

FINISHES

Coatings, Surfacing

There are three basic categories for aluminum finishes:
ANODIC FINISH, BAKED ENAMEL FINISH and **POWDER COAT FINISH**.
Each are available and are briefly described below:

Aluminum Tube Railings by ATR Technologies, Inc. are available in a variety of finishes and colors. These options are listed and described below.

Anodize Finishes

ARCHITECTURAL CLASS I ANODIZE

This process creates a film of aluminum oxide on the surfaces of aluminum extrusions with a minimum coating thickness of 0.7 mil. This hard and durable finish resists abrasion and corrosion. It is especially well suited for heavy abuse environments. It is used for exterior and interior applications with a life expectancy of over 30 years depending on environmental conditions. Architectural Class I Anodize finishes are available in the following colors:

CLEAR	(AA-M12 C22 A41)
GOLD	(AA-M12 C22 A43)
LIGHT BRONZE	(AA-M12 C22 A44)
MEDIUM BRONZE	(AA-M12 C22 A44)
DARK BRONZE	(AA-M12 C22 A44)
BLACK	(AA-M12 C22 A44)
HARD COAT	(MIL-A-8625, Type III, Class I)

MECHANICAL PRETREATMENTS

All Anodized finishes may be applied over pretreated aluminum extrusions. When used, the pretreatment number replaces the "M12" in the AA designation. The most commonly used pretreatments are: M32-Medium Directional Texture and M21- Smooth Polished.

GENERAL ANODIZE NOTES

Anodize is best used on 6063 or 6005 series aluminum alloys. Aluminum oxide coatings are known to have a hardness similar to that of a diamond. Since welding aluminum changes temper slightly, exposed welded joints may halo or appear slightly discolored under the anodized finish.

Baked Enamel Finishes

This coating process offers virtually unlimited colors and a wide variety of quality.

Superior Performance: Kynar 500®, Hylar 5000®, Duranar®, or other baked enamel products that contain 70% polyvinylidene fluoride (PVDF) resin. These products meet the performance criteria of the AAMA 2605 specification. Such finishes have 30-year life expectancy on aluminum depending on environment.

GENERAL BAKED ENAMEL NOTES

Baked Enamels are factory-applied, oven-baked finishes that are available in virtually any color. Prices may vary depending on the color choice. Generally, colors are divided into standard, custom and exotic colors. Custom colors are available and priced accordingly. Exotic colors are generally considered bright, metallic or "XL"

and therefore, may require a clear topcoat. Color matching is available. Color chips are prepared by the applicators laboratory for approval.

Powder Coat Finishes

This coating process offers hundreds of industry standardized "RAL" colors in many quality options:

High Performance Powder: Tiger Drylac, Spraylat, Akzo Nobel and others provide a variety of powder coating options. High Performance Powder Coatings meet the performance criteria of the AAMA 2604 up to 2605 specification.

GENERAL POWDER COATING NOTES

Prices vary depending on the color selection. Generally, colors are divided into standard, custom and exotic colors. Many custom colors are matched first to the closest existing "RAL" color available. Feasibility to create custom and/or exotic colors is subject to the product manufacturer's ability and priced accordingly. Color chips are provided from the applicator.

Uses, Applications

Aluminum Tube Railing systems are ideally suited for virtually maintenance free requirements such as decks and balconies. Railing systems over 4'-0" (1.21 Meters) high also produce virtually maintenance free fencing for pool areas and site perimeters. Other ornamental applications include Juliette (or false balcony rails, trellis structures, fretwork, and chair rails.

Assembly, Installation

Aluminum Tube Railing systems are easily installed, requiring virtually no assembly on the jobsite. Railing sections are shipped pre-assembled in lengths up to 20'-0" (6.09 Meters) long. Field assembly of Aluminum Tube Railing sections is accomplished by joining together the prefabricated sections and setting them into place. Shop drawings are provided for each awarded contract. Additional instructions are provided upon request. Installation by ATR Technologies, Inc. is available depending on project magnitude, location and requirements.

Materials, Finishes

Aluminum Tube Railings are produced from 6063-T6 & 6005-T5 aluminum alloys. A variety of finishes are available including several grades of baked enamel, powder coat and anodize. All mechanical connections use interlocking technology which is hidden from view or use internal fasteners of aluminum, cadmium

plated or stainless steel. Typical designs utilize non-welded joints. These mechanically connected joints avoid welded construction and also avoid the "halos" or discolored areas commonly seen with anodized finishes on welded joints. When required, welded construction is utilized.

Technical Support

ATR Technologies, Inc. provides design and cost estimates, installation, shop drawings, engineering calculations, custom extrusions and additional support for any project as required.

Workmanship and Installation

Aluminum Tube Railings shall be fabricated according to approved shop drawings and actual field dimensions. All materials shall be installed plumb, square, and level and shall be anchored securely in proper alignment with adjacent work. Posts shall be anchored according to approved shop drawings. Adequate provisions shall be made for thermal expansion and contraction of all exterior railings. All miters and field cuts shall be smoothed after joining. When aluminum is placed in contact with dissimilar materials, the aluminum surface shall be protected by a vinyl tape or epoxy paint barrier.

Final Acceptance

The railing subcontractor shall complete the railings for final inspection and acceptance as installed according to the contract requirements. The General Contractor shall be responsible for

protecting the installed railings from subsequent operations of other trades during the balance of construction.

Cleaning

Aluminum Tube Railings shall be cleaned with plain water containing a mild soap or detergent or distillate. No abrasive agent shall be used.

Codes, Certification

Engineering calculations are provided as required. When specified, certified engineering is provided by a California State Certified engineer for each project awarded. Aluminum Tube Railings by ATR Technologies, Inc. meet and exceed the loading requirements established by CBC, IBC, OSHA and local Building Codes, including ADA Accessibility Guidelines (ADAAG).

Operation, Maintenance

Aluminum Tube Railings by ATR Technologies, Inc. are virtually maintenance free. Depending on finish selected, seasonal rains may rinse off dust and debris on exterior installations. When heavier deposits are subject to occur or when periodic maintenance is required, mild detergents and warm water are generally recommended, subject to the applicator's cleaning recommendations. These recommendations vary by finish and location and are available as required.



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