

Environmental Product Declaration



According to
ISO 14025

Hightower[®] Kona Tables:

Wood, laminate, or painted wood top occasional tables

The Kona Tables Product Family

The Kona Tables product family includes 28 products of different sizes, shapes, and heights for various needs. The series offers various occasional tables in wood, laminate, or painted wood tops and a variety of power coat color options. Kona encompasses laptop tables (both fixed height and adjustable), coffee tables, café tables, and meeting tables.

Products HTKNNTS636, HTKNNTR336, HTKNNTS336, and HTKNCTR254 are not yet on the market – Results of this EPD shall be used with care as the LCI data for these products are not yet based on 1 year of production which may result in increased uncertainty.



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Hightower® Kona Tables

Office Furniture Workspace Products



EPD Program and Program Operator Name, Address, Logo, and Website

ASTM International
100 Barr Harbor Drive
PO Box C700
West Conshohocken, PA,
19428-2959, USA
www.astm.org

General Program Instructions and Version Number	ASTM Program Operator Rules. Version 8.0, Revised 04/29/20
Manufacturer Name and Address	Hightower Manufacturing & Showroom 211 Fraley Road, High Point, North Carolina 27263, USA
Declaration Number	EPD 918
Declared Product & Functional Unit or Declared Unit	One square meter (1 m ²) of physical floor space (workspace and storage) for a period of 10 years
Reference PCR and Version Number	BIFMA PCR for Tables: UNCPC 3812
Description of product application/use	Hightower® Kona Tables – Wood, laminate, or painted wood top occasional tables
Product RSL Description (if Appl.)	10 years
Markets of Applicability	North America
Date of Issue	March 25, 2025
Period of Validity	5 years
EPD Type	Product-average
EPD Scope	Cradle to grave
Year(s) of reported primary data	2022-2023
LCA Software & Version Number	SimaPro v.9.6.0.1.
LCI Database(s) & Version Number	Ecoinvent v.3.9.1
LCIA Methodology & Version Number	TRACI 2.1
The PCR review was conducted by:	Thomas P. Gloria, PH. D. t.gloria@industrial-ecology.com
	Jack Geibig, P.E.
	Dr. Michael Overcash
This declaration was independently verified in accordance with ISO 14025: 2006. <input type="checkbox"/> INTERNAL <input checked="" type="checkbox"/> EXTERNAL	Tim Brooke
	ASTM International
This life cycle assessment was conducted in accordance with ISO 14044 and the reference PCR by:	Chris Carter, Project Manager Matt Neiman, Senior LCA Analyst

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This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	TrueNorth Collective
	Lindita Bushi, PhD
	Athena Sustainable Materials Institute

Limitations

Exclusions: EPDs do not indicate that any environmental or social performance benchmarks are met, and there may be impacts that they do not encompass. LCAs do not typically address the site-specific environmental impacts of raw material extraction, nor are they meant to assess human health toxicity. EPDs can complement but cannot replace tools and certifications that are designed to address these impacts and/or set performance thresholds – e.g. Type 1 certifications, health assessments and declarations, environmental impact assessments, etc.

Accuracy of Results: EPDs regularly rely on estimations of impacts; the level of accuracy in estimation of effect differs for any particular product line and reported impact.

Comparability: The PCR this EPD was based on was written to determine the potential environmental impacts of a table type product from cradle-to-grave. It was not written to support comparative assertions. EPDs based on different PCRs, or different calculation models, may not be comparable. When attempting to compare EPDs or life cycle impacts of products from different companies, the user should be aware of the uncertainty in the final results, due to and not limited to, the practitioner's assumptions, the source of the data used in the study, and the specifics of the product modeled.

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1. Product Definition and Information

1.1. Description of Organization

Now operating for more than two decades, Hightower offers a curated house of brands as a family-founded furniture company. Hightower Studio, its inhouse brand, is designed and manufactured in High Point, N.C. Furniture from its select European partners +Halle, Ocee & Four Design, and Ondarreta are a mix of import, domestic assembly, and made in the U.S.A. Hightower is led by CEO/co-owner Natalie Hartkopf and is a certified Women Owned Business Enterprise. Hightower has signed The Climate Pledge and its Hightower Studio brand is a certified B Corp. Awards earned by Hightower include the prestigious Best of Competition at NeoCon, Metropolis Likes, and Interior Design's HiP, among others. Learn more about Hightower at hightower.design.

1.2. Product Description

28 Kona Table products encompassing different sizes, shapes, heights and optional features are covered by this declaration. Kona products are classified as occasional tables and are available as laptop tables, coffee tables, side tables, café tables and meeting tables. Several adjustable height laptop tables are offered.

