

TECHNICAL SERVICES

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MANUFACTURER

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Authentix Metal Collection®

TECHNICAL DATA

INTRODUCTION

The Authentix Metal Collection® is an innovative High Pressure Laminate version of metal that offers durability, ease of fabrication and value. This product offers a realistic HPL version of metal that solves the problem of scratch, mar, and scuff that will typically damage soft metals.

DESIGN & LAYOUT

The Powdered -47 and Brushed -09 finishes are recommended for normal use applications such as countertops and work surfaces. Available in Grades 10, 12, and 20.

The Punched -45 and the Quilted -15 finishes are recommended for vertical applications only. Due to their deep texture, they are not recommended for heavy use applications such as countertops and work surfaces. Available only in Grade 54, they are not postformable. In order to fabricate doors, a contrasting color or a coordinating color of Formica® Brand Laminate must be used.

Authentix Metal Collection colors have a directional grain and will appear to be a slightly different color when turned at a 90° or 180° degree angle. Punched and Quilted finishes should not be seamed or butted together in a panel system since the finish will not be able to be matched from sheet to sheet. A reveal is suggested between the panels to hide any difference in pattern.

RECOMMENDED APPLICATION

Formica Authentix Metal Collection in the Powdered -47 and Brushed -09 finishes is intended for applications that are vertical or horizontal. Some examples include: residential and commercial countertops and backsplashes, tabletops, and work surfaces; office furniture; architectural millwork; exhibits; retail fixtures; hotels; gaming; restaurants, etc.

Formica Authentix Metal Collection in the Punched -45 and Quilted -15 finishes is intended for vertical applications only, due to the deep texture. Some examples include: residential and commercial backsplashes,

modesty panels, space dividers, architectural millwork; exhibits; retail fixtures; hotels; gaming; restaurants, etc.

LIMITATIONS

Formica Authentix Metal Collection is designed for interior use only. Do not adhere directly to plaster, drywall (gypsum board), or concrete. Do not use in areas exposed to temperatures exceeding 275°F (135°C) or for exterior applications. The heavy texture in the Punched -45 and Quilted -15 finishes make Formica Authentix Metal Collection™ susceptible to stress cracks when using elastomeric (contact) adhesives. A PVA or rigid set wood glue should be used at any square corners to help prevent stress cracks.

STORAGE

The Authentix Metal Collection should be stored horizontally, with a cardboard or other protective sheet placed on top to protect the material from possible damage. The material should be protected from moisture, and should never be stored in contact with the floor or an outside wall. Optimum conditions for storage are approximately 75°F (24°C), and 45% to 55% relative humidity.

PRECONDITIONING

Prior to fabrication, allow both the Authentix Metal Collection and substrate to acclimate for at least 48 hours at the same ambient conditions. Optimum conditions are approximately 75°F (24°C), and relative humidity of 45% to 55%. Provisions should be made for the circulation of air around the materials.

SUBSTRATES

Authentix Metal Collection should be bonded to an appropriate substrate such as 45# density particleboard (CS 236-66: Type 1, Grade B, Class 2), or Medium Density Fiberboard (MDF). The use of plywood is discouraged whenever possible, due to the potential for stress cracking, shrink-back, and surface telegraphing problems. The substrate should be sanded smooth, clean, free of oil or grease, and uniform in thickness.



ADHESIVES

Contact, semi-rigid (PVA), or rigid (urea, resorcinol) adhesives may be used. Follow the adhesive manufacturer's recommendations.

ASSEMBLY

Material, equipment, and workmanship should conform to the industry standard practices, conditions, procedures, and recommendations as specified by ANSI/NEMA LD3-2005, Section 4., Architectural Woodwork Quality Standards, KCMA (Kitchen Cabinetmakers Manufacturers Association) and ANSI 161.2-1998 standards.

Authentix Metal Collection can be sawed, drilled, routed, and fabricated using standard carbide-tipped cutting tools.

