

Bonded Metal is lightweight, extremely durable and low-maintenance.

**Recycled Content & Certifications**

Configurations	Post-Industrial Recycled Content	Post-Consumer Recycled Content	Total Recycled Content	3 <sup>rd</sup> Party Certifications
Bonded Aluminum	28%	1%	29%	-
Bonded Bronze	52%	0%	52%	-
Bonded Nickel Silver	39%	1%	40%	-

**Green Building Standards**

<b>LEED® v3</b>
<i>MR2: Construction Waste Management</i> – packaging is designed to be reusable or recyclable. See below for details.
<i>MR4: Recycled Content</i> – this product contains recycled material. Recycled content is shown above for all standard options.
<i>MR5: Regional Materials</i> – this product is manufactured in Carpinteria, CA, Phoenix, AZ or Pune, India. Contact for additional information.
<b>LEED v4</b>
<i>MRp2/MR5: Construction Waste Management</i> – packaging is designed to be reusable or recyclable. See below for details.
<i>MR3: Sourcing of Raw Materials (recycled content)</i> – this product contains recycled material. Recycled content is shown above.
<i>(regional materials)</i> – – this product is manufactured in Phoenix, AZ or Pune, India. Contact for additional information.
<i>MR4: Material Ingredients</i> – this product has a Health Product Declaration. Contact for details.
<b>Green Globes™</b>
<i>3.5.4.1 Construction Waste</i> – packaging is designed to be reusable or recyclable. See below for details.
<b>Estidama Pearl Rating System: Design &amp; Construction, Version 1.0</b>
<i>SM-R1: Hazardous Material Elimination</i> – product contains no ACMs and no CCA-treated timber
<i>SM-R2/SM-13: Construction Waste Management</i> - packaging is designed to be reusable or recyclable. See below for details.

**Product Materials**

Material	Description	Maintenance (0-5)*	Inherent Value (0-5)**	Biodegradable	Corrosion/Wear Resistant	Rapidly Renewable	Recyclable	Scratch Resistant
Fiber-Reinforced Polymer	Composite materials made of a polymer matrix reinforced with fibers.	4	0		x			x
Metal Powder	Fine particles of metallic alloys used for specific metallurgical requirements.	4	5				x	

\*Maintenance ratings are assigned as follows: 0 – High level of maintenance required to keep up product performance and aesthetics; 5 – Absolutely no maintenance required to keep up product’s visual appearance and performance characteristics;

\*\*Inherent value ratings are assigned based on the material’s scrap value: 0 – No scrap value, or negative scrap value, and/or no scrap market; 5 – High scrap value, accompanied by robust scrap market

**Processes**

Process	Description
Bonded Metal Casting	Metal granules are cast in a fiber-reinforced polymer matrix.
Patina Application	A non-toxic contrast-enhancing surface treatment applied to the Bonded Metal.

**Packaging Materials**

Material	Type	Description	Disposal
Cardboard	Sheets	Used to provide impact cushioning between a product and its package or between two products.	Reuse/Recycle
Foam	Blocks	Foam blocks are used to cushion heavy products against their packages or each other.	Reuse
Wood	Crate	Made to fit onsite. Wood scraps are recycled into mulch. Crates are reused when possible.	Reuse/Recycle
Wood	Pallet	Used in shipping. Reused onsite until no longer serviceable, then recycled.	Reuse/Recycle

**Transport**

Method	Type	Description
Boat	Overseas	Some product components are shipped by cargo ship from overseas
Ground	Truck/Rail	Some incoming shipments and almost all outgoing shipments to customers are sent via ground transportation. This can include truck and often rail transport depending on the final destination. We are an EPA SmartWay® Transport Partner.

**Maintenance & Use**

Maintenance or Use	Description	Chemicals Required
Clean with Water and Mild Cleaner	This product requires a damp cloth and a mild, nontoxic cleaner for maintenance.	Mild, water-based cleaner

**Disposal**

Method	Description
Not Recyclable	Product is not recyclable (or cannot be easily disassembled for recycling).

**Summary – Natural Patina**

Category Type	Property/Component	Bonded Aluminum	Bonded Bronze	Bonded Nickel Silver
Basic	Post-Industrial Recycled Content	28%	52%	39%
Basic	Post-Consumer Recycled Content	1%	0%	1%
Basic	Total Recycled Content	29%	52%	40%
LEED v3	MR: Construction Waste Management	x	x	x
LEED v3	MR: Recycled Content	x	x	x
LEED v3	MR: Regional Materials	Contact	Contact	Contact
LEED v4	MR: Construction Waste Management	x	x	x
LEED v4	MR: Sourcing of Raw Matl (recycled content)	x	x	x
LEED v4	MR: Sourcing ... (regional materials)	Contact	Contact	Contact
LEED v4	MR: Material Ingredients	Contact	Contact	Contact
Green Globes	3.5.4.1 Construction Waste	x	x	x
Etidama Pearl	SM-R1: Hazardous Material Elimination	x	x	x
Etidama Pearl	SM-R2/SM-13: Construction Waste	x	x	x
Materials	Fiber-Reinforced Polymer	x	x	x
Materials	Metal Powder	x	x	x
Processes	Bonded Metal Casting	x	x	x
Packaging	Cardboard Sheets	x	x	x
Packaging	Foam Blocks	x	x	x
Packaging	Wood Crate	x	x	x
Packaging	Wood Pallet	x	x	x
Transport	Ground- Truck/Rail	x	x	x
Maintenance & Use	Clean with Water and Mild Cleaner	x	x	x
Disposal	Not Recyclable	x	x	x

**Summary – Dark Patina**

Category Type	Property/Component	Bonded Aluminum	Bonded Bronze	Bonded Nickel Silver
Basic	Total Recycled Content	29%	52%	40%
Basic	Post-Industrial Recycled Content	28%	52%	39%
Basic	Post-Consumer Recycled Content	1%	0%	1%
LEED v3	MR: Construction Waste Management	x	x	x
LEED v3	MR: Recycled Content	x	x	x
LEED v3	MR: Regional Materials	Contact	Contact	Contact
LEED v4	MR: Construction Waste Management	x	x	x
LEED v4	MR: Sourcing of Raw Matl (recycled content)	x	x	x
LEED v4	MR: Sourcing ... (regional materials)	Contact	Contact	Contact
LEED v4	MR: Material Ingredients	Contact	Contact	Contact
Green Globes	3.5.4.1 Construction Waste	x	x	x
Estdama Pearl	SM-R1: Hazardous Material Elimination	x	x	x
Estdama Pearl	SM-R2/SM-13: Construction Waste	x	x	x
Materials	Fiber-Reinforced Polymer	x	x	x
Materials	Metal Powder	x	x	x
Processes	Bonded Metal Casting	x	x	x
Processes	Patina Application	x	x	x
Packaging	Cardboard Sheets	x	x	x
Packaging	Foam Blocks	x	x	x
Packaging	Wood Crate	x	x	x
Packaging	Wood Pallet	x	x	x
Transport	Ground- Truck/Rail	x	x	x
Maintenance & Use	Clean with Water and Mild Cleaner	x	x	x
Disposal	Not Recyclable	x	x	x

\*Please see Bonded Metal Product Data Sheet for patterns that are available in dark patina.

Forms+Surfaces is dedicated to environmental responsibility. We maintain an Environmental Management System and are continually working to improve our impact through efficiency, material selection, vendor education, employee involvement, and a commitment to being exemplary corporate citizens. If you would like additional information, please contact our Sustainability Team at [green@forms-surfaces.com](mailto:green@forms-surfaces.com).