

Wilsonart® Decorative Metals (Types 401, 414, 416, 418 and 419) Technical Data

1. Distributor and/or manufacturer

Wilsonart International
2400 Wilson Place
P.O. Box 6110
Temple, Texas 76503-6110
Phone: (254) 207-7000; (800) 433-3222
Fax: (254) 207-2384
Web Site: www.wilsonartlaminare.com

2. Product Description

Recommended Uses: Wilsonart Decorative Metals are designed for vertical interior or ceiling applications where a special accent is required or a special mood is desired. The surface of Decorative Metals is that of fine finished metal. The genuine metal material is appropriate for **vertical areas** in retail facilities, hotel and office lobbies, theaters and restaurants, where its special eye-catching properties add a definite prestigious appeal. Decorative Metals add a visual sense of lightness when used as inserted accent banding in massive casework. These materials also can add a bright touch when used as cladding or accent trim in custom furniture, especially in combination with high gloss solid color laminates, Wilsonart® Custom Edges or Wilsonart® Gibraltar® Solid Surfacing.

A-Look Mirror Quality Decorative Metals are shatterproof, lightweight and unbreakable. Non-distorted mirror reflective qualities make A-Look Decorative Metals perfect for ceilings, walls, columns, safety mirrors and display cases. Anodized A-Look HPA 6251-EX is recommended for exterior and high humidity areas.

Product Composition:

- Type 401: A-Look Mirror Quality Decorative Metal panels consist of two thin skins of aluminum alloy continuously bonded to a thermoplastic core, then electroplated in chrome. Anodized A-Look with EX designation has a protective resin layer to prevent oxidation in exterior applications.
- Type 414: Galvalume® Steel. A 26-gauge steel sheet featuring a Galvalume® finish. The steel is coated with an aluminum-zinc alloy, and then protected with a clear acrylic, coating both sides. The metal features a decorative faceted finish on both sides – usable 2 sides (protective film applied one side only). **Pattern variation can occur within sheet and from sheet to sheet. Steel fabrication tools, saw blades and router bits are required.**
- Type 416: Artisan Group non-anodized aluminum alloy panels feature textured designs in five patterns applied from border to border, creating a dimensional appearance. Panels are coated with a clear resin to prevent oxidation and protect the beauty of the design.
- Type 418: Decorative aluminum (Types 419 & Type 416) bonded to a phenolic backer for fabrication following HPDL techniques for **flat surfaces only. Do NOT use as an edge trim or for strips.** When radius bending is required, Type 419 is recommended.
- Type 419: A solid sheet of aluminum is produced with a decorative, anodized finish and color on one side. The back side is prepared to facilitate bonding to a suitable substrate. (Keep this surface free of grease, oil or other contaminants.)

Basic Limitations: All decorative metals are designed for interior vertical applications. Only Anodized A-Look with an "EX" designation is recommended for protected exterior applications.

Reflective value and metal color may vary depending on type of lighting used. Fluorescent, incandescent and daylight produce slight color variations. The American Architectural Manufacturer's Association (AAMA) has issued the "Voluntary Specification for Anodized Architectural Aluminum" AAMA611-98. The maximum allowable color variation is established as Delta E CMC 5.0 or less for anodized aluminum produced from one coil.

Pattern, Size & Finish Availability:

Note: All decorative metals are supplied with a protective peel coat to prevent surface damage.

• **Product Type 401, A-Look Mirror Quality**

Pattern	Name	Surface Finish	Thickness	Stock Sizes
AK1102,	Chrome	Electroplated	2mm 0.079"	4x8'
AK1103	Chrome	Electroplated	3mm 0.118"	4x8'
*HPA6251-EX	Polished Natural Anodized	Anodized	3mm 0.118"	48" x 122"

*Note: HPA 6251-EX available on 'special order' ONLY. Request lead time and price quote.
(The fourth digit of the AK pattern number indicates material thickness in mm)

Note: A-Look Mirror Quality Decorative Metals are supplied by Mitsubishi Chemical Functional Products.

• **Product Type 414, Galvalume® Steel**

Pattern	Name	Surface Finish	Thickness	Stock Sizes
S6501	Crystal Steel	Acrylic	0.019"	4x8' & 4x10'

• **Product Type 416, Artisan Group**

Pattern	Name	Surface Finish	Thickness	Stock Sizes
6301	Florentine	Lacquered	0.025"	4x8' & 4x10'
6309	Random Swirl	Lacquered	0.025"	4x8' & 4x10'
6311	Silver Stria	Epoxy	0.025"	4x8'
6312	Mercury Stria	Epoxy	0.025"	4x8'
6313	Bronze Stria	Epoxy	0.025"	4x8'

Product Type 418

Available in Types 416 & 419 (except pattern 6287, Copper Nugget).

