

Boardwalk Benches are durable, low maintenance, ergonomic and easy to disassemble. The frame is comprised of 100% recyclable solid aluminum containing high recycled content. Powdercoat finishes are low- or no-VOC depending on color. The seat slats are made of FSC® Recycled 100% Cumaru hardwood which has been repurposed from the Atlantic City Boardwalk.

Recycled Content & Certifications

Configurations	Reclaimed material by weight of assembly	Post-Industrial Recycled Content	Post-Consumer Recycled Content	Total Recycled Content	3 rd Party Certifications
FSC Recycled 100% Cumaru hardwood slats, freestanding	29%	46%	37%	83%	FSC Recycled
FSC Recycled 100% Cumaru hardwood slats, freestanding, seat dividers	28%	46%	36%	82%	FSC Recycled
FSC Recycled 100% Cumaru hardwood slats, surface mount	29%	46%	37%	83%	FSC Recycled
FSC Recycled 100% Cumaru hardwood slats, surface mount, seat dividers	28%	46%	36%	82%	FSC Recycled

FSC License Code: FSC-C004453

Green Building Standards

<p>LEED® v3</p> <p><i>MR2: Construction Waste Management</i> – packaging is designed to be reusable or recyclable. See below for details.</p> <p><i>MR3: Materials Reuse</i>- wood used in this product has been reclaimed. The percentage by weight is shown above.</p> <p><i>MR4: Recycled Content</i> – this product contains recycled material. Recycled content is shown above for all standard options.</p> <p><i>MR5: Regional Materials</i> – this product is manufactured in Pittsburgh, PA. Contact for details.</p>
<p>LEED v4</p> <p><i>MRp2/MR5: Construction Waste Management</i> – packaging is designed to be reusable or recyclable. See below for details.</p> <p><i>MR3: Sourcing of Raw Materials (materials reuse)</i> – wood used in this product has been reclaimed. The percentage by weight is shown above. <i>(recycled content)</i> – this product contains recycled material. Recycled content is shown above for all standard options. <i>(regional materials)</i> – this product is manufactured in Pittsburgh, PA. Contact for details.</p> <p><i>EQ2: Low-emitting Materials</i> – inherently non-emitting sources. Contact for details.</p>
<p>Green Globes™</p> <p>3.5.2.2 <i>Interior Fit-Outs</i> - wood used in this product is certified by the Forest Stewardship Council (SCS-COC-001461), FSC Recycled 100%.</p> <p>3.5.3.3 <i>Reuse...Non-structural Elements</i> - wood used in this product has been reclaimed. The percentage by weight is shown above.</p> <p>3.5.4.1 <i>Construction Waste</i> – packaging is designed to be reusable or recyclable. See below for details.</p> <p>3.5.6.3 <i>Deconstruction and Disassembly</i> – this product can be disassembled to separate recyclable components.</p> <p>3.7.2.1 <i>Volatile Organic Compounds</i> - inherently non-emitting sources. Contact for details.</p>
<p>Estidama Pearl Rating System: Design & Construction, Version 1.0</p> <p><i>LBi-2.5: Material Emissions: Formaldehyde Reduction</i> – inherently non-emitting sources. Contact for details.</p> <p><i>SM-R1: Hazardous Material Elimination</i> – product contains no ACMs and no CCA-treated timber.</p> <p><i>SM-R2/SM-13: Construction Waste Management</i> - packaging is designed to be reusable or recyclable. See below for details.</p> <p><i>SM-8: Material Reuse</i> - wood used in this product has been reclaimed. The percentage by weight is shown above.</p> <p><i>SM-10: Recycled Materials</i> - this product contains recycled material. Recycled content is shown above for all standard options.</p> <p><i>SM-12: Reused or Certified Timber</i> - wood used in this product is certified by the Forest Stewardship Council (SCS-COC-001461), FSC Recycled 100%.</p>
<p>SITES v2 Rating System</p> <p><i>Materials C5.3: Design for adaptability and disassembly</i> - this product can be disassembled to separate recyclable components.</p> <p><i>Materials C5.4: Reuse salvaged materials and plants</i> - wood used in this product has been reclaimed. The percentage by weight is shown above.</p> <p><i>Materials C5.5: Use recycled content materials</i> - this product contains recycled material. Recycled content is shown above for all standard options.</p> <p><i>Materials C5.6: Use regional materials</i> - this product is manufactured in Pittsburgh, PA. Contact for extraction information.</p> <p><i>Construction C7.5: Divert construction and demolition materials from disposal</i> - packaging is designed to be reusable or recyclable. See below for details.</p>

