

TECHNICAL DATA SHEET

ClearMatt® with Adhere® (Patent 7,029,597)

Finish Description: Our customers asked us to develop a high quality anodized aluminum finish that will accept adhesives without having to apply a primer coat. ClearMatt® with Adhere® is a patented process developed by Lorin Industries that offers the customer an anodized aluminum finish on the top, good-side with exceptional adhesive qualities on the back-side of the sheet. This patented chemical process increases the surface area creating a bondable surface that accepts many different adhesives to adhere common substrates such as resin soaked papers, MDF board, Plywood, PVC, and other materials. The Adhere® process can be applied to many Lorin Anodized colors and finishes.

Reference Part Number (s)

0605-250-119A 0605-250-075A
0605-250-062A

Industry Designations

Aluminum Association

AA-M12-C22-A21

Mil A-8625F Classification

Type II Sulfuric Anodize

Industry Standards

ISO 9001: 2008

Quality management system

Mil A-8625F Anodizing Standard

Anodic coatings for aluminum and aluminum alloys

Aluminum Properties

Alloy: 5005

Temper: H34

Finish: Mill Finish

Mechanical Properties

UTS: 20-26 ksi [138-179 MPa]

YTS: 15 min [103 MPa]

Elongation: 4% to 5% min

T Bend: Recommended 1t - 2t, 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

Stock Gauge Availability ¹

0.025" (0.6 mm)

0.032" (0.8 mm)

0.040" (1.0 mm)

Stock Width Availability ²

48.0" (1219 mm)

48.5" (1232 mm) 0.025" (0.6mm) only

Anodize Film Thickness

Exterior Standard #1:

0.250 mils [6.4 μm]

Anodize Finish Properties (Topside)

Optical: Not Applicable

Gloss: Medium Matte

Color: Natural Aluminum

Color Target: Not Applicable

UV Stable: Yes

Environment: Exterior

Seal: S3, Duplex Seal III

Quality Grade: 2

Other: Back of sheet with Adhere®

Adhere® Properties

Adhesion Quality:

T-Peel Strength > 20 lbs/in; Using 1.6-mil 3M DP-420 Adhesive, Cured at 230-250 °F for 60 ± 5 minutes.

Footnotes: 1 - Other gauges can be custom ordered. 2 - Other widths can be custom ordered.



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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 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 Mill/6
- 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. 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.

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.

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.Lorin.com

Anodized Finish Test Data

Characteristic	Test Method	Standard	Test Results
Oxide Layer, Thickness	ASTM B244 - Eddy current method	AA Protective & Decorative coatings less than 10.2 µm (0.400 mils) maximum	Nominal Target, 6.4 µm (0.250 mils), Top-Side Surface
Oxide Layer, Weight	ASTM B137 - Coating Dissolution		> 1.5 mg/cm ² (9.7 mg/in ²), Top-Side Anodized Surface
Gloss Uniformity	ASTM D523 - 60° Gloss Reflectance	Medium Coarse, Matte Finish	Lorin Gloss E1H, Nominal Target 50
Film Hardness	ASTM D3363 - Pencil Hardness	Based on a anodic film thickness, 6.4 µm (0.250 mils)	9H Hardness, Top-Side Anodized Surface Only
Corrosion Resistance	ASTM B117 - Neutral Salt Spray	500 hours, No Visible Pits	Pass, No visible pits, Top-Side Anodized Surface Only
Adhesion Quality	ASTM 1876 - T-peel resistance test using 1.6mil 3M DP-420 adhesive	Lorin Commercial Standard	> 20 lbs/in ² peel strength, Back-Side Adhere® Surface
Seal Quality	ASTM B136 - Dye Stain	Dye Stain Test, No Stain Visible	Pass, No Visible Stain

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