Product Type 419, Anodized Aluminum

Pattern	Name	Surface Finish	Thickness	Stock Sizes
6251	Polished Natural Aluminum	Anodized	0.025"	4x8' & 4x10'
6252	Matte Natural Aluminum	Anodized	0.025"	4x8' & 4x10'
6255	Polished Gold Aluminum	Anodized	0.025"	4x8' & 4x10'
6256	Brite Brushed Natural Aluminum	Anodized	0.025"	4x8' & 4x10'
6257	Satin Brushed Natural Aluminum	Anodized	0.025"	4x8' & 4x10'
6258	Satin Brushed Gold Aluminum	Anodized	0.025"	4x8' & 4x10'
6261	Satin Brushed Light Bronze Aluminum	Anodized	0.025"	4x8' & 4x10'
6262	Satin Brushed Medium Bronze Aluminum	Anodized	0.025"	4x8' & 4x10'
6277	AlumaSteel™	Anodized	0.025"	4x8' & 4x10'
6281	Satin Brushed Smoke Aluminum	Anodized	0.025"	4x8' & 4x10'
6284	Satin Brushed Copper Aluminum	Anodized	0.025"	4x8' & 4x10'
6285	Polished Copper Aluminum	Anodized	0.025"	4x8' & 4x10'
6287	Copper Nugget Aluminum	Anodized	0.025"	4x8' & 4x10'
6296	Satin Brushed Black Aluminum	Anodized	0.025"	4x8' & 4x10'

Note: Sample Chain includes #6255P (418) Polished Gold Aluminum with phenolic backer

Sheet Dimensions

Type 401, A-Look Mirror Metal

Sheet Width	48" (-0 + ¼")	1219.2 mm (-0 + 6.4 mm)
Sheet Lengths	96" (-0 + ½")	2438.4 mm (-0 + 12.7 mm)
Sheet Thicknesses	0.079" (2mm)	
	0.118" (3mm)	
Weight PSF	2 mm: 0.59 # psf	
	3 mm: 0.80 # psf	
Type 401 Decorative Strips not available		

Type 414, Galvalume® Steel

Sheet Width	48" (-0 + ½")	1219.2 mm (-0 + 12.7 mm)
Sheet Lengths	96" (-0 + ½")	2438.4 mm (-0 + 12.7 mm)
	120" (-0 + ½")	3048 mm (-0 + 12.7 mm)
Sheet Thickness	0.019" (0.5 mm)	
Weight PSF	0.90625 # psf	
Type 414 Decorative Strips not available		

Type 416, Artisan Group (without phenolic back)

Sheet Width	*23-7/8" (-1/8" + 0)	606.4 mm (-3.2 mm +0)
	48" (-0)	1219.2 mm (-0)
Sheet Lengths	96" (-0)	2438.4 mm (-0)
	120" (-0)	3048 mm (-0 + 12.7 mm)
Sheet Thickness	0.025" ± 0.002" (0.64 mm ± (0.05 mm))	
Edge Trim	1 3/4" x 120" (44.4 mm x 3048 mm)	
Weight PSF	0.353 # psf	
Type 416 Decorative Strips	1 3/4" x 96", 120" (44.5 mm x 2438.4 mm, 3048 mm)	
Type 418 Decorative Strips not available.		

Note: 6311, 6312 & 6313 available in 4x8'

Type 418, Decorative Metals (with phenolic back) Made with Types 416 & 419

Sheet Widths	*24" (-0 + 1/4")	609.6 mm (-0 + 6.4 mm)
	48" (-0 + 1/2")	1219.2 mm (-0 + 12.7 mm)
Sheet Lengths	96" (-0 + 1/2")	2438.4 mm (-0 + 12.7 mm)
	120" (-0 + 1/2")	3048 mm (-0 + 12.7 mm)
Sheet Thickness	0.040" ± 0.004" (1 mm ± 0.1 mm)	
Weight PSF	0.484# psf	
Type 418 Decorative Strips not available		

***24" width MUST be ordered in multiples of 2 pieces**

Type 419, Anodized Aluminum (without phenolic back)

Sheet Widths	*24" (-0 + 1/4")	609.6 mm (-0 + 6.4 mm)
	48" (-0 + 1/2")	1219.2 mm (-0 + 12.7 mm)
Sheet Lengths	96" (-0 + 1/2")	2438.4 mm (-0 + 12.7 mm)
	120" (-0 + 1/2")	3048 mm (-0 + 12.7 mm)
Sheet Thickness Pattern 6277, AlumaSteel	0.025" ± 0.002" (0.64 mm ± 0.05 mm)	
	0.024" ± 0.002" (0.61 mm ± 0.05 mm)	
Weight PSF	0.353# psf	
Decorative Strips	1 3/4" x 120" (44.5 mm x 3048 mm)	

***24" width MUST be ordered in multiples of 2 pieces**

3. Technical Data

Codes and Certifications: Currently there are no NEMA standards or tests for decorative metal surfacing. However, American National Standards Institute/National Electrical Manufacturers Association (ANSI/NEMA), LD3-2005, Annex A, should be consulted for basic fabrication and handling techniques.

