OR STATEMENTS BY UNION'S AGENTS THAT DIFFER IN ANY WAY FROM THE TERMS OF THIS WRITTEN LIMITED WARRANTY SHALL BE GIVEN NO FORCE OR EFFECT. ANY SUCH REPRESENTATIONS, PROMISES, WARRANTIES OR STATEMENTS DO NOT CONSTITUTE WARRANTIES. SHALL NOT BE RELIED UPON BY THE BUYER AND ARE NOT PART OF THIS LIMITED WARRANTY OR OF THE CONTRACT FOR SALE OF THE GALVANIZED STEEL PANELS CONTAINING THE WARRANTED FINISH BETWEEN UNION AND BUYER. THIS LIMITED WARRANTY SHALL BE DEEMED TO BE A PART OF

23

THE CONTRACT OF SALE BETWEEN UNION AND BUYER FOR THE GALVANIZED STEEL PANELS WITH THE WARRANTED FINISH SOLD BY UNION TO THE BUYER. THE ENTIRE AGREEMENT AND UNDERSTANDING BETWEEN UNION AND THE BUYER WITH RESPECT TO THE WARRANTED FINISH IS EMBODIED IN THIS WRITING. THIS WRITING CONSTITUTES THE FINAL EXPRESSION OF THE PARTIES AGREEMENT AND IS A COMPLETE AND EXCLUSIVE STATEMENT OF THE TERMS OF THAT AGREEMENT.

SECTION G. WARRANTY NOT TRANSFERABLE:

This Limited Warranty is issued only to original Buyer. It is not transferable or assignable to any other party, and shall become void and of no further force and effect upon the transfer or conveyance of the products containing the Warranted Finish which are the subject of this Limited Warranty to any other person or entity.

SECTION H. NON WAIVER:

In any instance or series of instances, the determination of Union not to exercise any right hereunder or not to require compliance with any term or condition hereof, shall not constitute a waiver of Union's rights to exercise all rights and to require compliance with all terms and conditions herein on all occasions prior and subsequent to such instance or instances, and no such determination or series of determinations by Union shall constitute an alteration or waiver of the rights and liabilities of Union and Buyer as otherwise set forth herein.

SECTION I. NORTH CAROLINA LAW:

The rights and obligations of Union and Buyer hereunder shall be governed by and construed in accordance with the laws of the State of North Carolina.

Effective April 1, 2000

24