Tangent Rail Seating is constructed of durable materials. The seats are ergonomic, low maintenance, recyclable and easy to disassemble. Powdercoat finishes are no- or low-VOC. Aluminum and stainless steel contain high recycled content. Hardwood seat slats are available in FSC 100% Cumaru hardwood, an incredibly strong hardwood that is highly resistant to moisture, insects, and vandalism. FSC 100% means that 100% of the wood is responsibly sourced from forests certified by the Forest Stewardship Council, which is recognized as the gold standard of forest management.

Recycled Content & Certifications

Configurations	Post-Industrial Recycled Content	Post-Consumer Recycled Content	Total Recycled Content	3rd Party Certifications
Tangent Rail Seating, Straight, aluminum slats	Contact	Contact	15-30%	-
Tangent Rail Seating, Straight, FSC 100% Cumaru hardwood slats	Contact	Contact	12-26%	FSC 100%
Tangent Rail Seating, Straight, stainless steel seat pans	Contact	Contact	30-50%	-
Tangent Rail Seating, Articulating, aluminum slats	Contact	Contact	15-30%	-
Tangent Rail Seating, Articulating, FSC 100% Cumaru hardwood slats	Contact	Contact	12-26%	FSC 100%
Tangent Rail Seating, Articulating, stainless steel seat pans	Contact	Contact	30-50%	-

FSC License Code: FSC-C004453

Green Building Standards

LEED® v3

MR2: Construction Waste Management – packaging is designed to be reusable or recyclable. See below for details.

MR4: Recycled Content – this product contains recycled material. Please contact for details.

MR5: Regional Materials – this product is manufactured in Pittsburgh, PA. Please contact for details.

MR7: Certified Wood – Cumaru hardwood slats are certified FSC 100% by the Forest Stewardship Council (SCS-COC-001461).

IEQp2: Environmental Tobacco - this product may be used to help designate a smoking area away from doors, windows, and ventilation inlets.

LEED v4

MRp2/MR5: Construction Waste Management – packaging is designed to be reusable or recyclable. See below for details.

MR3: Sourcing of Raw Matls. (wood) – Cumaru hardwood slats are certified FSC 100% by the Forest Stewardship Council (SCS-COC-001461).

(recycled content) – this product contains recycled material. Please contact for details.

(regional materials) – this product is manufactured in Pittsburgh, PA. Contact for details.

EQp2: Environmental tobacco smoke control - this product may be used to help designate a smoking area away from doors, windows, & ventilation inlets.

EQ2: Low-emitting Materials – inherently non-emitting sources. Contact for details.

Green Globes™

3.5.2.2 Interior Fit-Outs – Cumaru hardwood slats are certified FSC 100% by the Forest Stewardship Council (SCS-COC-001461).

3.5.4.1 Construction Waste – packaging is designed to be reusable or recyclable. See below for details.

3.5.6.3 Deconstruction and Disassembly – this product can be disassembled to separate recyclable components.

3.7.2.1 Volatile Organic Compounds - inherently non-emitting sources. Contact for details.

3.7.2.9 Other Indoor Pollutants (Tobacco…) - this product may be used to help designate a smoking area away from doors, windows, & ventilation inlets.

Estidama Pearl Rating System: Design & Construction, Version 1.0

LBi-R2: Smoking Control - this product may be used to help designate a smoking area away from doors, windows, and ventilation inlets.

LBi-2.5: Material Emissions: Formaldehyde Reduction – inherently non-emitting sources. Contact for details.

SM-R1: Hazardous Material Elimination – product contains no ACMs and no CCA-treated timber.

SM-R2/SM-13: Construction Waste Management - packaging is designed to be reusable or recyclable. See below for details.

SM-12: Reused or Certified Timber – Cumaru hardwood slats are certified FSC 100% by the Forest Stewardship Council (SCS-COC-001461).

Green Building Standards continued

SITES v2 Rating System
Materials P5.1: Wood from threatened tree species – Cumaru hardwood slats are certified FSC 100% by the Forest Stewardship Council (SCS-COC-001461).
Materials C5.3: Design for adaptability and disassembly - this product can be disassembled to separate recyclable components.
Materials C5.5: Use recycled content materials - this product contains recycled material. Please contact for details.
Materials C5.6: Use regional materials - this product is manufactured in Pittsburgh, PA. Contact for extraction information.
Materials C5.7: Responsible extraction of raw materials - Cumaru hardwood slats are certified FSC 100% by the Forest Stewardship Council (SCS-COC-001461).
HHWB C6.10: Minimize exposure to environmental tobacco smoke (ETS) - this product may be used to help designate a smoking area away from doors, windows, and ventilation inlets.
Construction C7.5: Divert construction and demolition materials from disposal - packaging is designed to be reusable or recyclable. See below for details.
WELL Building Standard
Air – 11. Fundamental material safety – this product does not contain asbestos, lead or mercury. Please contact for details.
Air – 25. Toxic material reduction – this product does not contain PFCs, halogenated flame retardants, phthalates, isocyanate-based polyurethane or urea-formaldehyde. Please contact for details.
Fitness – 67. Exterior active design – this product can help support occupant activity.

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	
Stainless Steel	Steel that is alloyed with chromium and other metals to improve corrosion-resistance.	3	4		x		x	
Wood – Cumaru	Tropical hardwood valued for its appearance, strength, and high resistance to insects and decay. Native to Central and South America.	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.
Calendaring	Metalworking process in which sheet metal is rolled out at room temperature, changing the molecular structure to make it harder and more resistant to scratching.
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.
Metal Finishing	Applied using grinding/sanding or polishing wheels. Finishing produces a grained/brushed or mirror-like finish on the surface, and depending on the material will increase corrosion resistance.
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.

Processes continued

Process	Description
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.
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 Processing	Wood milled from trees and turned into lumber.

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	Shrink wrap	Shrink wrap is used to protect the finish on products and also to hold padding to products.	Recycle
Wood	Crate	Wood crates are made to fit onsite. Wood scraps are recycled into mulch. Crates are reused when possible.	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.	N/A
Tobacco Smoke Control	This product may be used to help designate a smoking area away from doors, windows, and ventilation inlets.	N/A
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.

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.