



BONDED METAL™

PRODUCT DATA





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Bonded Metal has achieved a place of distinction among high-performance surfacing materials. Providing a striking breadth of design possibilities, Bonded Metal is the product of a unique technology that casts metal granules in a tough, fiber-reinforced polymer matrix. Advanced mold-making techniques assure perfect reproduction of every fine detail in the original patterned surface. The result is lightweight but extremely durable castings with the character and appearance of solid metal.

Choose from an extraordinary collection of patterns in a variety of metal finishes. Bonded Metal can be specified for walls, doors, elevators, accents or any application where visual richness and exceptional resistance to wear are requirements. Field-proven for more than 40 years, Bonded Metal is exclusive to Forms+Surfaces.

SPECIFYING BONDED METAL

Bonded Metal selections are defined by three basic parameters:




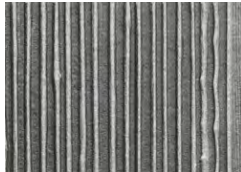


BONDED MATERIAL	PATTERN	PATINA
The metal incorporated into the composite that gives the surface its color and character.	The distinctive texture or design cast into the Bonded Metal surface.	A contrast-enhancing surface treatment applied to the Bonded Metal.

PATTERN OPTIONS

Any of the standard patterns shown on page four and five can be specified. Some older patterns that are no longer part of the standard product offering can also be produced. For larger projects, Forms+Surfaces welcomes inquiries regarding custom designs and applications for this highly sculptural material.

PATINA OPTIONS

Bonded Metal is available in your choice of natural or dark patina. A natural patina provides subtler, more even tonal gradations; dark patina heightens the contrast between highlights and shadows for a more pronounced three-dimensional effect. Each of the Bonded Metal colors are show below in both Natural and Dark patina. For optimal appearance, seven patterns—Champagne, Chardonnay, Kalahari, Mara, Sahara, Terrane, Undercurrent and Waterfall—are only available in natural patina.

BONDED ALUMINUM	BONDED BRONZE	BONDED NICKEL SILVER
 Natural	 Natural	 Natural
 Dark	 Dark	 Dark



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PRODUCTS & APPLICATIONS

Bonded Metal can be specified for walls, wainscoting, column covers, doors, elevator interiors, accents, custom fabrication or any application where modern, visual richness is desired. The below chart shows standard Forms+Surfaces' products in which Bonded Metal can be specified.

LEVELe WALL SYSTEM & ELEVATOR INTERIORS	LEVELc ELEVATOR INTERIORS	ELEVATOR DOOR SKINS	DOORS
<ul style="list-style-type: none">All Bonded Metal patterns are available as standard inset panel options in the LEVELe Wall System & LEVELe Elevator Interiors.For LEVELe Wall System, Bonded Metal can be used with Minimal and Capture panel types, though some patterns require Capture panels.	<ul style="list-style-type: none">All Bonded Metal patterns are available as standard inset panel options in our LEVELc-2000N Elevator Interiors.	<ul style="list-style-type: none">A selected group of slim castings and other Bonded Metal patterns may be specified as durable and highly attractive skins for elevator doors or hoistway doors.	<ul style="list-style-type: none">Doors are constructed of wood or steel cores with Bonded Metal castings laminated to both sides. Numerous size, edge treatment and door frame options are available.Bonded Metal can be specified as an inset panel option on Stile & Rail Doors.