Product Identification



Illustration A

Examples of Kona Table Products (Walnut Laptop Table, Round Ash Table, Rectangle Ash Table)

Product Specification

Products covered by this declaration as covered under UN Central Product Classification system; Class 3812 for Other Furniture of a kind used in offices are listed in Table 1. All products included in the Kona Product family are occasional tables. A base configuration representing normal has been chosen. Products whose impact values are within a 10% threshold are indicated in Table 1 with the label "base". Then product-average indicator values were calculated for this group of products, corresponding to the "base configuration" results declared in Section 4.

Product-average indicator values for alternative configurations with greater than 10% change in one or more impact categories are reported in separate tables in Section 4, documenting the differences between the base and alternate configuration. Products included in the alternative configuration with impacts above the base configuration are marked as "alternative – above" in Table 1 and highlighted teal. Products included in the alternative configuration with impacts below the base configuration are marked as "alternative – below" in Table 1 and highlighted orange. The EPD reader must be careful to select the set of results in Section 4 which is representative of the specific table product they are interested in.

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Products HTKNNTS636, HTKNNTR336, HTKNNTS336, and HTKNCTR254 are not yet on the market – Results of this EPD shall be used with care as the LCI data for these products are not yet based on 1 year of production which may result in increased uncertainty.

Table 1. Kona Products and Descriptions (FS = Floor Space, Occ = Occupants Supported, HAT = Height Adjustable Table, TH = Tablet Holder, SW = Solid Wood, L = Laminate/Veneer)

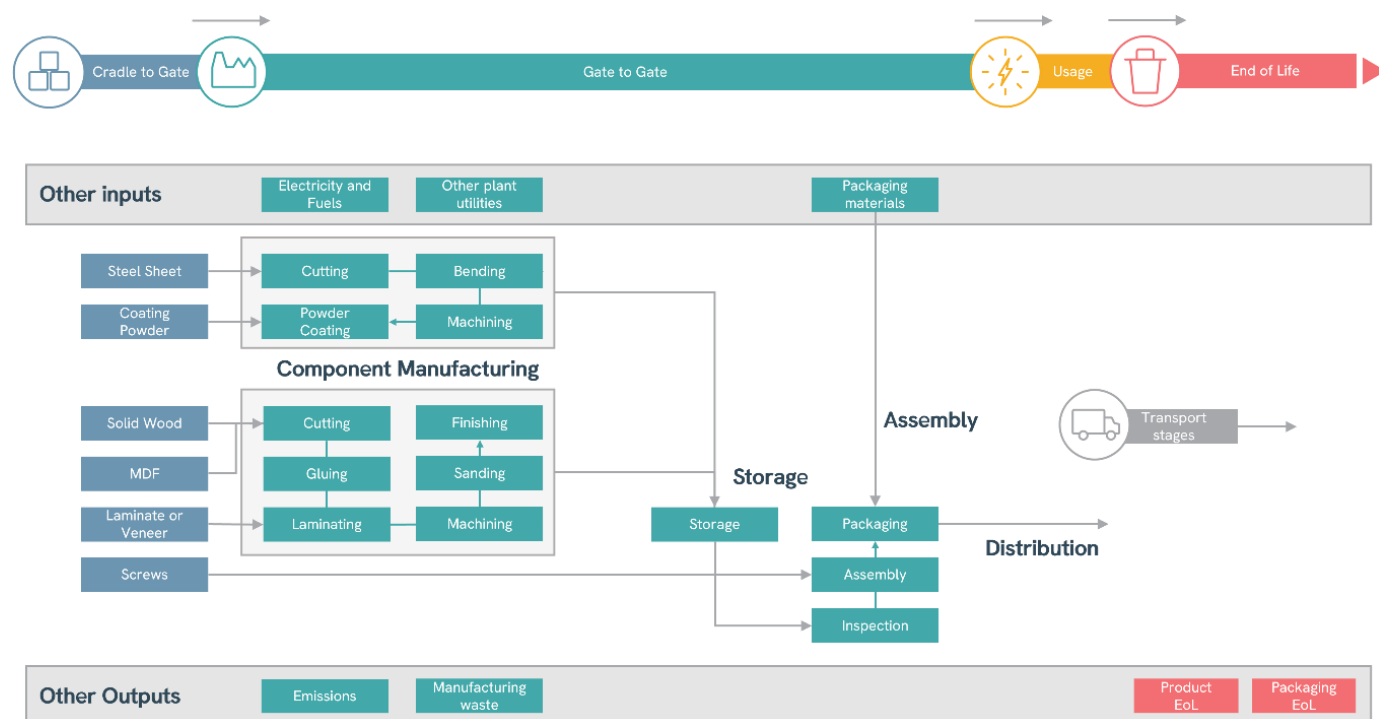
Product #	Name	FS (m²)	Occ	Features	Impact Configuration
HTKNLT200	Kona Laptop Table - Adjustable Height	0.190	1	HAT, (SW)	base
HTKNLT250	Kona Laptop Table w/ Tablet Holder - Adjustable Height	0.190	1	HAT, TH, (SW)	alternative - above
HTKNNTR636	Kona 34" Counter Height Table	0.675	3	(L)	base
HTKNNTS636	Kona Table, Counter 34" Height, Square - 36.5" x 36.5"	0.860	4	(L)	base
HTKNBTR430	Kona Table, Bar Height, Round - 30" Diameter	0.456	3	(L)	alternative - above
HTKNBTS430	Kona Table, Bar Height, Square - 30" x 30"	0.581	4	(L)	alternative - above
HTKNBTR436	Kona Table, Bar Height, Round - 36.5" Diameter	0.675	4	(L)	base
HTKNBTS436	Kona Table, Bar Height, Square - 36.5" x 36.5"	0.860	4	(L)	base
HTKNNTR330	Kona Table, Counter 36" Height, Round - 30" Diameter	0.456	3	(L)	alternative - above
HTKNNTR336	Kona Table, Counter 36" Height, Round - 36.5" Diameter	0.675	4	(L)	base
HTKNNTS330	Kona Table, Counter 36" Height, Square - 30" x 30"	0.581	4	(L)	alternative - above
HTKNNTS336	Kona Table, Counter 36" Height, Square - 36.5" X 36.5"	0.860	4	(L)	base
KN3880	Kona Laptop Table (NO Tablet Holder)	0.190	1	(SW), (L)	base
KN3870	Laptop Table	0.190	1	TH, (SW), (L)	base
KN3900R	Kona Laptop Table, Round	0.178	1	(SW), (L)	base
KN3900S	Kona Laptop Table, Square	0.227	1	(SW), (L)	base
HTKNFTR136	Kona Low Table, Round - 36.5" Diameter	0.675	4	(L)	base
HTKNCTT260	Kona Table, Rectangle - 60" Width	1.413	6	(L)	base
HTKNCTT272	Kona Table, Standard Height, Rectangle - 72" Width	1.695	8	(L)	base
HTKNCTR230	Kona Table, Round - 30" Diameter	0.456	3	(L)	alternative - above
HTKNCTR236	Kona Table, Round - 36" Diameter	0.675	4	(L)	base
HTKNCTR242	Kona Table, Round - 42" Diameter	0.894	4	(L)	alternative - below
HTKNCTR248	Kona Table, Round - 48" Diameter	1.167	4	(L)	base
HTKNCTR254	Kona Table, Standard Height, Round - 54" Diameter	1.478	6	(L)	alternative - below
HTKNCTR260	Kona Table, Standard Height, Round - 60" Diameter	1.824	6	(L)	alternative - below
HTKNCTS230	Kona Table, Square - 30" x 30	0.581	4	(L)	alternative - above
HTKNCTS236	Kona Table, Square 36" x 36	0.860	4	(L)	base
HTKNCTS242	Kona Table, Square - 42" x 42	1.138	4	(L)	base

