

# paint/finishes

Paint Chart

Paint and Anodizing



# Paint Selection Guide

## Standard Fluorspar® Colors



Bone White



Colonial White



Sandstone



Pueblo Tan



Beige  
353F061



Terra Cotta



Redwood



Boysenberry



Sage Brown



Brown



Medium Blue



Regal Blue



Aged Copper



Interstate Green



Hartford Green



Military Blue



Portland Stone



Fashion Gray



Charcoal Gray

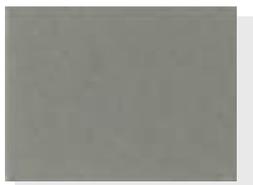


Black

## Premier Fluorspar Classic® II Colors



Copper Penny



Asti



Champagne Gold



Bright Silver



Pewter

Colors shown are as accurate as color chip reproduction permits, but may vary from actual color on aluminum.



**Oldcastle BuildingEnvelope™**

*Engineering your creativity™*

Oldcastle BuildingEnvelope™ is proud to offer our wide range of standard colors for your project requirements. Our experience and expertise in applying architectural coatings assures you of a quality finish. Oldcastle BuildingEnvelope™ standard color selection allows you to add color to your project at a reasonable cost and lead-time. Premier and Custom colors are offered on a per-job basis. Price and lead-time will vary according to project requirements.

### Fluorpon® Coatings by Valspar

Fluorpon coatings contain a full strength 70% Kynar 500® or Hylar 5000® fluoropolymer resin system that meets or exceeds AAMA (American Architectural Manufacturer's Association) 2605 specifications. For resistance to weathering, chalking, and fading, Fluorpon coatings outperforms all other paint coatings. This high performance coating has excellent flexibility with resistance to airborne chemicals, acid rain and cleaning solvents making it the traditional finish of choice for high-rise and monumental structures where proven performance and longest life are essential.

### Valspar

Valspar proudly offers two additional members of the Fluorpon® family, Fluorospar® and Fluorospar Classic® II. Advancements gained in these new product formulations provide the most environmentally responsible option available to the aluminum building components market today.

#### Before you choose the finish on your next project, consider the Fluorospar® advantages

- Reduced Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs) content.
- Decreased energy consumption through improved application features.
- Improved mar resistance reduces waste and offers additional protection.
- Long life cycle vital to sustainable design plans.
- No cadmium-based or lead pigments.

It is the continuing intent of Oldcastle BuildingEnvelope™ to be environmentally friendly in the communities where we manufacture as well as the areas in which our products are installed and maintained. All Standard Colors are painted using high efficiency Fluorospar® paint. Premier and custom colors may not be available in high efficiency Fluorospar® due to volume and formulation requirements.

**See the difference. Make the difference. Specify Fluorospar® and Fluorospar Classic® II.**

**FLUOROSPAR**  
A FLUROPON PRODUCT  
Better for the Environment

valspar



**Oldcastle BuildingEnvelope™**

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# Maintenance of Painted and Anodized Finishes

## Maintenance of Painted Finishes

### Recommended Inspection Procedures

Building managers and owners should have an engineer or other qualified person inspect cleaning and maintenance of anodized or painted finishes.

- It is important to check metal seams, sills, crevices and other areas that can trap dirt, cleaner or water to be sure they are clean and dry.
- It is recommended that a final inspection be made to verify that no stains or discoloration remain on surfaces.

### Cleaning and Care of Painted Finishes

Architectural aluminum finishes, whether painted or anodized, require care before and during installation and periodic maintenance after installation. Although resistant to corrosion, discoloration and general wear, both types of finishes can be damaged by neglect, abuse and harsh chemicals. Also, exterior surfaces collect various amounts of dirt and soil – of course, the amount depends on the environmental conditions, the building elevation and the type of finish.

Architectural aluminum should be cleaned at least once a year to prohibit accumulation of soil, which can speed up the weathering of finishes. For efficiency, glass and aluminum cleaning should be scheduled simultaneously. More frequent cleaning is recommended for finished aluminum that is exposed to harsh marine environments. Buildings located in certain areas also may dictate more frequent cleaning. These include locations in heavy industrial areas, locations with heavy rainfall and sheltered areas lacking rainfall and encouraging condensation.

