

KEILHAUER

# Wunder | Seating

Product Environmental Criteria



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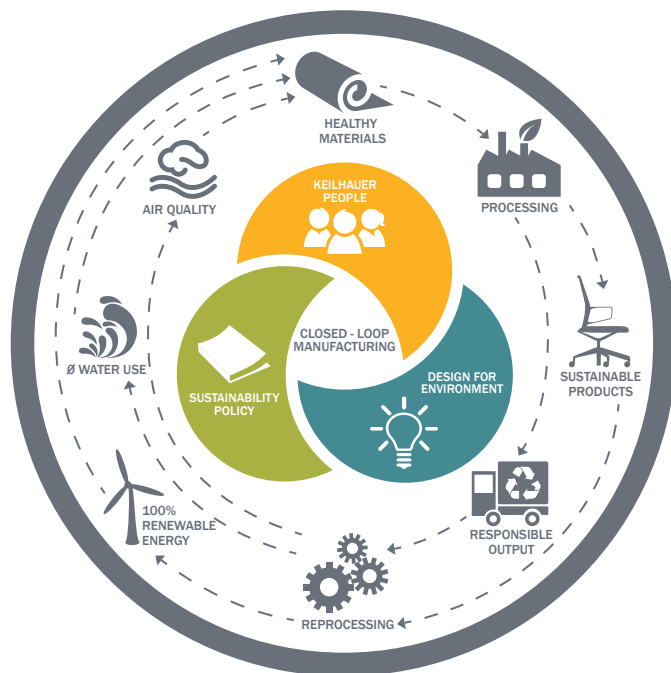
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# Planet Keilhauer Overview

As part of our commitment to transparency and disclosure, Keilhauer is proud to present our Product Environmental Criteria documents. These documents will provide information on our corporate sustainability goals as well as specific environmental information about our products. For information not found in this document please visit our website or contact your local sales representative.

Keilhauer is a design activist and a pioneer in creating sustainable solutions. We believe that good business and long term success is measured by the Triple Bottom Line, meaning we harmoniously look after our people, our environment and our economic success. We introduced a comprehensive sustainability program called Planet Keilhauer so that sustainability would be prioritized throughout our company.

Planet Keilhauer is driven by its Corporate Goal of closed loop manufacturing. We are guided by our sustainability policy, occupied by our sustainability programs, and supported by our people.



## We'll know we have a closed loop system when:

- We can disassemble, reuse, recycle, or biodegrade our products.
- We use 100% recycled content or rapidly renewable materials.
- We are powered by 100% renewable energy.
- We use materials with 0 impact on humans and the environment.
- We create 0 waste in our facilities.
- We use 0 water in our processes.

## Keilhauer Environmental Certifications

Keilhauer is proud to have many of our products certified under the following certifications (see Life Cycle Section for product applicability):



### BIFMA LEVEL®

Many Keilhauer products have been certified by SCS Global Services under BIFMA's multi-attribute sustainability standard: LEVEL® 2.



### Indoor Air Quality

Many Keilhauer products have been certified by SCS Global Services for Indoor Air Quality achieving Indoor Advantage™ Gold. This means they meet rigorous and comprehensive air quality standards.



### FSC® Forest Stewardship Council®

We believe in responsible forestry and ethically sourced materials. Many Keilhauer products are made from FSC-certified wood parts.



### Carbonfree® Product Certification

Keilhauer's Swurve chair is certified by Carbonfund.org to be carbon neutral.

# Wunder Seating Life Cycle

## 1. Design for Environment

Keilhauer's interdisciplinary Design for Environment Program (DfE) ensures that we design our products in line with our sustainability goals. This includes holistic life cycle thinking, material specification and sourcing so that we create exceptionally well designed and safe products with long, useful lives that are repairable and recyclable. Members of the DfE team include managers from Manufacturing, Engineering, Operations, Sustainability, and even our President!