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Flow Diagram



Product Average

Values are calculated as the average value of plant/product-specific amount, weighted by associated production given in units of surface area.

1.3. Application

This product is for application in commercial buildings.

1.4. Declaration of Methodological Framework

This study provides life cycle inventory and environmental impacts relevant to Hightower Kona Tables. The LCA follows an attributional approach as outlined in ISO 21930 Section 7.1.1. System modeling was performed using the commercial LCA software SimaPro (version 9.6.0.1) developed by PRé Sustainability.

1.5. Material Composition

Kona tables are assembled from several components: the base plate, central column and top plate are all made of steel powder coated in one of several color options. Some products integrate the column and top plate in a single piece. Most of the Kona collection is offered with an MDF tabletop laminated with a hardwood veneer or high-pressure laminate facer and profiled in a solid wood banded edge. Kona laptop tables are available in a solid wood top or high pressure laminate facer and profiled in a solid wood banded edge.

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Table 2. Material Composition Ranges

Material	% Composition	% Post-consumer recycled	% Pre-consumer recycled
Solid wood or veneered or laminated MDF tabletop	15 – 35 %	0	< 1 %
Powder coated steel parts	54 – 81 %	25.5 %	35.1 %

Percent composition of major material types are shown in Table 2. Pre and post-consumer recycled content is also given by material type. The remaining weight is made up of fasteners, plywood components and parts of adjustable height columns, depending on the specific product.

1.6. Manufacturing

The manufacturing process has been described in a simple flow chart in Section 1.2. General manufacturing processes across the Kona Tables Product Family include forming the structural table axis from a powder coated steel base plate, central column, and top plate, affixing a solid hardwood or laminated medium-density fiberboard (MDF) top plate to the tabletop, applying finish, and fastening of parts.

