



The Fusion Of Science And Art™

TECHNICAL DATA SHEET

# Aluminum Series™

2019-21<sub>ver01</sub>

## About Aluminum Laminates

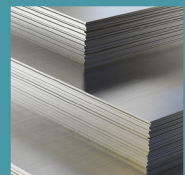
- General Guidelines
- Basic Limitations
- Standard Sizes And Colors
- Repair and Maintenance
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- Machining
- Care And Maintenance
- Applications

## Deco Technologies Inc.

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[decotechnologiesinc.com](http://decotechnologiesinc.com)

Deco Technologies Corporation

# Aluminum



# Aluminum Series

## General Description

DECO Aluminum Series laminates are a decorative polymer finish applied to premium aluminum sheet and coil ideally suited for use in partitions, door skins, architecture shapes, ceiling panels, office furniture, fixtures and casework, column cladding, interior wall applications, displays, signage, and other decorative and functional applications.

## Basic Limitations

DECO Aluminum are a veneered laminate series meant for decorative or non-critical structural applications. They are not intended for use as a structural component in any application regarding safety, support for humans, or in applications where metal fatigue or failure could result in injury, death, or ancillary property damage. DECO Aluminum Series laminates should not be subjected to temperatures higher than 150F for substantial periods of time.

## Finishes

DECO Aluminum Series laminates are available in many standard and hundreds of special order finishes including 3D woodgrains, metallic, abstracts, and stones. Custom matched finishes are available.

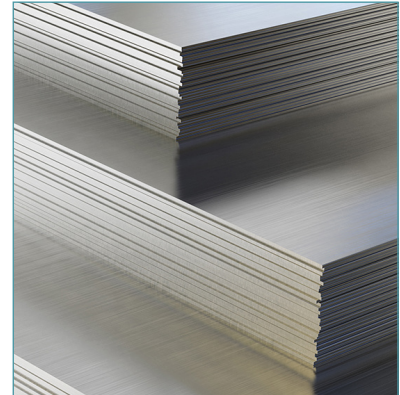
## Standard Sheet Sizes

Deco Aluminum Series laminates are manufactured in sheet or coil form. Standard gauges and widths stocked. Custom slit sizes and lengths available.

Sheet/Coil	Width	Length	Nominal Thickness
Sheet	36", 48"	96", 120"	.025" through .125"
Coil	24", 36", 48"	Coil	.020" through .040"

## Typical Properties Surface

Test	Standard	Deco Aluminum
Surface Abrasion	JAS Abrasion A	Less than .1g abrasion loss in 100 cycles
Anti-Scratch 1	Pencil Hardness JIS-K5400 (500 grams of weight )	B-2B
Anti-Scratch 2	Hoffman Scratch Test (WT)	200-300g No Appreciable Change
Steel Wool	Steel Wool #0000 1.5kg of WT	No Appreciable Change
Color Fastness	Xenon Meter	No Appreciable Change 300 hrs (E codes 5000hrs)



## At A Glance

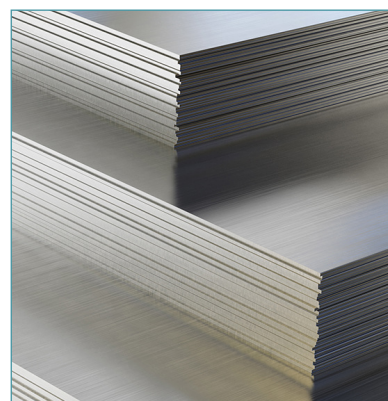
- Premium Aluminum Sheet & Coil
- High Recycled Content
- Contributes LEED v4
- Highly Formable
- Recycleable
- No VOC In Production
- Lightweight



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Test	Standard	Deco Aluminum
Heat Stability	NEMA 11-14-95	No Appreciable Change
Chemical Resistance Benzene Ethanol n-Hexane HCl – 10% NaOH – 10% H2SO4 – 10% Ca(OH)2 - Saturated	NEMA 11-14-95	No Appreciable Change
Solvent Resistance Toluene MEK Ethyl Acetate Acetone	NEMA 11-14-95	Some Change
Abrasion Resistance	ASTM D-1044	5000 cycles min
Impact Resistance	8 oz Steel Ball Dropped 2"	No Change
Stain Resistance Distilled Water Orange Peel Lemon Peel Mineral Oil Cloudy Ammonia Chlorox (Cleaning) Milk Cola Coffee Tea Ketchup Prepared Mustard Bacon Grease Hamburger Grease	EN 438/2.15 and NEMA LD3.4	No Appreciable Change