### Cleaning Painted Finishes

When cleaning painted surfaces, precautions must be taken. These include:

- Cleaning should start at the top of the building, moving down to the ground level in a continuous descent the width of the scaffolding.
- Always consider the effects of run-off on personnel, plants and equipment when scheduling the cleaning of finishes.
- Choose the appropriate method of cleaning for the type of finish.
- First, test a small area of the finish, and follow recommendations for mixing and diluting cleaners.
- Avoid using abrasive materials such as steel wool or hard-bristle brushes, which can damage finishes. Strong window glass cleaners that may come in contact with aluminum should not be used.
- Do not use paint removers, aggressive alkaline, acid or abrasive cleaners. Never mix cleaners or substitute heavy-duty cleaners when milder cleaners are specified.
- Be sure that all sponges, cloths and other cleaning equipment are free of grit.
- Do not clean finishes during extreme temperatures, which can accelerate chemical reactions, thereby causing streaking or staining.
- Post-construction cleaning should take place as soon as possible, due to the fact that mortar, cement and other alkaline materials can possibly stain a painted finish when allowed to dry on the metal surface.



# Maintenance of Painted and Anodized Finishes

## Maintenance of Painted Finishes (continued)

### Cleaning Light Surface Soil

When removing light surface soil, only by testing progressively stronger procedures can the best method be determined.

- First, a strong water rinse should be applied to the finish.
- If soil is still present after the water rinse has dried, use a soft brush in conjunction with sprayed water.
- Next, try a 5-percent solution of commercial or industrial detergent with a cloth, sponge or soft brush in an alternate horizontal and vertical motion.
- Rinse the surface thoroughly with clean water after washing. Do not allow the detergent to dry on the aluminum. The thorough rinse should remove all cleaners from crevices and joints, as well as the surface.
- Mineral spirits or equivalent solvents are recommended for removing oil, wax, polish or like substances; however, care must be taken when applying to painted finishes.

### Stain Removal—Painted Finishes

Specific solutions are appropriate in the removal of stains from painted finishes.

- Sodium hypochlorite solutions, such as laundry bleach, help remove certain stains.
- Acetic acid (vinegar) or oxalic acid solutions may be used to remove rust or alkali mortar stains from Duranar® and Fluropon® finishes. Surfaces should be flushed with water afterwards.
- Ten percent muriatic acid, diluted with 10 volumes of water, can also be used for rust or mortar stains.

- With acids, limit contact to five minutes, and always flush with clear water immediately after use. (Anodized surfaces should not be cleaned with acidic or caustic solutions.)

### Mildew Removal—Painted Finishes

Mildew can be removed with a solution of:

- 1/3 cup detergent
- 2/3 cup trisodium phosphate
- 1 quart sodium hypochlorite, 5-percent (bleach)

Rinse with clean water immediately afterwards.

### Cleaning of Non-Water Soluble Deposits for Painted Finishes

Non-water soluble deposits such as grease, tar, oil and paint may be removed with solvents no stronger than mineral spirits or denatured alcohol. Use extreme care when using solvents on painted surfaces—many of them will reduce the gloss level of the painted finishes. When solvents remain on the finish for more than a few minutes, they may soften the paint and damage the coating. It is recommended that the contact between solvent and painted areas be as limited as possible.

- Prolonged contact with solvents may also damage organic sealants, gaskets and finishes.
- Most organic solvents are flammable and toxic and should be handled with extreme care. Use protective clothing and goggles, and be sure of adequate ventilation.
- When using solvents, avoid open flames, sparks and electrical motors.



# Maintenance of Painted and Anodized Finishes

## Maintenance of Painted Finishes (continued)

### Touching Up Painted Aluminum (Large Areas)

Procedures for the touch-up of painted finishes in the field begin with surface preparation:

- First, be sure the surface is clean, dry and free of any contaminants.
- Sand the surface lightly, and feather edges at the damaged area.
- After sanding, remove dust with a clean cloth dampened in solvent.
- Pretreat any areas of bare aluminum with a conversion coating, such as Alodine 1201 or Amchems Alumiprep No. 33, following the manufacturer's label directions.
- Prime any bare aluminum with an approved wash primer, again following label directions.