1.7. Packaging

Kona tables are packaged in corrugated cardboard boxes for distribution. Packaging foam, stretch wrap, aluminized bubble wrap and packaging tape are used to secure and protect the table components. Smaller boxes are shipped as-is whereas larger products are sent on reusable wooden pallets.

1.8. Transportation

Transportation includes the delivery of components to the Hightower facility for assembly, transport of scrap to waste treatment, and the use of a box truck to move components between the Hightower facility and a warehouse for storage.

1.9. Product Installation

No flows related to product installation were considered in this declaration.

1.10. Use

The use stage of Kona Tables does not require energy or generate emissions.

1.11. Reference Service Life and Estimated Building Service Life

The Hightower Kona line has internally undergone and passed ANSI/BIFMA X5.5-2014 Desk/Table Products Section 4 Stability Tests. In addition, Hightower offers a 10-year warranty on Kona Tables, the details of which can be found at the time of publishing this EPD at <https://hightower.design/pages/warranty>. An expected product lifetime of 10 years matching the reference service life is used for the products covered by this study. No maintenance or repair is required under normal usage circumstances for Kona Tables to provide the functional unit (that is, no maintenance or repair is expected to be needed to achieve a reference service life of 10 years).

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1.12. Reuse, Recycling, and Energy Recovery

Recycling rates for product and packaging raw materials at end of life have been determined following the US EPA Municipal Solid Waste, 2017 Fact and Figures Fact Sheet.

1.13. Disposal

Materials not recycled are modeled for end of life using 80% landfill and 20% incineration.

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2. Life Cycle Assessment Background Information

2.1. Functional or Declared Unit

The declaration refers to the functional unit of one square meter (1 m²) of physical floor space (workspace and storage), with a reference service life of 10 years.

2.2. System Boundary

The scope of this declaration is cradle-to-grave, per the requirements of the PCR, including all industrial processes from raw material acquisition and pre-processing, production, product distribution and storage, use and maintenance, and end-of-life management.

2.3. Estimates and Assumptions

Conservative estimations, literature review and expert judgement are used to close gaps as accurately as possible. Where primary data was unavailable, industry literature, expert judgement, and industry average datasets were used to develop reasonable assumptions. Datasets for intermediate flows, background data, and electricity are from ecoinvent v3.9.1. For EPDs published on products not yet on the market, necessary assumptions on the value chain are extrapolated from sibling products. The following assumptions in Table 3 were also made.

Table 3. Additional Procedures

AREA OF APPLICABILITY	ASSUMPTION
Transportation of materials of unknown provenance to manufacturing	Mode: Truck Distance: 200km
Transport of product to disposal	Distance: 32 km
Component Manufacturing	30% Scrap Rate
Reuse of packaging materials	Pallets reused 5 times prior to disposal

2.4. Cut-off Criteria

All known energy and material flows within the system boundary are included in the study. No known flows are excluded.

2.5. Data Sources

The LCA model developed for this declaration leverages both foreground and background data. Foreground data are based on primary data collected in-house and from key suppliers. Secondary data used to represent intermediate flows, background unit processes, and generation and transmission of electricity were obtained from ecoinvent v3.9.1.

2.6. Data Quality

Data quality has been assessed in accordance with the ACLCA Guidance for Assessing Data Quality of Background Life Cycle Inventory (LCI) Datasets and meets the desired levels.

2.7. Period under Review

All the primary data in the scope of this analysis was collected from the Hightower manufacturing facility in 2023 aside from the determination of distribution transport, which utilized data from 2022.

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2.8. Allocation

The inputs and outputs to the manufacturing plant are allocated per the stepwise method detailed in ISO 21930, Section 7.2.4, 7.2.5, and 7.2.6. Most plant inputs and outputs are assigned across total production using mass-based allocation. Subdivision for product and packaging raw material inputs is possible through product bills of materials (BOMs). Allocation of assembly and storage impacts followed a two-tiered approach: first flows were allocated to the Kona family according to the ratio of Kona units of production to overall production number. Then, within the Kona line, flows were allocated to each product using a mass-based approach.

2.9. Comparability

The PCR this EPD is based on was written to determine the potential environmental impacts of a table type product from cradle-to-grave. It was not written to support comparative assertions. EPDs based on different PCRs, or different calculation models, may not be comparable. When attempting to compare EPDs or life cycle impacts of products from different companies, the user should be aware of the uncertainty in the final results, due to and not limited to, the practitioner's assumptions, the source of the data used in the study, and the specifics of the product modeled.