MATERIAL & CONSTRUCTION DETAILS

STANDARD, SLIM & BACKED CASTINGS	INSTALLATION
<ul style="list-style-type: none">Castings can be laminated to wood (plywood or particleboard) or metal surfaces. Application directly to drywall is not recommended.Selected Bonded Metal patterns are available in a reduced sheet thickness. Slim castings are designed for applications where clearance is an issue.Castings can be factory-laminated to a backer, suitable for application to interior walls. Standard backer options are 1/4" (6 mm), 1/2" (13 mm) or 3/4" (19 mm) fire-rated particleboard, or 6, 8 or 10 mm polycarbonate.	<ul style="list-style-type: none">Castings are typically installed using contact cement or construction adhesive. Backed castings provide a greater range of installation options using either adhesives or fasteners. General installation instructions are available.
APPLYING TO CURVED SURFACES	LIMITATIONS
<ul style="list-style-type: none">Standard and slim castings can generally be applied to curved surfaces with radii down to about 36" (the minimum radius achievable varies depending on each particular pattern's sheet thickness and degree of relief). In addition, Forms+Surfaces can supply selected patterns as pre-curved castings with outside radii of 9", 12" or 24" for column covers or other uses. Please call to discuss curved-surface applications on your project.	<ul style="list-style-type: none">Bonded Metal is intended to be an attractive and durable cladding material and should not be used as a structural element nor should it be used to provide reinforcing or bracing for structural members. Forms+Surfaces recommends either a minimum 1/8" (3 mm) reveal or a trim detail between sheets. Exposed edges of casting should be protected by trim or other material.

MAINTENANCE & FIRE RATING

MAINTENANCE	FIRE RATING
<ul style="list-style-type: none">The Bonded Metal surface has been sealed with a high-quality interior/exterior acrylic lacquer. It is a hard, durable finish that will last for many years but can be damaged if cleaned improperly. Avoid using harsh abrasives. If solvents are ever required for cleaning only naphtha or other aliphatic hydrocarbons should be used. Because the surface is made with genuine metal, it is normal for Bonded Metal installed outdoors to weather to a deeper, natural patina over time. Bonded Metal does not absorb moisture and should not rot or rust.Fingerprints, smudges and more persistent dirt can be removed using an ammonia-free cleaner/ degreaser such as Simple Green®.	<ul style="list-style-type: none">Bonded Metal is NFPA and IBC class B fire rated and UBC class 2 fire rated.

ENVIRONMENTAL CONSIDERATIONS

Please refer to the Bonded Metal Environmental Data Sheets for detailed environmental impact information.

HOW TO SPECIFY

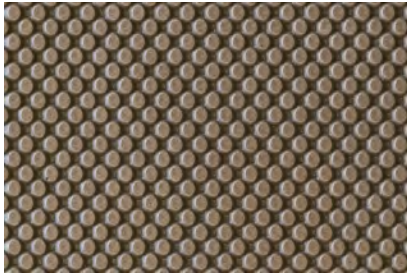
To order, please indicate material, pattern, patina and quantity.



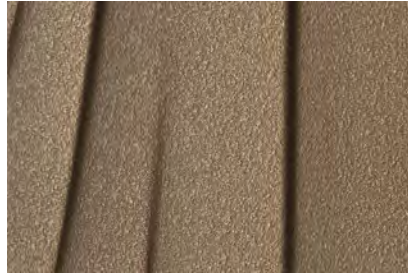
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AVAILABLE PATTERNS