After preparation of the aluminum surface, follow these procedures for the application of air-dry, touch-up enamel.

- For the application of the paint and an initial 24-hour drying period, be sure that ambient air and surface temperatures are at least 50 degrees F.
- Except for small scratches and minor defects, it is advised to apply touch-up coatings with air spray equipment due to the coating's drying speed.
- Multiple light passes are recommended to slowly build to the desired 1.0 mil minimum film thickness.

Oldcastle BuildingEnvelope™ recommends field repairs for large areas be performed by a professional.

### Touching Up Painted Aluminum (Small Areas)

**CAUTION:** The guidelines below are to be used to touch up small scratches, not to repaint a large surface. These guidelines will not apply to all situations; therefore Valspar does not offer a warranty if this work is done. Please seek a qualified technical person to assess your specific situation and make recommendations. This is for Fluropon® using air dry additive.

Mixing ratio is 1 to 1. One part Fluropon®, and one equal part air-dry additive (920X346). Apply product in temperatures above 70 degrees F for best results.

It must be noted that the first step in repairing a damaged film is to observe the damage and evaluate what must be done.

If the surface to be repaired is intact and not exposed to the substrate, clean the locale of all dirt, oil, grease or other foreign matter. The most important step in painting any surface is to be sure the area is ready to be coated. Lightly scuff the damage with #400 grit sandpaper.

If the surface is damaged to the substrate or corrosion is present, then sanding to bare substrate and priming would be indicated.

Dampen a lint free cloth or tack cloth with MEK (Methyl Ethyl Ketone) using the proper precautions for handling solvents as instructed on the MSDS or container of the solvent. This may include safety glasses, gloves, protective clothing and a respirator. Wipe the surface liberally to clean the exposed area to be re-painted.

The surface must be dry before the finish coat is applied.

When applying touch-up paint, less is best. Apply with as small an applicator as possible. For small imperfections such as surface scratches, a brush similar to a finger nail polish applicator is best. Dip the brush half the length of the bristles into the paint. Tap the brush against the side of the container but don't wipe against the lip. Hold at the handle near the base and apply light pressure with the fingertips to make the bristles flex slightly. Feather the touch-up into the scratch using the least amount possible.

If the paint is applied in too thick a layer and spread to areas where it is not needed, long term differential fading between the two coatings present will be much more apparent. An air-dry paint is being applied to a surface that originally



# Maintenance of Painted and Anodized Finishes

## Maintenance of Painted Finishes (continued)

was factory applied and thermally cured. The same performance cannot be expected.

Follow the manufacturer's directions on the label of the material chosen for application instructions. There may be limitations such as ambient temperature at which the material may be applied and would cure properly.

### Reworking Painted Finishes

There are no set reworking procedures, which cover all possible situations that occur. If reworking the surface exposes the aluminum substrates, one can assume the pretreatment of that area no longer exists and other considerations are needed. If bare aluminum has not been exposed, recoating is usually satisfactory. Keep in mind that touch-up enamel is intended for minor defects and scratches only. If larger areas of the aluminum need repainting, contact your manufacturer.

### Protective Coatings for Painted Aluminum

Aluminum finishes should be protected at the job site and following installation. As stated earlier, cement, mortar and other alkaline materials, as well as acid-based cleaning materials for masonry products, are damaging to finishes and should be removed with soap and water immediately. Coatings that protect finishes at the job site include:

Stripping Plastic—these plastics have been available for some time, but they also have weaknesses:

- They are developed with cohesive strength but inadequate adhesive strength.
- Uniform thickness is difficult to achieve, and

where the film is thin, the cohesive strength decreases and the adhesive strength increases.

- Exposure to the sun can make the vinyl film brittle.
- Thin coatings can be difficult to remove.
- Thick coatings, on the other hand, tend to peel off prematurely.
- If the time is taken to properly apply these plastic coatings, they can provide adequate protection at the job site.

