MAB COMMERCIAL GLAZING, LLC

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General Cleaning of Aluminum

In the cleaning of aluminum extrusions, it is important to select the proper cleaner suited for the type of finish.

1. Use mild soaps and detergents and non-etching cleaners. Spot test to be sure cleaner does not affect finish.
2. Solvent and emulsion cleaners are generally mild in their action and more effective on certain stains when used on anodized or painted surfaces. Surface should be spot tested.
3. Care should be taken in cleaning finished surfaces. Grit, sand, metal pieces, etc., should be removed from all cleaning tools. **Do not** use wire brushes, steel wool, metal spatulas, etc., for cleaning. Special care should be taken for painted finishes, which are softer than anodized finishes.
4. The use of acidic or alkaline detergents should be avoided since they cause corrosion or color change.
5. Some commercially available cleaners cause corrosion of aluminum extrusions. Make a spot test to be sure the cleaner does not affect the finished surface.
6. After using water soluble detergents, wash the extrusions thoroughly with water, and wipe off the water using a dry cloth.

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Cleaning and Maintenance of
Aluminum Extrusions and Curtain Wall Panels
Coated with Akzo Nobel Coatings Inc.
TRINAR® and TRI-Escent II® Products
(Kynar 500® Finishes)

I. Introduction

This document covers the care and maintenance of aluminum painted with TRINAR® or TRI-Escent II® from Akzo Nobel Coatings, Inc. This applies to aluminum extrusions such as window frames, door frames, entryways, railings and trim as well as curtainwall panels, louvers and other architectural components.

These coatings are Kynar 500® finishes. These are the most durable types of finishes available and will provide many years of trouble-free performance with little maintenance required. Still, the unpredictability of the environment or building service conditions generally makes periodic cleaning necessary and desirable. Using these procedures will enhance the aesthetic appearance and service life. It is important to read this brochure thoroughly and completely before attempting to clean factory painted aluminum extrusions or curtainwall.

II. Cleaning Painted Surfaces

Note: It is always recommended that you "test clean" a small "least conspicuous" area to ensure the cleaning agents and procedures are not harmful to the coating.

While factory-applied finishes for extrusions and curtainwall 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 painted surfaces to appear dull or discolored. A good cleaning will generally restore the appearance and render any other remedial action unnecessary.

Annual washing with a mild detergent, as explained below, maintains the original appearance of the factory-applied coating. Mild solutions of household soap and water will usually produce the desired results. Either of the following two solutions are recommended:

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

Note: The use of detergents containing greater than 0.5% phosphate *is not* recommended for general cleaning of painted metal surfaces. NEVER BLEND STRONG CLEANERS AND BLEACH.

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

Akzo Nobel does not recommend the use of solvents, although solvents may be required at times to remove material that is not soluble in water, such as grease, tar, oil, paint or other materials. Because these can affect the sealant and chalking, they should be used with caution to avoid staining of the painted surface and detrimental effects to the sealant or chalking. These are the preferred solvents to use when all other measures fail, and fall into the following two categories:

1. Aliphatic Solvents
   - Mineral Spirits
   - VM&P Naphtha
   - Kerosene
   - Turpentine

2. Alcohols
   - Isopropyl (rubbing alcohol)
   - Denatured alcohol (ethanol)
   - Methanol (wood alcohol)

All precautions on the appropriate Material Safety Data Sheets must be followed for the use of these solvents. Check for other recommendations from Akzo Nobel Coaints, Inc. or from the metal supplier before proceeding with other solvents to clean the surface of the coating.

Concrete spillage that has dried on the painted surface may be difficult to remove. Any spillage must be removed within 24 hours; special measures or cleaners may be required to accomplish this task. Diluted solutions of muriatic acid may aid in this task. The muriatic acid (37% hydrocholoric acid) must be diluted with **a minimum** of ten parts of water. This gives a solution of less than 4% hydrochloric acid. Proper handling techniques must be followed when using this solution. This must not be allowed to dry on the painted surface. Large quantities of clean water are required to rinse this solution **completely** from the painted surface. A test area should always be done first before cleaning any of the painted surfaces by any of the above chemical-cleaning agents.

Note: Neither the metal supplier nor the coating manufacturer are responsible for any damage that may be caused as a result of contact with the concrete, or as a result of the subsequent cleaning that is required.

Work from top to bottom of the metal surface. Use a well-soaked soft cloth, sponge, ***very*** soft bristle brush or low pressure spray washer using ambient temperature water. Do not use scouring powders or 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 with a soap solution 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 surface being cleaned, since this may result in damage to the surface of the coating.

The final step of any cleaning procedure is a thorough clear water rinse to remove dirt and/or cleaning residue. **SUCH RESIDUES MAY DAMAGE THE PAINT FINISH.** The damage may not be readily apparent and can take months or years to show.

It is recommended that you "test clean" a small area to be certain that satisfactory results are achieved with whatever solutions and procedures you have chosen before starting on the entire area or building.

III. Summary of General Cleaning Tips

A. Perform test cleaning on small area before full-scale cleaning begins.
B. Over-cleaning or excessive rubbing can damage the coating.
C. Solvents or cleaners can be too strong and may damage the surface. These can also affect the long-term durability, so the damage may not be readily or immediately apparent.
D. **Do Not** use any abrasive cleaners, brushes, soiled cloths, soiled sponges, steel wool, etc. since these can wear and harm the finishes.
E. Avoid run-down, drips or splashes of the cleaners as much as possible. Rinse these off as quickly as possible! **Never** allow any solutions to dry on the painted surface.
F. Avoid temperature extremes during cleaning. Heat accelerates chemical reactions as well as evaporates water faster. Extremely low temperatures may make the solutions less effective.
G. Do not use industrial strength cleaners or higher concentrations of the recommended cleaners.
H. **Never** use paint removers, aggressive alkaline, acid or abrasive cleaners. **Never** use trisodium phosphate or cleaners that are highly alkaline or acidic. Always check a test surface.
I. Consult with your metal supplier or the coating manufacturer before using solutions or cleaners not recommended in this document. Some products that look fine when checked with a spot test might adversely affect long-term durability that will not be evident for months or years.
J. Consider the effect of any run-off of the cleaners on shrubbery, equipment or nearby personnel.
K. Keep all cloths, brushes and sponges free of any grit. Rinse these frequently while cleaning.