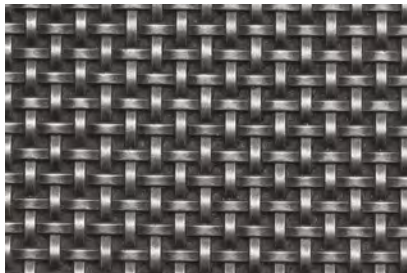
AUSTIN™



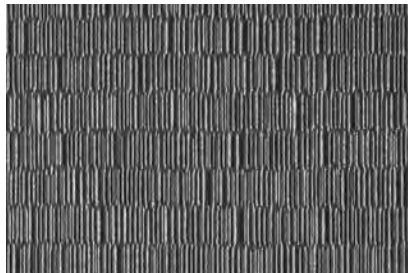
CHAMPAGNE™



CHARDONNAY™



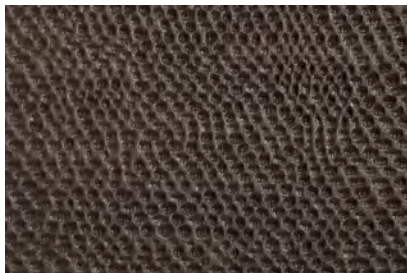
CHARLESTON™



DASH™



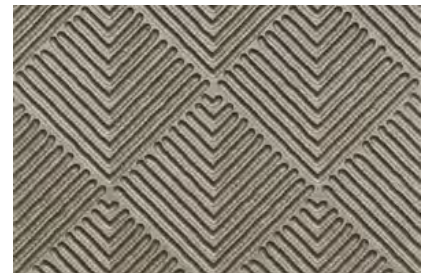
DELTA™



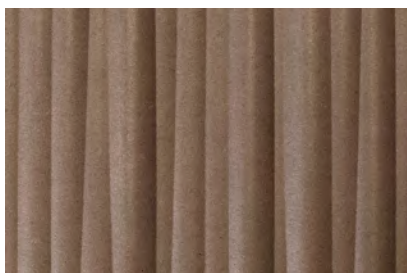
GLINT™



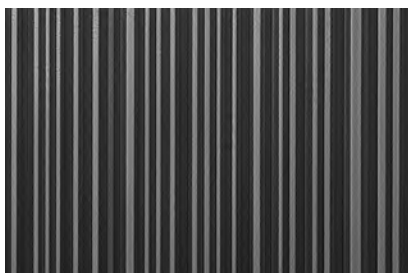
GRASS™



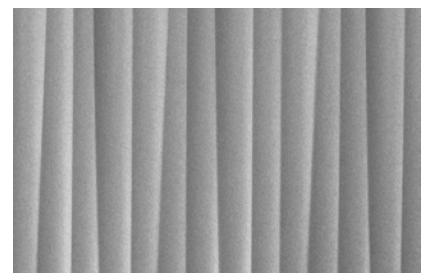
HERRINGBONE™



KALAHARI™



LOFT™



MARA™



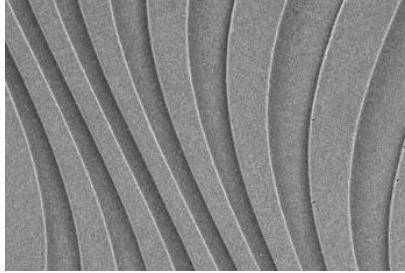
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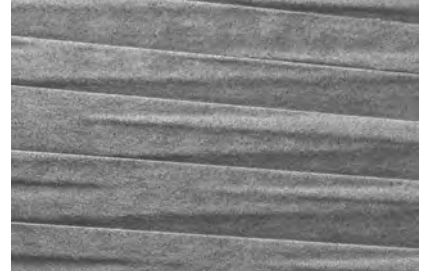
AVAILABLE PATTERNS



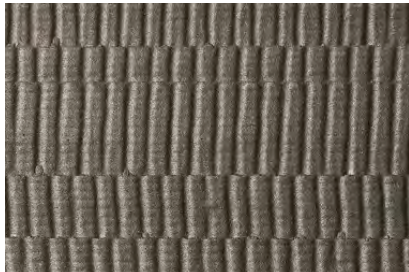
RAIN™



SAHARA™



TALUS™



TERRANE™



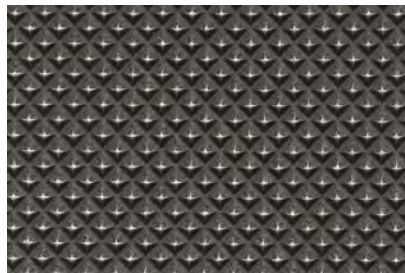
TILT™



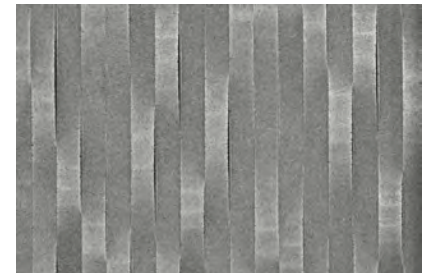
TREVIA™



UNDERCURRENT™



VANCOUVER™



WATERFALL™

Note: Because different computers will render colors and textures differently, actual finishes may vary from those shown.