The GREENGUARD Environmental Institute™ has awarded its **GREENGUARD® Indoor Air Quality Certification** to Wilsonart Laminate. All Wilsonart Laminate product types were tested under the stringent GREENGUARD Standards for low-emitting products. All GREENGUARD Indoor Air Quality Certified® products ensure minimal impact on the indoor environment. For a copy of the certificate, visit www.greenguard.org.

Typical Fire Test Data:

Wilsonart Decorative Metals (**Type 401, 414, 416, 418 & 419**) have been tested in accordance with ASTM-E84, Tunnel Test, and **achieved Class 1 or A as follows:**

Type	Thickness	Smoke Developed	Flame Spread
401, A-Look Mirror Metal	3mm	15	0
401, A-Look Mirror Metal	2mm	5	0
414, GalvAlume® Steel	0.019"	0	0
416, Artisan Group	0.025"	15	0
418, Phenolic Backed with types 416 and 419	0.040"	0	25
419, Anodized Aluminum	0.025"	0	0

Model Code Designations used to determine flame spread classification

Flame Spread Classification (Maximum Rating)	International (IBC)	Life Safety (NFPA 101)
25	A	A
75	B	B
200	C	C

(Reference: Architectural Woodwork Quality Standard, 8th Edition, Version 1.0 - 2003)

All Model Codes regulate the generation of smoke by interior finish material. In all cases they specify a maximum smoke development rating of 450.

Fire code approvals:

Product Type	Certification
401, A-Look Mirror Metal	New York City, MEA 354-87-M City of Los Angeles, RR 24932
418, Phenolic Backed with types 416 and 419	New York City, MEA 5-87-M, Vol. III

Type 401, A-Look Mirror Metal

Aviation: Federal Aviation Administration, Transport Category Airplanes, Paragraph 25.853(a) and Appendix F, Part 1, Paragraph (a) (1) (i), Vertical Test as published in the Federal Register and Amendment 25-101, effective December 19, 2000.

NSF Certification

(Type 419) Anodized Aluminum

NSF International Standard 51 approval for splash zone

FDA Certification

(Types 401, 416 & 419) A-Look Mirror Metal, Artisan Group and Anodized Aluminum
Food & Drug Administration approval for food contact

FMVSS 302

(Types 401 & 419) A-Look Mirror Metals and Anodized Aluminum
U.S. Federal Motor Vehicle Safety Standard, "Flammability of Interior Materials", compliant

General Standards: Currently there are no NEMA standards or tests for decorative metal surfacing.

Specific Product Standards: Currently there are no NEMA standards or tests for decorative metal surfacing.

4. Installation: Fabrication and Assembly Recommendations

For comprehensive fabrication instructions for Metal types 401, 414, 416, 418 and 419, consult the Decorative Metals **Fabrication Manual, BR0406**.

Fabrication and installation of **A-Look Mirror Quality Decorative Metals** is easy with tools and machinery normally associated with laminate, metal or woodworking shops. They are easily applied by using a low- or non-shrink silicone sealant and low-modulus contact cement, or a very high-bond type of double-stick foam tape. Please refer to the manual for comparison to other reflective mirror materials for equivalent rigidity and general properties.

Some points to keep in mind when using A-Look Decorative Metals include:

1. Use on vertical surfaces only. Horizontal work surfaces are not recommended.
2. A-Look Decorative Metals can be formed using standard roll bending equipment.
3. The protective film should be removed when installation is complete. If the film is left in place after installation, exposure to direct sunlight for a prolonged period may cause a paste residue and create other problems.
4. For exterior applications, the edge of Anodized A-Look EX Decorative Metals should be covered or sealed with aluminum or stainless steel molding (such as H or J mold) using a sealant that does not contain acid or a strong alkaline solution. Interior applications can be butt jointed.