## 2. Wunder Seating Certification

Wunder seating is certified under the following industry standard certifications:



## 3. Environmental Standards

Keilhauer products may assist in achieving credits under the following industry standards and certifications:

### WELL™ v2 Building Standard

Keilhauer products may be applied to the three WELL project typologies:

- New and Existing Buildings
- New and Existing Interiors
- Core and Shell

For more credit specific details, see WELL v2 Building Standard Credit Applicability on page 5.

### LEED® v4.1

Keilhauer products may assist with the following LEED Projects. For more credit specific details, see LEED v4.1 Credit Applicability on pages 5 and 6.



Applicable credits can be found in the following sections:

- Materials and Resources Credits
- Indoor Environmental Quality
- Pilot Credits

### Healthier Hospitals for Safer Chemicals Challenge - V2.0

Keilhauer products may comply with this standard. Please contact your local sales representative for more information.

## 4. Supply Chain

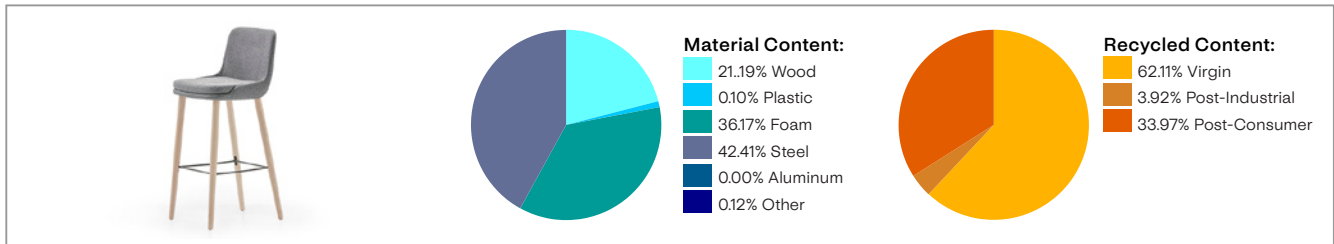
We have always believed that who you do business with is fundamental to how you do business. We work with vendors that conduct business honestly and ethically, giving priority to local vendors. We also work with vendors to include recycled materials and to source raw materials from sustainable sources.

## 5. Materials & Recycled Content

Our products are made from a variety of materials, some of which are made using recycled content. See below for percentages from our best seller. For other models please reference the chart at the end of the document.

Note: Recycled content is determined by weight. Products may contain both pre-consumer and post-consumer recycled content materials. Post-industrial (pre-consumer) recycled content is material diverted from the waste stream during manufacturing. Post-consumer recycled content is material generated by end users such as households, commercial, or consumers of the final product.

### Best seller: Wunder 78040, Bar Stool with Ash Legs



## 6. Manufacturing Plant

To target efficiency, we measure our resource use and perform regular audits. Using the data generated, we can evaluate our processes such as energy and water use and shift our capital investments to align with our sustainability goals.

## 7. Final Manufacturing Location

Keilhauer products are manufactured in Toronto, Ontario, Canada.



## 8. Blanket Wrapping

When shipping seating, Keilhauer's standard is to cover products in a recyclable plastic bag (made using recycled content), and then wrap in a reusable blanket. The blanket is taken back by the shipper at delivery. Alternatively, products can be shipped in recyclable cardboard boxes. Depending on the model, some tables are packed in wooden crates.

## 9. End of Product Life

For information on repairability and recyclability see 'End of Product Life Document: Lounge' located on our website: [www.keilhauer.com](http://www.keilhauer.com).

# Environmental Standards & Credit Applicability

Keilhauer products may assist with the following features and credits:

## WELL v2 Building Standard Credit Applicability

### Materials

#### FEATURE: X05 Enhanced Material Restrictions

Keilhauer restricts the use of heavy metals in all products. Any Keilhauer components that constitute a minimum of 5% by weight meet the following thresholds for material content: Less than 100 ppm of Mercury, Cadmium and Antimony. All standard Keilhauer components are free of halogenated flame retardants, meeting CAL 117-2013 without the use of chemical flame retardants and are labeled accordingly. Urea formaldehyde content of all Keilhauer composite wood and laminate components complies with TSCA Title VI. Textiles and plastic components may contain lead and polyfluoroalkyl substances (PFAS) in amounts less than 1000 ppm. Please contact [sustainability@keilhauer.com](mailto:sustainability@keilhauer.com) for details.