Product Materials

Material	Description	Maintenance (0-5)*	Inherent Value (0-5)**	Biodegradable	Corrosion/Wear Resistant	Rapidly Renewable	Recyclable	Scratch Resistant
Aluminum	Corrosion-resistant metal that is suitable for many fabrication methods.	3	3		x		x	
Neoprene	Synthetic rubber that is produced by polymerization of chloroprene. It exhibits good chemical stability, and maintains flexibility over a wide temperature range.	4	0		x		x	
Stainless Steel	Steel that is alloyed with chromium and other metals to improve corrosion-resistance. Formed by rolling or extruding.	3	4		x		x	
Wood – Reclaimed Cumaru	Tropical hardwood prized for its insect-resistance, rot-resistance, beauty, and strength. Repurposed from the Atlantic City Boardwalk.	3	1	x			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
Aluminum Making	A two-step process by which the aluminum is first dissolved in a caustic bath and then precipitated out in crystals. This two-step process can be circumvented by using recycled scrap that is melted down to form new parts.
Aluminum Treatment	Aluminum receives a treatment to improve corrosion resistance and coating adhesion.
Casting	The process of creating a solid object by pouring molten metal into a mold and allowing it to cool.
Cutting	A variety of methods may be used to cut through various materials.
Extruding	Process in which heated metal is pushed through a cross-sectional die to create a linear part with a specific shape.
Forming	A mechanical process used to alter the shape of metal.
Machining	A form of subtractive or additive manufacturing often requiring specialty tooling to physically remove or add material to achieve a desired geometry.
Metal Finishing	Applied using grinding/sanding or polishing wheels or fine glass beads. Finishing produces a grained/brushed, mirror-like or matte/etched finish on the surface and depending on the material will increase corrosion resistance.
Plastics Manufacture	Plastic is the common term for a wide range of synthetic or semi-synthetic organic solid materials used in industrial applications. Plastics are typically polymers of high molecular weight, and may contain other substances to improve performance or reduce costs.
Powdercoating	A solvent-free finishing method in which electrically charged particles of pigmented resins are sprayed onto a product. Electrical grounding of the coated object causes the charged powder to adhere to the surface. When baked in a curing oven the deposited powder melts and fuses together to form a durable, cross-linked coating.
Sand Blasting	The process of smoothing, shaping and cleaning a hard surface by forcing solid particles across that surface at high speeds to provide an even finish.
Steel Making	Steel and stainless steel are made in one of two types of furnace: a Basic Oxygen Furnace (BOF) or an Electric Arc Furnace (EAF). A BOF is used to make steel from iron ore or from scrap steel; an EAF is used primarily to reprocess scrap steel.
Welding	A process that joins two similar metals by causing coalescence. Usually accomplished by melting the work pieces and adding a filler material to form a pool of molten metal that cools to become a strong joint.

Processes continued

Process	Description
Wood Finishing	Wood is cut and sanded smooth. Finishes are applied to adjust the wood's color, enhance its appearance or to protect it from staining or weathering.
Wood Reclamation	Wood is repurposed from the Atlantic City Boardwalk.

Packaging Materials

Material	Type	Description	Disposal
Cardboard	Box	Small or light products are packaged in cardboard boxes. Reused for shipping.	Reuse/Recycle
Foam	Sheets	Micro foam sheets are used to protect the finish on products.	Reuse
Plastic	Band	Banding is used to keep products secured to a pallet during transport.	Recycle
Plastic	Shrink wrap	Shrink wrap is used to protect the finish on products and also to hold padding to products.	Recycle
Steel	Band	Banding is used to keep products secured to a pallet during transport.	Recycle
Wood	Crate	Wood crates are made to fit onsite and are reused when possible. Wood scraps are recycled into mulch.	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
Ergonomic	Product is designed for ergonomic use, which will contribute to service life.	NA
Wood Finishing	Wood in this product can be allowed to weather, but must be refinished with wood oil to retain the original look.	Wood oil

Disposal

Method	Description
Biodegradable	Wood components of this product are biodegradable.
Disassemble	Product can be disassembled to separate recyclable components.
Recyclable - Fully	Product is fully recyclable.
Recycling - Scrap	Materials can be sold for scrap.
Reuse	This item can be reused in the same or different function.

