

ENGINEERING REPORT

TOPIC: Finishes

Report No. 505:1

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Ruskin offers several finish and color selections for louvers, screens, and grilles. Finish type and durability, as well as color selection and matching, are all considerations for the architect or engineer. Some of the following information can help during the decision-making process.

Anodize vs. Pearledize

Color anodize is an electrolytically deposited coating on aluminum. The color anodize process is specified in Aluminum Association Code AA-C22A44. The process electrolytically deposits an inorganic color pigment finish to a 0.7 mil minimum surface depth on sulphuric acid anodized aluminum extrusions. It is available only on aluminum and some slight shade variation may occur.

Clear anodize is a clear oxide coating for aluminum. Clear anodize preoxidizes the extrusion surface for a clear finish not easily affected by natural oxidizing influences. Appearance is similar to clean mill finish extrusions.

Clear anodize is available in a 0.4 mil depth treatment, which is 204-R1 (Aluminum Association Code AA-C22A31) for normal weather exposure or a 0.7 mil depth treatment, which is 215-R1 (Aluminum Association Code AA-C22A41) for corrosive or abrasive exposure.

Pearledize is a Kynar-based paint finish that is an attractive and often cost effective alternate to anodize. It provides a metallic-like appearance without the use of metallic flakes. Pearlescent mica flakes, which are inert and do not react with the atmosphere, are used to provide sparkle in the finish. Unlike metallic paints, a clear topcoat (third coat) is not required. Ruskin offers nine standard colors for Pearledize that simulate most common clear and bronze anodize colors. Custom colors may also be provided (a sample of the custom color must be supplied to Ruskin).

Pearledize is available in two formulas. Pearledize 50 utilizes 50% Kynar resin and meets the AAMA 2604-02 specification. Pearledize 70 utilizes 70% Kynar resin and meets the AAMA 2605-02 specification.

Advantages of Pearledize

1. Pearledize is color consistent. With anodizing, different alloys as well as different batches of the same material anodize differently. This makes color matching difficult. For instance, formed flashing will anodize a different shade than an extruded louver.
2. Pearledize is available with a **limited 20-year warranty on extruded louvers**. Anodize is not warranted beyond the standard one year product warranty.
3. Steel products and components can be finished with Pearledize. Anodize can only be applied to aluminum.
4. Pearledize can be touched up if scratched. Anodize cannot be touched up.
5. Pearledize is a Kynar finish and can be formed after finishing. Anodize finish will crack and/or craze when formed after finishing.
6. Pearledize has a shorter lead time (same as our Kynar and Baked Enamel finishes) than anodize. Anodize often increases louver order lead times.
7. Mortar and concrete splatter can be removed from Pearledize without harm. Both will ruin anodize finishes.
8. In most cases, Pearledize 50 is less expensive than anodize. The anodize finish process is slower and more prone to quality issues compared to painting, adding labor and cost to the finish.

Kynar 500 (70% Kynar) vs. Baked Enamel (50% Kynar)

Kynar 500 is the premium fluoropolymer coating that is virtually maintenance-free with excellent color retention, adhesive properties, and weather resistance to chalking, fading, and chemical abrasion. This polyvinylidene fluoride spray coating contains 70% Kynar by weight and is applied to a 1.2 mil dry, baked-on thickness. The finish coating meets or exceeds AAMA specification 2605.02 and is available with a limited 20-year warranty on extruded louvers. Ruskin's option name for Kynar 500 is simply "Kynar."

Ruskin's Baked Enamel semi-gloss finish is

actually a modified fluorocarbon spray finish. It contains 50% Kynar resin by weight and is applied to a 1.2 mil dry, baked-on thickness. Baked Enamel provides the benefits of fluoropolymer with improved economy. This finish meets sections of the AAMA 2604.02 specification. A limited 20-year warranty is available on extruded louvers.

Ruskin's Kynar and Baked Enamel are considered two-coat finishes, consisting of prime and color coat processes. Both finishes offer a full range of colors and custom color matching. Baked enamel is not available in metallic and exotic colors.

70% Kynar-based finishes are also available in formulations that offer metallic appearances. This is typically done by adding either metallic flakes or mica flakes to the paint formulation. Metallic paints most often utilize aluminum flakes and are frequently designated with an "XL" suffix. These finishes require a clear topcoat (at least three coats total). Mica paints are often referred to as "pearlescent" finishes and do not require a clear topcoat. (Example: Ruskin Pearledize finishes) Both metallic and mica paints are often more expensive than standard finishes, with metallic being the most expensive. The economically priced Pearledize 50 finish, described earlier, is an exception to the higher priced rule.

Use Kynar (Kynar 500) . . . when the specification reads "full strength, 70%, Kynar 500, AAMA 2605.2, 70% Polyvinylidene Fluoride Resin, or Hylar 5000." Also, watch for trade names that indicate 70% Kynar; Duranar, Fluropon, Trinar, and Nubelar.

Use Baked Enamel (50% Kynar) . . . when the specification reads "Kynar" and offers no further explanation as to content. Then, Ruskin's advice is to quote 50% Kynar. It is more economical and still meets the specification.

Note that Baked Enamel should not be specified on monumental structures.

Color Matching Capabilities

Ruskin utilizes in-house computerized color matching equipment. This provides several benefits to the customer.

1. More exact color matches
2. Faster turnaround and lead times
3. A greater range of colors

The latest in color matching technology is used to accurately match customer-provided color samples. Color matching is available with Kynar, Baked Enamel and Pearledize finishes.

Simply send Ruskin Louver Sales a 1" x 1" minimum size color chip on paper or metal with the order. Code numbers and formulations are not acceptable. If the chip is being sent separately from the order, reference the

job name, purchase order number, control number, and any other pertinent information.

To match the color sample, the matching equipment analyzes the sample and generates several potential match formulas. Ruskin selects the best match, mixes a small batch of paint and applies it to a small metal panel for match verification. If required, the color match sample is sent for the architect's engineer's approval. Once the sample is approved, the exact quantity of finish will be mixed for each release of the order.

While many typical colors utilized in building exterior design can be matched in-house, certain colors cannot be matched by Ruskin's in-house system. Most earth tones (grays, tans, stone, etc.) are very easily and accurately matched. However, the paint manufacturer in their own lab often must match bright "exotic" colors and "XL" metallics. These colors are generally "buy-out" finishes that require an additional price add. Most bright reds, blues and other colors are considered exotic. Some metallics can be closely matched with mica-flake finishes at a lower cost than with metal flake formulations.

Ruskin-provided color samples will be identified by a number on the rear of the sample panels. Record this number and reference it on your order submittal or release correspondence to Ruskin. This number enables Ruskin to provide the correct color at the time of release and to reproduce the color at a later date for additional releases, touch-up and repair or replacement louvers.

Finishes Tips

1. Send a color chip in with your order to avoid having the order be put on hold.
2. Some colors are very difficult or impossible to be matched in-house. These finishes generally include bright exotic colors and metallics. They are also generally more expensive. Unless specified as three or four coat Kynar, exclude these colors.
3. Finishes requiring three or four coats are more expensive than standard finishes. Consult Ruskin for pricing and have the square footage amounts ready.
4. On projects with metallic finishes specified, find out if two-coat mica finishes may be substituted. This can provide substantial cost savings.
5. Buy a copy of the Aluminum Association's "Designation System for Aluminum Finishes." It will help you interpret finish specifications correctly. Visit the Aluminum Association's website at www.aluminum.org for ordering information.
6. Build a color chart library. Pick up color charts at your local hardware and paint stores and at trade shows.
7. When in doubt, call Ruskin.