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DOOR PATTERNS

The five patterns shown below are special, full-scale symmetrical patterns available with mating left and right sides. While any Bonded Metal pattern may be specified for our doors, these four patterns are designed specifically for full-sheet use on doors, wall panels or other large-scale applications where a dramatic visual effect is desired. Choosing just one side of the pattern for a single-leaf door or narrower wall panel is also an option.



CORONA™



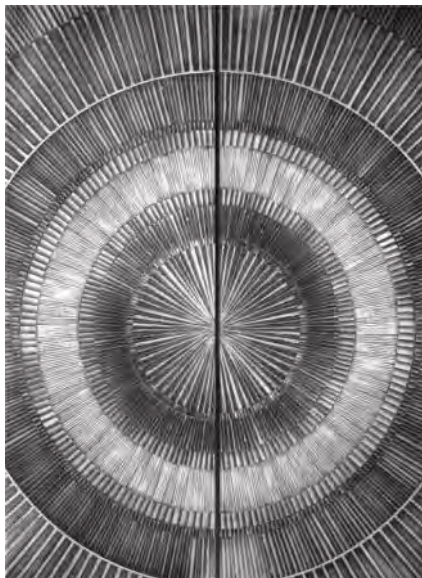
CRETE™



ECLIPSE™



EQUINOX™



SOLSTICE™

**MATERIAL SPECIFICATIONS**

The chart below shows thickness and sheet size dimensions for all Bonded Metal castings. For backed castings, simply add your preferred backer thickness to the casting thickness shown. The face layer of the cast matrix that makes up Bonded Metal ranges from 0.018-0.035". Castings may be specified in any sheet size up to the maximum indicated in the chart.