### Insulating Coatings for Painted Aluminum

For jobs that require that the architectural aluminum be attached directly to other metals, a coating should be applied to act as an insulator between the two metals. A zinc-based primer is the most common coating. It should be applied to the steel or other metal, as opposed to the aluminum—its pigment offers cathodic protection for the coated metal. The formulation used depends on the solvent system, as well as the vehicle used.

Zinc and clear lacquer are often used when aluminum is installed in direct contact with uncured concrete plaster or other alkaline material. This type of coating protects the aluminum from corrosion. Bituminous paint is also used for insulation. It has very good resistance to water, salts, acids and alkalines that depend on water as a carrier for ionization. Bituminous paints are inexpensive, allowing contractors to use a thick coating which provides insulation against galvanic action. These paints are easily dissolved with almost any organic solvent.



# Maintenance of Painted and Anodized Finishes

## Maintenance of Painted Finishes (continued)

### AAMA Reference Publication

The American Architectural Manufacturers Association (AAMA) has published a combined specification guide to provide information on the care and maintenance of architectural finishes.

- AAMA 609 & 610-02—  
Cleaning and Maintenance  
Guide for Architectural  
Finished Aluminum

- For copies of the guide, contact:  
American Architectural Manufacturers  
Association  
1827 Walden Office Square, Suite 550  
Schaumburg, IL 60173  
Phone: 847.303.5664

## Anodized Finishes

The Aluminum Association Designation System is considered the standard of the industry for standard anodized finishes. The Aluminum Association, however, lists many finishes, some of which are not often used in architectural applications. In order to keep costs down and

to maintain optimum shipping schedules while still providing the finest in architectural aluminum, Oldcastle BuildingEnvelope™ currently offers seven standard finishes. For internal record keeping, a 3-digit designation has been assigned to our standard finishes.

Trade Names		Oldcastle BuildingEnvelope™	AA
CLEAR	CLASS II	204	AA-M12C22A31
CLEAR	CLASS I	215	AA-M12C22A41
BRONZE	CLASS I	740	AA-M12C22A44
BLACK	CLASS I	760	AA-M12C22A44
LIGHT BRNZ	CLASS I	700	AA-M12C22A44
MED BRNZ	CLASS I	710	AA-M12C22A44
CHAMPAGNE	CLASS I	699	AA-M12C22A44

Class I - .7 mils  
Class II - .4 mils

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- It is recommended that a final inspection be made to verify that no stains or discoloration remain on surfaces.

### Cleaning, Care and Maintenance of Anodized Finishes

Architectural aluminum finishes, whether painted or anodized, require care before and during installation and periodic maintenance after installation. Although resistant to corrosion, discoloration and general wear, both types of finishes can be damaged by neglect, abuse and harsh chemicals. Also, exterior surfaces collect various amounts of dirt and soil—of course, the amount depends on the environmental conditions, the building elevation and the type of finish.



# Maintenance of Painted and Anodized Finishes

## Anodized Finishes (continued)

Architectural aluminum should be cleaned at least once a year to prohibit accumulation of soil, which can speed up the weathering of finishes. For efficiency, glass and aluminum cleaning should be scheduled simultaneously. More frequent cleaning is recommended for finished aluminum that is exposed to harsh marine environments. Buildings located in certain areas also may dictate more frequent cleaning. These include locations in heavy industrial areas, locations with heavy rainfall and sheltered areas lacking rainfall and encouraging condensation.

### Cleaning Anodized Finishes

When cleaning anodized surfaces, precautions must be taken. These include:

- Cleaning should start at the top of the building, moving down to the ground level in a continuous descent the width of the scaffolding.
- Always consider the effects of run-off on personnel, plants and equipment when scheduling the cleaning of finishes.
- Choose the appropriate method of cleaning for the type of finish.
- First, test a small area of the finish, and follow recommendations for mixing and diluting cleaners.
- Avoid using abrasive materials such as steel wool or hard-bristle brushes, which can damage finishes. Strong window glass cleaners that may come in contact with aluminum should not be used.
- Do not use paint removers, aggressive alkaline, acid or abrasive cleaners. Never mix cleaners or substitute heavy-duty cleaners when milder cleaners are specified.
- Be sure that all sponges, cloths and other cleaning equipment are free of grit.
- Do not clean finishes during extreme temperatures, which can accelerate chemical reactions, thereby causing streaking or staining.
- Post-construction cleaning should take place as soon as possible, due to the fact that mortar, cement and other alkaline materials will corrode

anodic coatings when allowed to dry on the metal surface.

