

# LA EXTRA DARK BRONZE COLORIN®



## FINISH DESCRIPTION

LA Extra Dark Bronze ColorIn® is a finish developed for general applications. The LA Extra Dark Bronze ColorIn® finish utilizes a specialized anodizing process using a two-step electrolytic coloring system. The combination of a 0.250 film thickness with the inorganic coloring chemistry provides excellent corrosion resistance and will maintain color consistency throughout its lifetime.

## MAINTENANCE AND CLEANING

The anodized aluminum finish can be washed with mild soap and water followed by a clean water rinse. For more information on cleaning anodized aluminum, please refer to the Aluminum Association Publication 92, Care of Aluminum or AAMA 609 & 610-09, Cleaning and maintenance guide for architecturally finished aluminum.

## AVAILABILITY

The standard lead time for stocked gauges and widths is two weeks for anodizing and one week for any secondary services such as slitting, shearing and applying transparent protective films or paper.

Please check availability of Non-Stocked materials by contacting our sales staff using our toll free number 1-800-PAC-CLAD or email your request to [info@pac-clad.com](mailto:info@pac-clad.com). Some raw materials may have extended lead times.

## WARRANTY

A limited 20 year warranty is available upon request. The warranty is issued on a per project basis and can be applied for on line by completing an application for warranty at [www.pac-clad.com](http://www.pac-clad.com).

## INDUSTRY DESIGNATIONS

- ▶ **Aluminum Association:** AA-M12-C22-A34
- ▶ **Mil A-8625F Classification :** Type II Sulfuric Anodize

## INDUSTRY STANDARDS

- ▶ **AAMA 611-12 :** Voluntary specification for anodized architectural aluminum
- ▶ **Mil A-8625F Anodizing Standard :** Anodic coatings for aluminum and aluminum alloys

## SUSTAINABILITY AND LEED

- ▶ **Recycled Content, 5005 alloy:**
  - ▶ 100% recyclable
  - ▶ Recycled Content: 6.6%
  - ▶ Reclaimed-Virgin Material: 93.4% 2012.04.30 Mill6
- ▶ **Volatile Organic Compounds:** The aluminum oxide layer does not contain any VOC's

## ALUMINUM PROPERTIES

- ▶ **Alloy:** 5005
- ▶ **Temper:** Half Hard
- ▶ **Finish:** Mill Finish



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## MECHANICAL PROPERTIES

- ▶ **UTS:** 20-26 ksi [138-179 MPa]
- ▶ **YTS:** 15 min [103 MPa]
- ▶ **Elongation:** 4% - 5% min

## CHEMICAL PROPERTIES

- ▶ **Si:** 0.30 %
- ▶ **Fe:** 0.7 %
- ▶ **Cu:** 0.20 %
- ▶ **Mn:** 0.20 %
- ▶ **Mg:** 0.50—1.1 %
- ▶ **Cr:** 0.10 %
- ▶ **Zn:** 0.25 %
- ▶ **Other:** 0.15 %
- ▶ **Al:** Remainder

## GAUGE AVAILABILITY

- ▶ 0.032" (0.8 mm)
- ▶ 0.040" (1.0 mm)
- ▶ 0.050" (1.3 mm)
- ▶ 0.063" (1.6 mm)
- ▶ 0.080" (2.0 mm)

## WIDTH AVAILABILITY <sup>1</sup>

- ▶ 48.0" (1219 mm)

## ANODIZE FILM THICKNESS

- ▶ **Architectural Class II:** 0.400 mils [10.2 µm] minimum

## ANODIZE FINISH PROPERTIES <sup>2</sup>

- ▶ **Optical:** Not Applicable
- ▶ **Gloss:** Coarse Matte
- ▶ **Color :** LA Extra Dark Bronze
- ▶ **Color Target:** < Delta E of 5.0
- ▶ **UV Stable:** Yes
- ▶ **Environment:** Exterior
- ▶ **Quality Grade:** 2
- ▶ **Other:** ColorIn®

## ALUMINUM SECONDARY SERVICES

- ▶ **Shearing, Width Capabilities:** 7" (178mm) - 62" (1575 mm)
- ▶ **Shearing, Length Capabilities:** Up to 192" (4876 mm)
- ▶ **Shearing, Loading Gauge:** Up to 0.080" (2.0 mm)
- ▶ **Slitting, Width Capabilities:** 0.75" (19 mm) min
- ▶ **Slitting, Loading Gauge:** Up to 0.100" (2.5 mm)
- ▶ **Other Secondary Services:**
  - ▶ Protective peelable films
  - ▶ International packaging
  - ▶ Perforating and embossing

## ANODIZED FINISH TEST DATA

CHARACTERISTIC	TEST METHOD	STANDARD	TEST RESULTS
Oxide Layer, Weight	ASTM B137 - Coating Dissolution	AAAMA 611-12, > 1.5mg/cm <sup>2</sup> (9.7mg/in <sup>2</sup> )	> 1.5mg/cm <sup>2</sup> (9.7mg/in <sup>2</sup> )
Color Uniformity	ASTM B2244 - Calculation Δ in Delta E	AAMA 611-12, must meet agreed upon specification	Lorin Color D045, Δ in Delta E ≤ 2.7
Gloss Uniformity	ASTM D523 - 60° Gloss Reflectance	Coarse, Matte Finish	Lorin Gloss E1A, Nominal Target 20
Film Hardness	ASTM D3363 - Pencil Hardness	Based on a anodic film thickness, 6.4 µm (0.250 mils)	9H Hardness
Corrosion Resistance	ASTM B117 - Neutral Salt Spray	500 hours, No Visible Pits	Pass, No visible pits
Seal Quality	ASTM B136 - Dye Stain	Dye Stain	Pass, No visible pits

<sup>1</sup>: Other gauges can be custom ordered. <sup>2</sup>: Panel-to-Panel match quality can be custom ordered.