

Architectural Grilles & Sunshades, Inc.

CARE AFTER INSTALLATION OF PAINTED ALUMINUM

GENERAL CONSIDERATIONS

Today's high qualities painted architectural finishes are extremely resilient. Factory applied heat cured painted finishes are both durable and colorfast. The Kynar and Hylar based products that meet the AAMA 2605 specification and/or ASCA96 with trade names such as Duranar by PPG, Floropon by Valspar or Trinar by AKZO-Nobel are warranted to retain their color and gloss level for many years. However, to assure they retain their original beauty, these highly durable finishes should be cleaned regularly. Although painted aluminum is exceptionally resistant, to corrosion, discoloration and wear, its natural beauty can be marred by harsh chemicals, abuse or neglect. The Architectural Aluminum Manufacturers Association, recognizing the need for the aluminum industry to provide information on the care and maintenance of exterior wall finishes, released a publication entitled "Voluntary Guide Specification for Cleaning and Maintenance of Architectural Anodized Aluminum, AAMA 609.1-1977." The best specification available for cleaning painted architectural coatings is AAMA 609.79. This specification outlines methods, equipment, and materials to clean painted aluminum after construction and for subsequent, periodic maintenance. The methods outlined are applicable to architectural products fabricated from both rolled and extruded shapes, including window and door frames, store fronts, and entrances, curtain walls, mullions, hand rails, flag poles, and hardware. The information provided in the specification is useful to building owners, managers, architects, contractors, and others in the building industry that are interested in the proper care and maintenance of anodized aluminum.

As with any finished building material, aluminum requires reasonable care prior to and during installation and periodic cleaning and maintenance after installation. Such conditions usually affect only the surface finish but do not reduce the service life of the aluminum. All exterior surfaces collect varying amounts of soil and dirt, depending on geographic area, environmental conditions, finish and location on the building. These factors and the owner's attitude regarding surface appearance determine the type and frequency of cleaning required. The aluminum cleaning schedule should be integrated with other cleaning schedules for efficiency and economy. For example, both the glass and the aluminum curtain wall can be cleaned at the same time.

Climatic conditions vary from one location to the next. Cleaning may be required more often in one geographic area than another when appearance is of prime importance. More frequent cleaning will be required in heavy industrialized areas than in rural areas. Seasonal rainfall can affect washing frequency by removing water-soluble deposits and less adherent soil. In foggy coastal regions, frequent cycles of condensation and drying can create a heavy buildup of atmospheric salts and dirt, which may adhere tenaciously.



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In areas of high salt concentration such as adjacent to the seashore, a systematic maintenance program must be instituted to clean the surface periodically so as to prevent the accumulation of concentrated salt deposits. In climates where the rainfall is low, the opportunity for atmospheric washing of the surface is minimal. Los Angeles, for example, with its unique combination of limited rainfall, temperature fluctuation, smog and condensation, requires that aluminum be cleaned more frequently than in other metropolitan areas with more frequent rainfall.

In both wet and dry climates, recessed and sheltered areas usually become more heavily soiled because of the lack of rain-washing. More frequent and longer periods of condensation also occur in protected areas, increasing the adhesion of the soil. This is particularly true of soffit areas on overhangs, bottoms of fascia panels, sheltered column covers and the like. Periodic maintenance inhibits long-term accumulation of soil, which, under certain conditions, can accelerate weathering of the finish.

CLEANING PROCEDURES

Cleaning procedures for painted aluminum should be initiated as soon as practical after completion of installation to remove construction soils and accumulated environmental soils and discolorations. Cleaning work should start at the top of the building and proceed to the ground level in a continuous drop. Using a forceful water spray, an area the width of the stage or scaffolding should be rinsed as cleaning proceeds from the top down.

Because surface soils may be light or heavy, several progressively stronger cleaning procedures may be employed depending of the severity and tenacity of the soil. For light soils, the simplest procedure is to flush the surface with water using moderate pressure. Washing should be done with uniform pressure, first horizontally then vertically. If soil is still present after air-drying the surface, scrubbing with a soft brush or sponge and concurrent spraying with water should be tried. If soils still adhere, than a mild detergent cleaner should be used with a soft cloth, sponge or soft brush. When selecting a cleaning solution use mild soap solutions that are safe for use with your bare hands. Avoid the use of strong acid or alkali cleaners as they may damage the finish. Remove bugs, sap, tree seeds and other materials as soon as possible, as they harden with exposure to sunlight and heat and become more difficult to remove.

Solvents no stronger than mineral spirits or denatured alcohol may be used to remove grease, sealants, or other materials. Never mix cleaners or cleaners and solvents as the resultant mixture can cause harmful or even dangerous results. Extreme care must be used when solvents of this type are used since they may damage organic sealants, gaskets and finishes. Do not use abrasive cleaners or materials such as steel wool or abrasive brushes which can also harm the surface. Following the washing the surfaces must be thoroughly rinsed by spraying with clean water and dried with a soft cloth.



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CLEANING PRECAUTIONS

Certain precautions must be taken when cleaning painted aluminum surfaces. Aluminum finishes must first be identified to select the appropriate cleaning method. Aggressive alkaline or acid cleaners must never be used. Cleaning hot, sun-heated surfaces should be avoided since possible chemical reactions will be highly accelerated and cleaning non-uniformity could occur. Strong cleaners should not be used on window glass and other components where it is possible for the cleaner to come in contact with the aluminum. Excessive abrasive rubbing, abrasive cleaners or materials such as steel wool or abrasive brushes should not be used since it could damage the finish.

INSPECTION

It is suggested that the building owner or manager provide an engineer or other qualified representative to inspect the cleaning work. Care must be taken to see that metal seams, crevices, sills and other areas that may trap water, cleaner, or dirt are carefully cleaned and dried. A final inspection to ensure that no discoloration or stains remain on the surface is recommended.

FIELD TOUCH UP

It is almost a given that some damage will occur and touch up work will be required during or after installation. Painted aluminum surface damage can be easily repaired if the damage is slight such as a scratch or rub mark. Minor painted surface damage can be sanded prior to touch up painting with excellent results. For scratches or gouges use a relatively coarse grit paper to remove the damage then use progressively finer paper to remove the sanding marks, finishing with a 180 to 220 grit paper. AGS, Inc. can supply touch up paint to be applied very sparingly in small aerosols or bottles with a built in brush for easy application. It is intended to cover small blemishes or to touch up exposed cut ends on fabricated parts. It is not intended for use on large areas of more than a few square inches. The color will closely match the factory applied painted finish, however the finish is not as hard nor the performance the same as the baked on finishes. After cleaning the area to be touched up, with the area with denatured alcohol to remove any moisture or cleaning residue and apply the touch up paint per instructions. Use caution an excessive use of touch up paint will void the original finisher's warranty.

CORRECTING MORE SEVERE DAMAGE:

Please refer to the product warranty when painted aluminum becomes damaged or discolored beyond the point where simple field touchup will not correct the problem.

EQUIPMENT AND PRODUCTS

Equipment and products needed for cleaning and maintaining painted aluminum finishes are listed in AAMA 609.1-1977. These include mild soaps, detergents, non-etching cleaners, abrasive cleaning pads and cleaning machines. AAMA, however, has not evaluated these materials nor does its listing constitute an endorsement. This list is included only as an aid to potential users in identifying the materials.