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3. Life Cycle Assessment Scenarios

Table 4. Transport to the building site (A4)

Name	Value	Unit
Fuel type	Diesel	
Liters of fuel	44.5	l/100km
Vehicle type	Truck	
Transport distance	6.04E+02	km
Capacity utilization (including empty runs, mass based)	100	%

Table 5. Reference Service Life

Name	Value	Unit
RSL	10	years

Table 6. End of life (C1-C4)

Name	Value	Unit
Assumptions for scenario development (description of deconstruction, collection, recovery, disposal method and transportation)		
Collection process (specified by type)	Collected separately	57.9 kg
	Collected with mixed construction waste	kg
Recovery (specified by type)	Reuse	kg
	Recycling	16.7 kg
	Landfill	32.9 kg
	Incineration	8.3 kg
	Incineration with energy recovery	kg
	Energy conversion efficiency rate	
Emissions of biogenic carbon (including packaging)	31.7	kg CO2
Removals of biogenic carbon (including packaging)	10.0	kg CO2

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4. Life Cycle Assessment Results

Table 7. Description of the system boundary modules (x = included in LCA, MND = module not declared)

	Cradle to Gate		Gate to Gate		Usage		End of Life	
	Raw Material Extraction and Processing	Transportation to Gate	Manufacturing	Distribution	Energy	Maintenance / Repair (if applicable)	Transportation	Disposal modeling
EPD	X	X	X	X	X	X	X	X

Indicator values per piece can be determined by multiplying indicator values per functional unit as indicated in tables 8-19 by the floor space of a product, listed in table 1 in section 1.2. It is also indicated in section 1.2 which products belong to the base configuration (tables 8-11) and which products belong to each of the alternative configurations (tables 12-19).

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4.1 Results for Base Configuration

Life Cycle Impact Assessment Results

Table 8. North American Impact Assessment Results per FU – Base Configuration

TRACI v2.1	RAW MATERIAL EXTRACTION AND PROCESSING	TRANSPORTATION TO GATE	MANUFACTURING	DISTRIBUTION	ENERGY	MAINTENANCE / REPAIR (IF APPLICABLE)	TRANSPORTATION	DISPOSAL MODELING
GWP 100 [kg CO ₂ eq.]	1.30E+02	3.59E-01	1.23E+02	3.47E+01	0	0	4.02E-01	4.17E+00
ODP [kg CFC-11 eq.]	3.89E-06	5.95E-09	2.46E-06	5.19E-07	0	0	6.66E-09	1.51E-08
AP [kg SO ₂ eq.]	4.81E-01	1.93E-03	5.02E-01	1.18E-01	0	0	2.16E-03	3.58E-03
EP [kg N eq.]	4.51E-01	3.67E-04	4.62E-01	6.42E-02	0	0	4.11E-04	1.30E-01
POCP [kg O ₃ eq.]	7.66E+00	5.40E-02	5.53E+00	2.89E+00	0	0	6.04E-02	9.01E-02

Life Cycle Inventory Results

Table 9. Resource Use per FU – Base Configuration

RESOURCE CATEGORY [UNIT]	RAW MATERIAL EXTRACTION AND PROCESSING	TRANSPORTATION TO GATE	MANUFACTURING	DISTRIBUTION	ENERGY	MAINTENANCE / REPAIR (IF APPLICABLE)	TRANSPORTATION	DISPOSAL MODELING
RPRE [MJ, LHV]	1.75E+02	6.42E-02	1.72E+02	1.92E+01	0	0	7.19E-02	1.68E-01
RPRM [MJ, LHV]	2.37E+02	0	2.51E+02	0	0	0	0	0
RPRT [MJ, LHV]	4.12E+02	6.42E-02	4.22E+02	1.92E+01	0	0	7.19E-02	1.68E-01
NRPRE [MJ, LHV]	1.49E+03	5.41E+00	1.68E+03	6.07E+02	0	0	6.06E+00	4.69E+00
NRPRM [MJ, LHV]	4.77E+01	0	5.72E+01	0	0	0	0	6.60E+00
NRPRT [MJ, LHV]	1.54E+03	5.41E+00	1.73E+03	6.07E+02	0	0	6.06E+00	1.13E+01
SM [kg]	0	0	0	0	0	0	0	0
RSF [MJ, LHV]	0	0	0	0	0	0	0	0
NRSF [MJ, LHV]	0	0	0	0	0	0	0	0
RE [MJ, LHV]	0	0	0	0	0	0	0	0
ADP _{fossil} [MJ, LHV]	8.97E+01	7.13E-01	1.57E+02	6.20E+01	0	0	7.99E-01	1.48E+00
FW [m ³]	1.06E+00	7.06E-04	2.66E-02	8.28E-02	0	0	7.91E-04	7.19E-03

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Table 10. Output Flows and Waste Categories per FU– Base Configuration