Panel assemblies should be laminated with the appropriate backing sheet to minimize warpage. Optimum balancing is obtained by bonding the same surface laminate on both sides of the assembly with the same adhesive. For less critical applications the selection of an appropriate backer, such as Formica Grade 91/BLS, depends on the specific application. Panels should never be seamed or butted together when using the Punched -45 or Quilted -15 finish. A reveal should be put between the panels to hide any differences in the finish.

All inside corners of cutouts must be radiused as large as possible, 1/8" (3.18mm) minimum, to minimize chance of stress cracking. The edges and corners should be routed, sanded, or filed smooth and free of chips or nicks.

TECHNICAL DATA

Performance Properties for Brushed and Powdered Finishes only:

Performance Properties (minimum acceptable values)

Properties	ANSI/NEMA LD3 2005 LD3 Test Method	Grade Units	HGS -10	HGP -12	VGP -20
Nominal Thickness	–	mm (In.)	1.2 (0.048)	1.0 (0.039)	0.7 (0.028)
Thickness Tolerance	–	mm (In.)	±0.12 (±0.005)	±0.12 (±0.005)	±0.10 (±0.004)
Appearance	3.1	–	–	–	–
Surface Finish	3.2	–	–	–	–
Light Resistance	3.3	Rating* Min.	SL	SL	SL
Cleanability	3.4	Rating* Max.	20	20	20
Stain 1-10	3.4	Rating* Min.	NE	NE	NE
Stain 11-15	3.4	Rating* Min.	M	M	M
Boiling Water Resistance	3.5	Rating* Min.	NE	SL	SL
High Temperature Resistance	3.6	Rating* Min.	SL	SL	SL
Ball Impact Resistance	3.8	mm (In.) Min.	1250 (50)	750 (30)	500 (20)
Dart Impact Resistance	3.9	mm	500	300	200
Radiant Heat Resistance	3.10	Sec. Min.	125	100	80
Dimensional Change	3.11 3.11	% MD, Max. % CD, Max.	0.5 0.9	1.1 1.4	1.1 1.4
Room Temperature Dimensional Stability	3.12 3.12	% MD, Max. % CD, Max.	0.5 0.8	1.0 1.3	1.0 1.3
Wear Resistance	3.13	Cycles Min.	400	400	400
Formability	3.14	mm (In.) Radius Min.	–	16 (5/8)	13 (1/2)
Blister Resistance	3.15	Sec., Min.	–	55	40

* Rating System: NE-No effect, SL-Slight effect, M-Moderate effect, S-Severe effect

COLOR MATCH

Color will vary due to directionality of the sheet and may vary slightly from sheet to sheet. Check before cutting and fabricating.

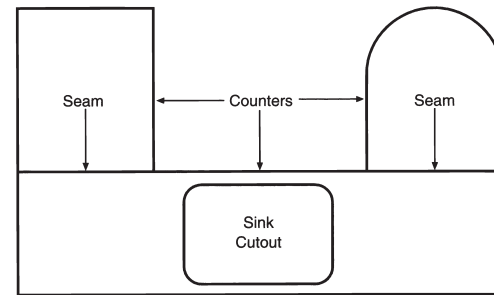


Figure 2

CUSTOM TOPS SEAM PLACEMENT

STRESS CRACK

To reduce the potential of stress crack with the Punched -45 or the Quilted -15 finish:

- Use particleboard substrate and acclimate the laminate to the substrate for a minimum of 48 hours.
- Mask contact adhesive from 6" pie shape at inside corners. Then use PVA or yellow carpenters glue at stress points. This will distribute stresses away from inside corners. See Adhesive Bond Section of Stress Crack Avoidance Technical Brief (Form No. 01-071).
- Seams at inside comers will eliminate the chance of stress cracks.