- Brickwash, which is also acidic, can corrode anodic coatings.

### Stain Removal—Anodized Finishes

If general cleaning procedures have been attempted, the next step is cleaning with an abrasive pad soaked in clean water or mild detergent.

- Hand-scrub the metal surface using a small, nylon cleaning pad. Rub the metal in the direction of the grain.
- After cleaning, rinse the surface thoroughly with clean water or wipe with solvent to remove all residue.
- If cleaning solutions have dried on the surface, wipe dry with a clean cloth, squeegee or chamois.
- For the removal of heavy soils, a power-cleaning tool may be needed. If this operation is necessary, the surface must be kept wet with a clean water or mild detergent to provide lubrication and dirt removal. As with hand cleaning, alternate horizontal and vertical strokes should be used.
- The area then must be rinsed and scrubbed again with a hard-bristle brush. The operation is completed by a final rinse, and the surface is wiped dry or air-dried. Any cleaner running down onto unclean surfaces should be removed to avoid staining.

### Cleaning of Non-Water Soluble Deposits for Anodized Finishes

Non-water soluble deposits such as grease, tar, oil and paint may be removed with solvents.

- Prolonged contact with solvents may also damage organic sealants, gaskets and finishes.
- Always avoid using solvents on anodic finishes protected by clear coatings such as lacquer. Use organic solvents in accordance with manufacturer's safety recommendations.



# Maintenance of Painted and Anodized Finishes

## Anodized Finishes (continued)

- Most organic solvents are flammable and toxic and should be handled with extreme care. Use protective clothing and goggles, and be sure of adequate ventilation.
- When using solvents, avoid open flames, sparks and electrical motors.

### Protective Coatings for Anodized Aluminum

Aluminum finishes should be protected at the job site and following installation. As stated earlier, cement, mortar and other alkaline materials, as well as acid-based cleaning materials for masonry products, are damaging to finishes and should be removed with soap and water immediately. Coatings that protect finishes at the job site include:

Lacquer—although a clear lacquer coating can temporarily protect the surface of anodized aluminum, it has drawbacks, which include:

- Changing the appearance of anodized finishes.
- Making the surface seem painted rather than anodized.
- Causing small white areas to appear where there is a loss of adhesion.

Stripplable Plastic—these plastics have been available for some time, but they also have weaknesses:

- They are developed with cohesive strength but inadequate adhesive strength.
- Uniform thickness is difficult to achieve, and where the film is thin, the cohesive strength decreases and the adhesive strength increases.
- Exposure to the sun can make the vinyl film brittle.
- Thin coatings can be difficult to remove.
- Thick coatings, on the other hand, tend to peel off prematurely.
- If the time is taken to properly apply these plastic coatings, they can provide adequate protection at the job site.

### Insulating Coatings for Anodized Aluminum

For jobs that require that the architectural aluminum be attached directly to other metals, a coating should be applied to act as an insulator between the two metals. A zinc-based primer is the most common coating. It should be applied to the steel or other metals, as opposed to the aluminum—its pigment offers cathodic protection for the coated metal. The formulation used depends on the solvent system, as well as the vehicle used.

Zinc and clear lacquer are often used when aluminum is installed in direct contact with uncured concrete plaster and other alkaline material. This type of coating protects the aluminum from corrosion. Bituminous paint is also used for insulation. It has very good resistance to water, salts, acid and alkaline that depend on water as a carrier for ionization. Bituminous paints are inexpensive, allowing contractors to use a thick coating, which provides insulation against galvanic action. These paints are easily dissolved with almost any organic solvent.

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