Parameter	RAW MATERIAL EXTRACTION AND PROCESSING	TRANSPORTATION TO GATE	MANUFACTURING	DISTRIBUTION	ENERGY	MAINTENANCE / REPAIR (IF APPLICABLE)	TRANSPORTATION	DISPOSAL MODELING
HWD [kg]	0	0	0	0	0	0	0	0
NHWD [kg]	0	0	1.38E+01	0	0	0	0	4.03E+01
HLRW [kg]	0	0	0	0	0	0	0	0
ILLRW [kg]	0	0	0	0	0	0	0	0
CRU [kg]	0	0	0	0	0	0	0	0
R [kg]	0	0	1.05E+01	0	0	0	0	1.84E+01
MER [kg]	0	0	0	0	0	0	0	0
EE [MJ, LHV]	0	0	0	0	0	0	0	0

Table 11. Carbon Emissions and Removals per FU – Base Configuration

Parameter	RAW MATERIAL EXTRACTION AND PROCESSING	TRANSPORTATION TO GATE	MANUFACTURING	DISTRIBUTION	ENERGY	MAINTENANCE / REPAIR (IF APPLICABLE)	TRANSPORTATION	DISPOSAL MODELING
BCRP [kg CO ₂]	-2.81E+01	0	5.45E-01	0	0	0	0	1.82E+00
BCEP [kg CO ₂]	0	0	5.62E+00	0	0	0	0	2.01E+01
BCRK [kg CO ₂]	0	0	-1.99E+01	0	0	0	0	8.14E+00
BCEK [kg CO ₂]	0	0	1.69E-01	0	0	0	0	1.16E+01

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4.2 Results for Alternate Configuration Representing Products with Impacts Above the Base Configuration

Life Cycle Impact Assessment Results

Table 12. North American Impact Assessment Results per FU – Alternate Configuration Representing Products with Impacts Above the Base Configuration

TRACI v2.1	RAW MATERIAL EXTRACTION AND PROCESSING	TRANSPORTATION TO GATE	MANUFACTURING	DISTRIBUTION	ENERGY	MAINTENANCE / REPAIR (IF APPLICABLE)	TRANSPORTATION	DISPOSAL MODELING
GWP 100 [kg CO ₂ eq.]	1.80E+02	4.51E-01	1.67E+02	4.50E+01	0	0	5.26E-01	5.61E+00
ODP [kg CFC-11 eq.]	5.43E-06	7.46E-09	3.34E-06	6.72E-07	0	0	8.69E-09	1.98E-08
AP [kg SO ₂ eq.]	6.55E-01	2.42E-03	6.87E-01	1.53E-01	0	0	2.82E-03	4.52E-03
EP [kg N eq.]	6.23E-01	4.60E-04	6.21E-01	8.32E-02	0	0	5.36E-04	1.49E-01
POCP [kg O ₃ eq.]	1.03E+01	6.77E-02	7.57E+00	3.74E+00	0	0	7.89E-02	1.12E-01

Life Cycle Inventory Results

Table 13. Resource Use per FU – Alternate Configuration Representing Products with Impacts Above the Base Configuration

RESOURCE CATEGORY [UNIT]	RAW MATERIAL EXTRACTION AND PROCESSING	TRANSPORTATION TO GATE	MANUFACTURING	DISTRIBUTION	ENERGY	MAINTENANCE / REPAIR (IF APPLICABLE)	TRANSPORTATION	DISPOSAL MODELING
RPRE [MJ, LHV]	2.22E+02	8.06E-02	2.30E+02	2.48E+01	0	0	9.40E-02	2.11E-01
RPRM [MJ, LHV]	2.69E+02	0	3.25E+02	0	0	0	0	0
RPRT [MJ, LHV]	4.92E+02	8.06E-02	5.55E+02	2.48E+01	0	0	9.40E-02	2.11E-01
NRPRE [MJ, LHV]	2.04E+03	6.78E+00	2.27E+03	7.87E+02	0	0	7.91E+00	1.13E+01
NRPRM [MJ, LHV]	8.56E+01	0	7.27E+01	0	0	0	0	3.39E+00
NRPRT [MJ, LHV]	2.12E+03	6.78E+00	2.35E+03	7.87E+02	0	0	7.91E+00	1.47E+01
SM [kg]	0	0	0	0	0	0	0	0
RSF [MJ, LHV]	0	0	0	0	0	0	0	0
NRSF [MJ, LHV]	0	0	0	0	0	0	0	0
RE [MJ, LHV]	0	0	0	0	0	0	0	0
ADP _{fossil} [MJ, LHV]	1.23E+02	8.95E-01	2.12E+02	8.03E+01	0	0	1.04E+00	1.92E+00
FW [m ³]	1.40E+00	8.86E-04	1.94E-02	1.07E-01	0	0	1.03E-03	9.24E-03

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Table 14. Output Flows and Waste Categories per FU – Alternate Configuration Representing Products with Impacts Above the Base Configuration