Caution: Check adhesive carefully prior to application. When adhesive is used, due to the inherent thermal expansion and contraction ratios, A-Look Decorative Metals may pull toward the base material after installation. It is suggested that you use VHB double-stick foam tape, or a low-modulus silicone or rubberizing contact cement.

5. Warranty

Wilsonart International, Inc. warrants that, under normal use and service, the material and workmanship of its Wilsonart® Decorative Metals and METALAMINATES™ shall conform to the applicable supplier or industry standards set out below, or to the standards set forth on the applicable technical data sheets for a period of one (1) year from the date of sale to the first consumer purchaser. Dealers and distributors are provided with the technical data sheets which contain specific standards of performance for the products. In the event that a Decorative Metal or METALAMINATES product does not perform as warranted, the first consumer purchaser's sole remedy shall be limited to repair or replacement of all or any part of the product which is defective, at the manufacturer's sole discretion. In no instance shall the replacement cost exceed the original purchase price paid by the consumer purchaser for the Decorative Metals or METALAMINATES product.

This warranty applies only to product:

1. In its original installation; and
2. Purchased by the first consumer purchaser.

This warranty is not transferable, **does not cover horizontal applications** and expires upon resale or transfer by the purchaser.

This warranty shall not apply to defects or damage arising from any of the following:

1. Accidents, abrasion, physical impact, abuse or misuse;
2. Exposure to extreme temperature, corrosive atmospheres or precipitants;
3. Improper fabrication, installation or maintenance; or
4. Any damage due to delivery or after delivery of the product to the purchaser.
5. Horizontal applications.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE MADE, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. UNDER NO CIRCUMSTANCES SHALL WILSONART INTERNATIONAL, 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 WILSONART INTERNATIONAL, INC. HAS THE AUTHORITY TO MODIFY THE OBLIGATIONS OR LIMITATIONS OF THIS WARRANTY.

This warranty gives you specific legal rights, and you may also have other rights which 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.

Supplier or Industry Standards for Decorative Metals and METALAMINATES for visual surface defects are as follows:

1. Visual Surface Defects – means spots, indents, stains, scratches, orange peel and/or sheet flatness. These defects must not be easily detected when inspected using established viewing conditions.
2. Established viewing conditions shall be from a distance of 6.6 feet with an indirect illumination intensity of 400 lux. The viewing area is 4 square feet.
3. Visual surface defects are measured according to T.A.P.P.I. T564 sp-96, Transparent Chart for the Estimation of Defect Size. A visual defect means spots, indents, etc. that are 0.8mm(2) or more within 4 square feet, or 2 defects each having an area of 0.4mm(2) or more within 4 square feet. Further the visual defect should be at least 12" apart.

6. Maintenance

- **Type 401: A-Look Mirror Quality Decorative Metal**

For A-Look Mirror Quality Decorative Metals, household cleaners, ammoniated detergents or glass cleaners may be used.

- **Types 414 & 416**

For Galvalume® Steel and the Artisan Group, use only glass cleaners that are free of ammonia and petroleum products. 409® Glass & Surface Cleaner and warm water with a mild dish soap solution is also recommended for cleaning. **Do NOT use cleaners that contain abrasives, acids or alkalis as they will mar the surface. Do NOT clean metal face with solvents, paint thinner or adhesive remover.** After washing, always wipe the surface completely dry with a soft, clean cloth.

- **Types 418 & 419:**

It is recommended that anodized aluminum surfaces be cleaned with 409® Glass & Surface Cleaner and warm water with a mild soap such as those used for hands or dishes. Household cleaners, non-ammoniated detergents, or glass cleaners may be used. Stubborn stains may be removed with a thin, clean oil and a dry cloth. After cleaning, always wipe the surface completely dry with a soft, clean cloth. **Do NOT use cleaners that contain abrasives, acids or alkalis, as they will mar the surface. Ammoniated detergents or petroleum-based cleaners should not be used to clean anodized aluminum surfaces.**

Do NOT clean metal face with solvents, paint thinner or adhesive remover. Refer to BRO406, Decorative Metals Fabrication Manual, for adhesive removal recommendations.

7. Technical Services

For samples, literature, questions or technical assistance, please contact our toll-free Hotline at (800) 433-3222, Monday through Friday, 7 am –7 pm, CST, or www.wilsonartlaminat.com

Specification Form:

Surface shall be Wilsonart Decorative Metals, produced by Wilsonart International, Temple, Texas 76503-6110.
Type: Specify 401, 414, 416, 418, or 419
Surface
Metal Number: _____
Metal Name: _____
Adhesive
Name: _____
Grade/Type: _____
Manufacturer: _____
Fabrication shall comply with Architectural Woodwork Quality Standards Guide

MetalsTD (TD0276)

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