



**CLEARMATT® ARCHITECTURAL CLASS I IS A PRODUCT DEVELOPED BY LORIN INDUSTRIES AND DESIGNED FOR EXTERIOR USE TO SUPPORT MULTIPLE APPLICATIONS.**

ClearMatt® Architectural Class I finish meets the American Architectural Manufacturers Association (AAMA) standard for high performance anodic finishes used primarily for exterior applications receiving periodic cleaning and maintenance such as façades. If the designer is looking for an anodized aluminum product with natural metallic beauty and formable for many exterior applications, then Lorin’s ClearMatt® Architectural Class I is the material of choice.

**INDUSTRY DESIGNATIONS**

**Aluminum Association**  
**AA-M12-C22-A41**  
**Mil A-8625F Classification**  
 Type II Sulfuric Anodize

**INDUSTRY STANDARDS**

**AAMA 611-12**  
 Voluntary specification for anodized architectural aluminum  
**ISO 9001: 2008**  
 Quality management system  
**Mil A-8625F Anodizing Standard**  
 Anodic coatings for aluminum and aluminum alloys

**ALUMINUM PROPERTIES**

Alloy ..... 5005  
 Temper ..... Half Hard  
 Finish ..... Mill Finish

**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

**ANODIZE FILM THICKNESS**

**Architectural Class I:**  
 0.700 mils [17.8 µm] minimum

*1.000 mils [25.0 µm] film thickness can be requested at a premium charge for additional oxide.*

**ANODIZE FINISH PROPERTIES**

Optical ..... N/A  
 Gloss ..... Coarse Matte  
 Color ..... Natural Aluminium  
 Color Target ..... N/A  
 UV Stable ..... Yes  
 Environment ..... Exterior  
 Quality Grade ..... 2  
 Other ..... None

*Panel-to-Panel match quality can be custom ordered.*

**WIDTH AVAILABILITY**

48.0" (1219 mm)  
*Other widths can be custom ordered.*

**GAUGE AVAILABILITY**

0.020" (0.5 mm)  
 0.025" (0.6 mm)  
 0.032" (0.8 mm)  
 0.040" (1.0 mm)  
 0.048" (1.2 mm)  
 0.050" (1.3 mm)  
 0.063" (1.6 mm)  
 0.080" (2.0 mm)

*Other gauges can be custom ordered.*

## ANODIZED FINISH TEST DATA

CHARACTERISTIC	TEST METHOD	STANDARD	TEST RESULTS
Oxide Layer, Weight	ASTM B137 - Coating Dissolution	AAMA 611-12, 4.18 mg/cm <sup>2</sup> (27.0 mg/in <sup>2</sup> )	> 4.18 mg/cm <sup>2</sup> (27.0 mg/in <sup>2</sup> )
Gloss Uniformity	ASTM D523 - 60° Gloss Reflectance	AAMA 611-12, Must meet agreed upon specification	Lorin Gloss E1D, Nominal Target 30
Abrasion Resistance	ASTM D4060 - Taber abrasive wheel	Based on a anodic film thickness, 18 µm (0.700 mils)	10,000 cycles; 40.6mg /wgt loss; 4.1 wear index
Film Hardness	ASTM D3363 - Pencil Hardness	Based on a anodic film thickness, 18 µm (0.700 mils)	9H Hardness
Corrosion Resistance	ASTM B117 - Neutral Salt Spray	AAMA 611-12, 3,000 hours ≤ 15 pits < 1mm, 381 cm <sup>2</sup> (150in <sup>2</sup> )	4H Hardness
Weathering	SAE J1960 - ATLAS Accelerated testing using an Xenon Arc light source	AAMA 611-12, 10 year Florida Exposure max Δ Delta E of 5.0	Delta E 1.40; 3,929 hours equivalent to 2.00 years South Florida Sun (20140602)
Craze Resistance	AAMA 611-12 - Thermal Crazing of the oxide layer	AAMA 611-12, oxide layer shall not craze less than than 82°C (120°F)	No visible evidence of Thermal Crazing
Chemical Resistance	ASTM D1308 - Effect of Household Chemicals	10% Reagent grade Muriatic Acid, 15 minute exposure at ambient temp	No blisters, No peeling. Subtle stain
Seal Quality	ASTM B680 - Acid Dissolution	AAMA 611-12, max wgt loss shall be 40mg/dm <sup>2</sup> (2.6mg/in <sup>2</sup> )	< 20mg/dm <sup>2</sup> (1.3mg/in <sup>2</sup> )
Solar Reflectance	ASTM E1980 - SRI Calculation	Reference Reflectance and Thermal Emissivity	SRI 92

### 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 peel-able films

International packaging

Perforating and embossing

### 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.

### 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

### 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 800.654.1159 or email your request to [info@lorin.com](mailto:info@lorin.com). Some raw materials may have extended lead times.

### TECHNICAL SUPPORT

A staff of factory trained personnel are available to offer technical assistance. Please call our toll free number 800.654.1159 or email your question to [info@lorin.com](mailto:info@lorin.com).

### PRODUCT SUPPORT PARTNERS

Lorin Industries works very closely with many manufacturers' in multiple markets who specialize in anodized aluminum fabrication. Our support staff can assist you if you are looking for finished components. Please call our toll free number 800.654.1159 or email your request for product and application support to [info@lorin.com](mailto:info@lorin.com).

### 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 [Lorin.com](http://Lorin.com).