## Many Uses

Ceiling Systems  
Wall Panels  
Column Wrapping  
Signage  
Vertical Panels  
Partition Skins  
RV And Equine Trailers  
Transportation Interiors

## Typical Properties Substrate

Test/Condition	Standard
Standard Alloy/Temper	AA3003/3105 H14 (others available)
Elongation At Break (lbs/cu ft)	2% min in 2in AA7.1– 3105 H14
Ultimate Tensile Strength	22.0ksi min. – 29.0ksi max. AA3105 H14
Yield Strength	18.0 ksi min, AA7.1 – 3105 H14
Bend Radius Recommended	1T with surface raised to 60C



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Test/Condition	Standard
Lateral Bow Tolerance	.125" max. in 48"W x 90+"L sheet
1 Hour Boiling Water	No de-lamination of decorative layer
Aluminum Gauge Tolerance	+/- .0025"

## Use And Machining

DECO Aluminum Series laminates may be used with most manufacturing equipment including; roll formers, auto-benders, perforators, saws, pressing, laminators, routers, etc..

DECO Aluminum laminates may be laminated to most surfaces such as particleboard, medium density fiberboard (MDF), high density fiberboard (HDF), fiber reinforced gypsum board (FRG), straw/wheat stalk board, or "A" sided plywood. Cracks or porous areas should be filled with the appropriate filler to provide a smooth bonding surface, and an adhesive compatible with the substrate is used. Deco Aluminum laminates should not be applied directly to non-reinforced gypsum, concrete, masonry, or other similar surfaces as warping and bond failure may occur. Aluminum laminates may not be used as structural members or supporting components.

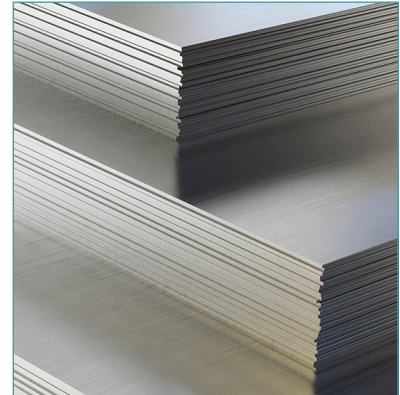
For laminating applications virtually any adhesive that is compatible with aluminum will perform well. Follow the techniques recommended by the adhesive manufacturer. Even edge-to-edge coating is recommended for best results. Roll coating with PUR adhesives work well.

When routing or sawing, use of carbide-tipped saw and router blades is advisable. High tool speed and medium-fast feed rate will produce the best results. To prevent tearing of the surface or the substrate layer, use clamps or other hold-down devices when sawing, routing, or drilling.

For metal bending, forming, or stamping operations, the artwork surface layer should be heated to approx. 60C to soften the surface and prevent stressing or whitening along the bend line or radius. This can most easily be accomplished with infrared heaters in-line before the in-feed rolls of most formers, stamping, presses, etc. Other methods of heating include hot air guns, heat tents, hot air blowers, etc. If stressing or whitening has occurred along a bend line, it can usually be removed by heating the material after forming using the same methods as listed above. NOTE: certain deep-grained high definition finishes within the Deco Technologies Inc. standard fandeck behave differently when heated after whitening has occurred. For consistency of processing all finishes, it recommended that every attempt be made to prevent whitening from occurring by pre-heating the laminate prior to forming.

## Protective Polyfilm Use

Protective removable polyfilm will be applied only when directed by the customer. Deco Technologies Inc. does not recommend the use of protective polyfilm unless other means of scratch or abrasion prevention prove unsuccessful in the manufacturing or final installation. The use of polyfilm in general leads to increased cost, waste when removed, and can prove difficult to remove after manufacturing if heat was used in processing.



## Easily Machined

- Cold Bonding
- Pressing
- Routing
- Sawing
- Roll Forming
- Perforating
- Drilling
- Sawing
- Auto-Folding



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## Light Fastness

Standard laminates are for interior or shrouded exterior applications such as soffits, overhangs, ceilings, or other installations that are not in direct sunlight. The use of DECO laminates in direct sunlight applications should be avoided unless used for temporary applications as fading can occur. Direct sunlight rated laminates are available on special order basis.