Parameter	RAW MATERIAL EXTRACTION AND PROCESSING	TRANSPORTATION TO GATE	MANUFACTURING	DISTRIBUTION	ENERGY	MAINTENANCE / REPAIR (IF APPLICABLE)	TRANSPORTATION	DISPOSAL MODELING
HWD [kg]	0	0	0	0	0	0	0	0
NHWD [kg]	0	0	1.89E+01	0	0	0	0	5.65E+01
HLRW [kg]	0	0	0	0	0	0	0	0
ILLRW [kg]	0	0	0	0	0	0	0	0
CRU [kg]	0	0	0	0	0	0	0	0
R [kg]	0	0	1.40E+01	0	0	0	0	2.54E+01
MER [kg]	0	0	0	0	0	0	0	0
EE [MJ, LHV]	0	0	0	0	0	0	0	0

Table 15. Carbon Emissions and Removals per FU – Alternate Configuration Representing Products with Impacts Above the Base Configuration

Parameter	RAW MATERIAL EXTRACTION AND PROCESSING	TRANSPORTATION TO GATE	MANUFACTURING	DISTRIBUTION	ENERGY	MAINTENANCE / REPAIR (IF APPLICABLE)	TRANSPORTATION	DISPOSAL MODELING
BCRP [kg CO ₂]	-2.73E+01	0	7.79E-01	0	0	0	0	2.60E+00
BCEP [kg CO ₂]	0	0	5.35E+00	0	0	0	0	1.86E+01
BCRK [kg CO ₂]	0	0	-2.58E+01	0	0	0	0	1.05E+01
BCEK [kg CO ₂]	0	0	2.20E-01	0	0	0	0	1.51E+01

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4.3 Results for Alternate Configuration Representing Products with Impacts Below the Base Configuration

Life Cycle Impact Assessment Results

Table 16. North American Impact Assessment Results per FU – Alternate Configuration Representing Products with Impacts Below the Base Configuration

TRACI v2.1	RAW MATERIAL EXTRACTION AND PROCESSING	TRANSPORTATION TO GATE	MANUFACTURING	DISTRIBUTION	ENERGY	MAINTENANCE / REPAIR (IF APPLICABLE)	TRANSPORTATION	DISPOSAL MODELING
GWP 100 [kg CO ₂ eq.]	1.13E+02	6.98E-01	9.62E+01	3.06E+01	0	0	3.55E-01	4.22E+00
ODP [kg CFC-11 eq.]	3.43E-06	1.15E-08	1.86E-06	4.58E-07	0	0	5.87E-09	1.50E-08
AP [kg SO ₂ eq.]	4.35E-01	3.75E-03	3.45E-01	1.04E-01	0	0	1.90E-03	3.58E-03
EP [kg N eq.]	3.83E-01	7.12E-04	3.75E-01	5.66E-02	0	0	3.62E-04	1.47E-01
POCP [kg O ₃ eq.]	6.87E+00	1.05E-01	4.34E+00	2.55E+00	0	0	5.32E-02	9.04E-02

Life Cycle Inventory Results

Table 17. Resource Use per FU – Alternate Configuration Representing Products with Impacts Below the Base Configuration

RESOURCE CATEGORY [UNIT]	RAW MATERIAL EXTRACTION AND PROCESSING	TRANSPORTATION TO GATE	MANUFACTURING	DISTRIBUTION	ENERGY	MAINTENANCE / REPAIR (IF APPLICABLE)	TRANSPORTATION	DISPOSAL MODELING
RPRE [MJ, LHV]	1.49E+02	1.25E-01	1.40E+02	1.69E+01	0	0	6.34E-02	1.49E+02
RPRM [MJ, LHV]	2.20E+02	0	2.21E+02	0	0	0	0	2.20E+02
RPRT [MJ, LHV]	3.69E+02	1.25E-01	3.61E+02	1.69E+01	0	0	6.34E-02	3.69E+02
NRPRE [MJ, LHV]	1.34E+03	1.05E+01	1.32E+03	5.36E+02	0	0	5.33E+00	1.34E+03
NRPRM [MJ, LHV]	5.58E+01	0	5.26E+01	0	0	0	0	5.58E+01
NRPRT [MJ, LHV]	1.39E+03	1.05E+01	1.37E+03	5.36E+02	0	0	5.33E+00	1.39E+03
SM [kg]	0	0	0	0	0	0	0	0
RSF [MJ, LHV]	0	0	0	0	0	0	0	0
NRSF [MJ, LHV]	0	0	0	0	0	0	0	0
RE [MJ, LHV]	0	0	0	0	0	0	0	0
ADP _{fossil} [MJ, LHV]	9.05E+01	1.39E+00	1.24E+02	5.47E+01	0	0	7.04E-01	9.05E+01
FW [m ³]	1.07E+00	1.37E-03	2.55E-02	7.31E-02	0	0	6.97E-04	1.07E+00

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Table 18. Output Flows and Waste Categories per FU – Alternate Configuration Representing Products with Impacts Below the Base Configuration