SUMMARY

Category Type	Property/Component	FSC Recycled reclaimed Cumaru hardwood slats, freestanding	FSC Recycled reclaimed Cumaru hardwood slats, freestanding, seat dividers	FSC Recycled reclaimed Cumaru hardwood slats, surface mount	FSC Recycled reclaimed Cumaru hardwood slats, surface mount, seat dividers
Basic	Reclaimed material by weight of assembly	29%	28%	29%	28%
Basic	Post-Industrial Recycled Content	46%	46%	46%	46%
Basic	Post-Consumer Recycled Content	37%	36%	37%	36%
Basic	Total Recycled Content	83%	82%	83%	82%
Basic	3rd Party Cert	FSC Recycled	FSC Recycled	FSC Recycled	FSC Recycled
LEED v3	MR: Construction Waste Management	x	x	x	x
LEED v3	MR: Materials Reuse	x	x	x	x
LEED v3	MR: Recycled Content	x	x	x	x
LEED v3	MR: Regional Materials	Contact	Contact	Contact	Contact
LEED v4	MR: Construction Waste Management	x	x	x	x
LEED v4	MR: Sourcing of Raw Matls...materials reuse	x	x	x	x
LEED v4	MR: Sourcing of Raw Matls...recycled	x	x	x	x
LEED v4	MR: Sourcing of Raw Matls...regional matls	Contact	Contact	Contact	Contact
LEED v4	EQ: Low-emitting Materials	Contact	Contact	Contact	Contact
Green Globes	3.5.2.2 Interior Fit-Outs - wood	x	x	x	x
Green Globes	3.5.3.3 Reuse...Non-structural elements	x	x	x	x
Green Globes	3.5.4.1 Construction Waste	x	x	x	x
Green Globes	3.5.6.3 Deconstruction and Disassembly	x	x	x	x
Green Globes	3.7.2.1 Volatile Organic Compounds	Contact	Contact	Contact	Contact
ESTIDAMA	LBI: Material Emissions	Contact	Contact	Contact	Contact
ESTIDAMA	SM: Hazardous Material Elimination	x	x	x	x
ESTIDAMA	SM: Construction Waste Management	x	x	x	x
ESTIDAMA	SM: Material Reuse	x	x	x	x
ESTIDAMA	SM: Recycled Materials	x	x	x	x
ESTIDAMA	SM: Reused or Certified Timber	x	x	x	x
SITES	Materials: Design for disassembly	x	x	x	x
SITES	Materials: Reuse salvaged materials	x	x	x	x
SITES	Materials: Recycled content materials	x	x	x	x
SITES	Materials: Regional materials	Contact	Contact	Contact	Contact
SITES	Construction: Divert construction materials	x	x	x	x
Materials	Aluminum	x	x	x	x
Materials	Neoprene	x	x		
Materials	Stainless Steel			x	x
Materials	Wood – Reclaimed Cumaru	x	x	x	x
Processes	Aluminum Making	x	x	x	x
Processes	Aluminum Treatment	x	x	x	x
Processes	Casting	x	x	x	x
Processes	Cutting	x	x	x	x
Processes	Extruding	x	x	x	x
Processes	Forming	x	x	x	x

SUMMARY continued

Category Type	Property/Component	FSC Recycled reclaimed Cumaru hardwood slats, freestanding	FSC Recycled reclaimed Cumaru hardwood slats, freestanding, seat dividers	FSC Recycled reclaimed Cumaru hardwood slats, surface mount	FSC Recycled reclaimed Cumaru hardwood slats, surface mount, seat dividers
Processes	Machining	x	x	x	x
Processes	Metal Finishing	x	x	x	x
Processes	Plastics Manufacture	x	x		
Processes	Powdercoating	x	x	x	x
Processes	Sand Blasting	x	x	x	x
Processes	Steel Making			x	x
Processes	Welding	x	x	x	x
Processes	Wood Finishing	x	x	x	x
Processes	Wood Reclamation	x	x	x	x
Packaging	Cardboard - Box	x	x	x	x
Packaging	Foam Sheets	x	x	x	x
Packaging	Plastic - Band	x	x	x	x
Packaging	Plastic – Shrink wrap	x	x	x	x
Packaging	Steel – Band	x	x	x	x
Packaging	Wood – Crate	x	x	x	x
Packaging	Wood – Pallet	x	x	x	x
Transport	Boat - Overseas	x	x	x	x
Transport	Ground – Truck/Rail	x	x	x	x
Maintenance & Use	Clean with Water and Mild Cleaner	x	x	x	x
Maintenance & Use	Ergonomic	x	x	x	x
Maintenance & Use	Wood Finishing	x	x	x	x
Disposal	Biodegradable	x	x	x	x
Disposal	Disassemble	x	x	x	x
Disposal	Recyclable - Fully	x	x	x	x
Disposal	Recycling - Scrap	x	x	x	x
Disposal	Reuse	x	x	x	x

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 an unwavering commitment to being exemplary corporate citizens. If you would like additional information on our Environmental Management System or our company environmental initiatives and policies, please feel free to contact our Sustainability Team at green@forms-surfaces.com.