PATTERN	CASTING TYPE	THICKNESS	SHEET SIZE
AUSTIN	STANDARD	0.131" (3.3 mm)	48" x 120" (1219 x 3048 mm)
CHAMPAGNE	STANDARD	0.147" (3.7 mm)	48" x 120" (1219 x 3048 mm)
CHAMPAGNE	SLIM	0.060" (1.5 mm)	30" x 120" (762 x 3048 mm)
CHARDONNAY	STANDARD	0.147" (3.7 mm)	48" x 120" (1219 x 3048 mm)
CHARDONNAY	SLIM	0.060" (1.5 mm)	30" x 120" (762 x 3048 mm)
CHARLESTON	STANDARD	0.139" (3.5 mm)	36" x 120" (914 x 3048 mm)
CORONA (LEFT)	STANDARD	0.289" (7.3 mm)	36" x 120" (914 x 3048 mm)
CORONA (RIGHT)	STANDARD	0.289" (7.3 mm)	36" x 120" (914 x 3048 mm)
CRETE	STANDARD	0.357" (9.1 mm)	48" x 120" (1219 x 3048 mm)
DASH	STANDARD	0.132" (3.4 mm)	47.5" x 119.5" (1207 x 3035 mm)
DELTA (HORIZONTAL)	STANDARD	0.151" (3.8 mm)	48" x 120" (1219 x 3048 mm)
DELTA (VERTICAL)	STANDARD	0.151" (3.8 mm)	48" x 120" (1219 x 3048 mm)
ECLIPSE (LEFT)	STANDARD	0.289" (7.3 mm)	48" x 120" (1219 x 3048 mm)
ECLIPSE (RIGHT)	STANDARD	0.289" (7.3 mm)	48" x 120" (1219 x 3048 mm)
EQUINOX (LEFT)	STANDARD	0.116" (2.9 mm)	36" x 120" (914 x 3048 mm)
EQUINOX (RIGHT)	STANDARD	0.116" (2.9 mm)	36" x 120" (914 x 3048 mm)
GLINT	STANDARD	0.132" (3.4 mm)	47.5" x 119.5" (1207 x 3035 mm)
GRASS	STANDARD	0.135" (3.4 mm)	48" x 120" (1219 x 3048 mm)
HERRINGBONE (HORIZONTAL)	STANDARD	0.139" (3.5 mm)	48" x 120" (1219 x 3048 mm)
HERRINGBONE (VERTICAL)	STANDARD	0.139" (3.5 mm)	48" x 120" (1219 x 3048 mm)
KALAHARI (HORIZONTAL)	STANDARD	0.200" (5.1 mm)	48" x 120" (1219 x 3048 mm)
KALAHARI (VERTICAL)	STANDARD	0.200" (5.1 mm)	48" x 120" (1219 x 3048 mm)
LOFT	STANDARD	0.105" (2.7 mm)	48" x 120" (1219 x 3048 mm)
MARA (HORIZONTAL)	STANDARD	0.200" (5.1 mm)	48" x 120" (1219 x 3048 mm)
MARA (VERTICAL)	STANDARD	0.200" (5.1 mm)	48" x 120" (1219 x 3048 mm)
RAIN	STANDARD	0.112" (2.8 mm)	48" x 120" (1219 x 3048 mm)
SAHARA	STANDARD	0.158" (4.0 mm)	48" x 120" (1219 x 3048 mm)
SOLSTICE (LEFT)	STANDARD	0.289" (7.3 mm)	48" x 120" (1219 x 3048 mm)
SOLSTICE (RIGHT)	STANDARD	0.289" (7.3 mm)	48" x 120" (1219 x 3048 mm)
TALUS	STANDARD	0.135" (3.4 mm)	48" x 120" (1219 x 3048 mm)
TERRANE	STANDARD	0.116" (2.9 mm)	48" x 120" (1219 x 3048 mm)
TILT	STANDARD	0.132" (3.4 mm)	47.5" x 119.5" (1207 x 3035 mm)
TREVIA	STANDARD	0.120" (3.0 mm)	48" x 120" (1219 x 3048 mm)
UNDERCURRENT	STANDARD	0.130" (3.3 mm)	47.5" x 119.5" (1207 x 3035 mm)
VANCOUVER	STANDARD	0.137" (3.5 mm)	48" x 120" (1219 x 3048 mm)
WATERFALL	STANDARD	0.130" (3.3 mm)	48" x 120" (1219 x 3048 mm)

**STANDARD BONDED METAL COLOR AND PATTERN COMBINATIONS**

	Bonded Aluminum Natural	Bonded Aluminum Dark	Bonded Bronze Natural	Bonded Bronze Dark	Bonded Nickel Silver Natural	Bonded Nickel Silver Dark
Austin	•	•	•	•	•	•
Champagne	•		•		•	
Chardonnay	•		•		•	
Charleston	•	•	•	•	•	•
Dash	•	•	•	•	•	•
Delta	•	•	•	•	•	•
Glint	•	•	•	•	•	•
Grass	•	•	•	•	•	•
Herringbone	•	•	•	•	•	•
Kalahari	•		•		•	
Loft	•	•	•	•	•	•
Mara	•		•		•	
Rain	•	•	•	•	•	•
Sahara	•		•		•	
Talus	•	•	•	•	•	•
Terrane	•		•		•	
Tilt	•	•	•	•	•	•
Trevia	•	•	•	•	•	•
Undercurrent	•		•		•	
Vancouver	•	•	•	•	•	•
Waterfall	•		•		•	
FULL SHEET PATTERNS						
Corona	•	•	•	•	•	•
Eclipse	•	•	•	•	•	•
Equinox	•	•	•	•	•	•
Solstice	•	•	•	•	•	•