Parameter	RAW MATERIAL EXTRACTION AND PROCESSING	TRANSPORTATION TO GATE	MANUFACTURING	DISTRIBUTION	ENERGY	MAINTENANCE / REPAIR (IF APPLICABLE)	TRANSPORTATION	DISPOSAL MODELING
HWD [kg]	0	0	0	0	0	0	0	0
NHWD [kg]	0	0	1.07E+01	0	0	0	0	2.99E+01
HLRW [kg]	0	0	0	0	0	0	0	0
ILLRW [kg]	0	0	0	0	0	0	0	0
CRU [kg]	0	0	0	0	0	0	0	0
R [kg]	0	0	8.69E+00	0	0	0	0	1.40E+01
MER [kg]	0	0	0	0	0	0	0	0
EE [MJ, LHV]	0	0	0	0	0	0	0	0

Table 19. Carbon Emissions and Removals per FU – Alternate Configuration Representing Products with Impacts Below the Base Configuration

Parameter	RAW MATERIAL EXTRACTION AND PROCESSING	TRANSPORTATION TO GATE	MANUFACTURING	DISTRIBUTION	ENERGY	MAINTENANCE / REPAIR (IF APPLICABLE)	TRANSPORTATION	DISPOSAL MODELING
BCRP [kg CO ₂]	-3.43E+01	0	2.13E-01	0	0	0	0	7.10E-01
BCEP [kg CO ₂]	0	0	7.11E+00	0	0	0	0	2.63E+01
BCRK [kg CO ₂]	0	0	-1.76E+01	0	0	0	0	7.18E+00
BCEK [kg CO ₂]	0	0	1.50E-01	0	0	0	0	1.03E+01

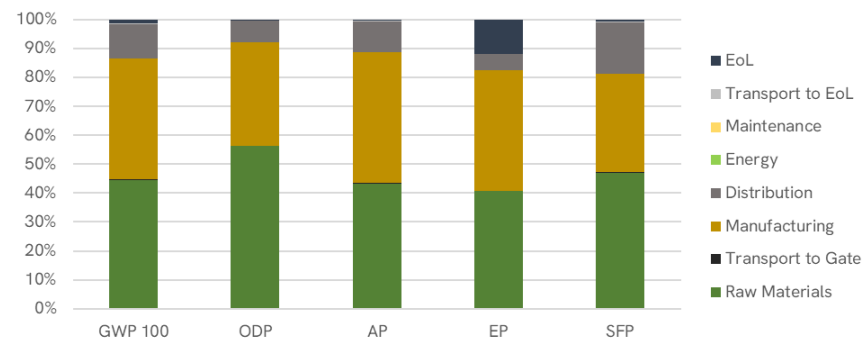
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5. LCA Interpretation

Based on the LCA of the Kona Tables product family, it was concluded that the majority of potential impacts are contributed by the raw material supply and manufacturing for all impact categories. The distribution stage is seen to be an important driver of potential smog formation as well as accounting for between 5%-10% of other indicators. The end-of-life stage is responsible for about 10% of the life cycle eutrophication potential.



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6. Additional Environmental Information

6.1 Content of Regulated Hazardous Substances

No substances required to be reported as hazardous are associated with the production of these products.

6.2 Release of Dangerous Substances from Construction Products

These products do not release any dangerous, regulated substances that affect health and the environment according to the relevant market of applicability.

6.3 Non-LCA Environmental Aspects

The Kona Table product family meets SCS Global Services' highest level of indoor air quality performance for furniture. The certification assures that furniture products support a healthy indoor environment by meeting strict chemical emission limits for volatile organic compounds (VOCs).

Kona Tables conform to the ANSI/BIFMA Furniture Emissions Standard (M7.1/X7.1-2011 R2016) and ANSI/BIFMA e.3 -2014e (Credits 7.6.1, 7.6.2, 7.6.3), as well as the CDPH/EHLB Standard Method (CA 01350) v1.2-2017. They contribute to the LEED Low-Emitting Materials Credit, WELL Building Standard v1 Air Feature, Section 4, Part 5, WELL Building Standard v2 Pilot Materials Feature X11, Part 1, and CHPS EQ 7.1.4 Additional Low-Emitting Materials Credit.

Hightower is proud to offer products that adhere to certain guidelines set forth in International Living Future Institute's "Living Building Challenge Red List 3.1". To the best of our knowledge and based on information provided to us by our suppliers, Kona Tables (excluding tables specified with laminate) do not contain any intentionally-added chemicals on the "Living Building Challenge Red List 3.1" at or above the 100 ppm level.

Hightower is happy to offer products that contain both pre-consumer and post-consumer recycled content, as defined by the US Green Building Council's LEED standard. Products that contain recycled content can contribute to the LEED v4 and v4.1 Materials and Resources: Building Disclosure and Optimization – Sourcing of Raw Materials credit.

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7. References

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