## Warranty Statement

DECO Technologies warrants that, DECO Aluminum Series laminates under normal use, will conform to the standards set forth by this technical data sheet for a period of sixty (60) months from the date of sale to the first consumer purchaser. DECO Technologies Inc. will also warrant for a period of LIFETIME years against de-lamination of the artwork from the backer substrate. In the event that this product does not perform as warranted, the first purchaser's sole remedy shall be limited to repair or replacement of all or any part of the laminate product that is defective, at the manufacturer's sole discretion. This warranty applies only to product in its original installed form from the first consumer buyer. This warranty is not transferable, and expires upon resale or transfer by the first consumer purchaser. This warranty shall not apply to defects or damage arising for any of the following caused by accidents, abuse, improper installation or fabrication, misuse, or failure to properly prepare the bonding surface.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE MADE. UNDER NO CIRCUMSTANCES SHALL DECO TECHNOLOGIES INC. BE LIABLE FOR ANY LOSS OR DAMAGE ARISING FROM THE PURCHASE, USE OR INABILITY TO USE THIS PRODUCT, OR FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES. NO FABRICATOR, INSTALLER, DEALER AGENT OR EMPLOYEE OF DECO TECHNOLOGIES INC. HAS THE AUTHORITY TO MODIFY THE OBLIGATIONS OR LIMITATIONS OF THIS WARRANTY.

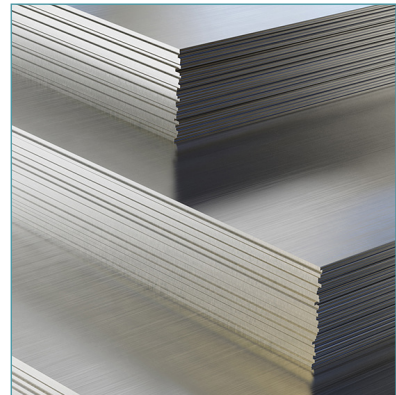
This warranty gives you specific legal rights, and you also may have other rights that vary from state to state; therefore, some of the limitations stated above may not apply to you. It is to your benefit to save your documentation upon purchase of a product

## Care And Maintenance

The decorative surface may be cleaned with warm water and mild detergents or dishwashing soaps. Do not use cleansers that contain abrasives, they will scratch or damage the decorative surface. Household cleaners such as Fantastik, 409, and other like products may be used on stubborn stains. Always test any new cleaner in an inconspicuous spot to ensure no degradation of the surface will occur.

Do not allow any of the following chemicals to remain in prolonged contact with the decorative surface:

- Acetone
- Bleach (except for disinfecting)
- Greater than 10% solutions of hydrochloric, sulfuric, or nitric acid
- Caustic solutions containing lye (drain cleaners commonly use lye)
- Sodium bisulfate
- Potassium permanganate
- Juice from staining berries
- Violet (genetian)
- Bluing
- Fabric dye
- Alcohol containing iodine
- Hydrogen peroxide solutions



## Easy Maintenance

- Moisture Resistant
- Surface Easily Cleaned
- Resistant To Most Stains
- No Off Gassing
- Graffiti Resistant
- Repairable



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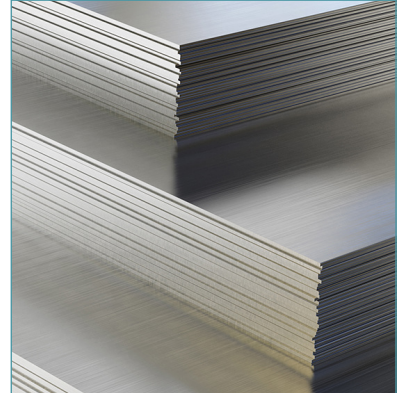
## Repair and Finishing

DECO laminates can be finished with topcoats for higher gloss and durability. Finishing steps must be in accordance with the manufacturers' application instructions and performed when the laminate is in its final bonded position. Cracking, crazing, or complete de-lamination of the topcoat may occur if applied to sheet prior to bonding or forming. Always test any topcoat bond and finish on a sample to ensure topcoat meets desired finish quality. Surface should be 40 dyne minimum before applying topcoat. Corona, blown plasma, and/or flame treating may be needed to raise surface above 40 dyne. Care should be taken to not scorch surface.

Repair of scratches and gouges can be done through the use of high-quality furniture repair kits. Follow repair kit instructions. Avoid repair kits that use an iron in direct contact with the veneer surface as this may increase the gloss level of the finish in that area. Please note that this method will not provide a complete repair if damage is extensive.

## Technical Questions

For technical assistance with any of the following technical specifications, please contact us at 866-757-9845, Monday through Friday, 8 a.m. – 5 p.m. EST.



## Excellent Properties

Lightweight  
Highly Formable  
Recycleable/Recycled  
Economical



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