- Radius all inside corners to a minimum of 1/8" (3.18mm). Remember, ships and planes have rounded doors and windows for a reason.
- See Stress Crack Avoidance Technical Brief (Form No. 01-071) for thorough insight.

EDGE DETAILS

Self edge

The Powdered -47 and Brushed -09 finish can be self-edged with conventional methods. Punched -45 and Quilted -15 finish require the use of a coordinating Powdered or Brushed finish, solid color or pattern laminate or Formica® ColorCore™ surfacing material to edge custom tops and panels.

Wood edge

Use a waterproof carpenter's glue (Titebond II or equivalent) or polyurethane adhesive. After the adhesive is fully cured, apply the finish over the wood, glue line. A continuous finish film will seal the glue line and protect the substrate.

Formica® Solid Surfacing Edges

Spline or biscuit Formica Solid Surfacing edges to substrate. Use Eclectic Products (1-800-767-4667) E-6000 medium viscosity clear adhesive to bond and filament tape to clamp. Use silicone adhesive/caulk at all Formica Solid Surfacing to Formica Solid Surfacing joints. DO NOT rigid bond Solid

Surfacing joints, they will crack due to the expansion /contraction of the wood substrate.

SEAM FILLING

Commercial seam filling compounds are available.

CODES AND SPECIFICATIONS

- U.S. Federal Motor Vehicle Safety Standard, No. 302 10, 12, 20
- NSF Standard 35 Work Surfaces Grade 10, 12 (-09, -47)
- NSF Standard 35 Splash Zones Grade 20 (-09, -47)
- NSF Standard 35 Splash Zones Grade 54 (-15, -45)

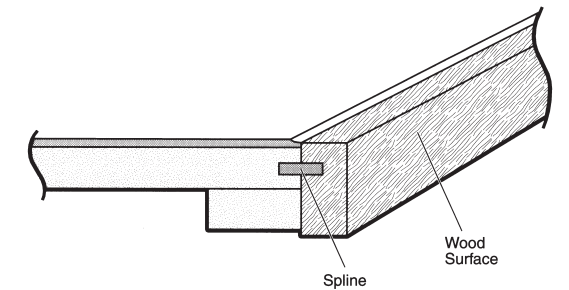


Figure 3

Standard Finishes

Finish No.	Finish Name	Description
-09	Brushed	A classic, linear brushed finish that runs lengthwise on the sheet of laminate, practical for horizontal and vertical surfaces. Available only on selected Authentix Collection items.
-15	Quilted	Raised harlequin diamond pattern that runs lengthwise on the sheet of laminate. Suggested for vertical use due to deep texture. Available only on selected Authentix Collection items.
-45	Punched	Small embossed square shapes that produce an architectural effect. Suggested for vertical use due to deep texture. Available only on selected Authentix Collection items.
-47	Powdered	An understated textural, non-directional finish that imparts a subtle glossy finish, multifunctional for horizontal and vertical surfaces. Available only on selected Authentix Collection items.

Standard Grades

Grade	Nominal Thickness	Description
10	.048" 1.2mm	General Purpose Grade (HGS) The most widely specified grade; recommended for horizontal and vertical interior applications.
12	.039" 1.0mm	Horizontal Postforming Grade (HGP) Outside radius to 1/2" (12.7mm) and cove radius to 3/16"(4.8mm). Postformable to permit bending on suitable commercial postforming equipment. Use whenever forming is desired for decorative or functional purposes in interior applications. Optimum postforming temperature is 325°F (163°C).
20	.028" 0.7mm	Vertical Postforming Grade (VGP) Outside and inside radii to 3/8"(9.5mm). A forming grade designed for vertical or light duty horizontal interior applications requiring radiused edges. Thinner than Grade 12; excellent for postformed radii. Installed panel width not to exceed 24" (609.6mm) maximum.
54	.047" 1.2mm	Vertical Dimensional Grade (VGD) Dimensional laminate for vertical interior applications. Available only for Punched and Quilted Finishes.