#### FEATURE: X06 VOC Restrictions

Wunder seating is certified by SCS Global Services for Indoor Air Quality at the Indoor Advantage™ Gold level and conforms to the requirements set out in the ANSI/BIFMA Furniture Emissions Standard (M7.1/X7.1-2011 R2016) and ANSI/BIFMA e.3-2019 (Credits 7.6.1, 7.6.2, 7.6.3) for seating parameters. Also conforms to the CDPH/EHLB Standard Method (CA 01350) v1.2-2017 for seating. See registration number located in the Life Cycle section on page 3 of this document. The certificate can be found on Keilhauer's website under the sustainability section.

## LEED v4.1 Credit Applicability

### LEED ID+C Interior Design + Construction

#### Materials and Resources (MR) Credits:

##### CREDIT: Construction and Demolition Waste Management Planning

When shipping, Keilhauer covers seating in a recyclable plastic bag (made using recycled content) which is then wrapped with a protective reusable blanket. The blanket is taken back by the shipper at delivery. Alternatively, products can be shipped in recyclable cardboard boxes. See page 4 for End of Product Life details.

##### CREDIT: Interiors Life Cycle Impact Reduction

Keilhauer products are designed for durability and offer a long useful life with a ten year warranty. Some products may be refurbished and reused to contribute to this point on future projects.

##### CREDIT: Sourcing of Raw Materials

**Materials Reuse:** Keilhauer products are designed for durability and offer a long useful life with a ten year warranty. Some products may be refurbished and reused to contribute to this point on future projects.

**Recycled Content:** The majority of Keilhauer products contain some recycled content and may assist in contributing to this credit. Reference the chart on pages 7-8 for model specific recycled content percentages.

## LEED BD+C Building Design + Construction

### Materials and Resources (MR) Credits:

**CREDIT: Construction and Demolition Waste Management Planning**

When shipping, Keilhauer covers seating in a recyclable plastic bag (made using recycled content) which is then wrapped with a protective reusable blanket. The blanket is taken back by the shipper at delivery. Alternatively, products can be shipped in recyclable cardboard boxes. See page 4 for End of Product Life details.

**CREDIT: Sourcing of Raw Materials**

**Materials Reuse:** Keilhauer products are designed for durability and offer a long useful life with a ten year warranty. Some products may be refurbished and reused to contribute to this point on future projects.

**Recycled Content:** The majority of Keilhauer products contain some recycled content and may assist in contributing to this credit. Reference the chart on pages 7-8 for model specific recycled content percentages.

**CREDIT: Furniture and Medical Furnishings  
(Option 3. Building Product Disclosure and Optimization)**

**Materials Reuse:** Keilhauer products are designed for durability and offer a long useful life with a ten year warranty. Some products may be refurbished and reused to contribute to this point on future projects.

**Recycled Content:** The majority of Keilhauer products contain some recycled content and may assist in contributing to this credit. Reference the chart on pages 7-8 for model specific recycled content percentages.

### Indoor Environment Quality (EQ) Credits:

**CREDIT: Low Emitting Materials**

Wunder seating is certified by SCS Global Services for Indoor Air Quality at the Indoor Advantage™ Gold level and conforms to the requirements set out in the ANSI/BIFMA Furniture Emissions Standard (M7.1/X7.1-2011 R2016) and ANSI/BIFMA e.3-2019 (Credits 7.6.1, 7.6.2, 7.6.3) for seating parameters. Also conforms to the CDPH/EHLB Standard Method (CA 01350) v1.2-2017 for seating. See registration number located in the Life Cycle section on page 3 of this document. The certificate can be found on Keilhauer's website under the sustainability section.

## LEED O+M Operations + Maintenance

### Materials and Resources (MR) Credits:

**PREREQ: Facility Maintenance and Renovations Policy**

**Low Emissions of VOC:** Wunder seating is certified by SCS Global Services for Indoor Air Quality at the Indoor Advantage™ Gold level and conforms to the requirements set out in the ANSI/BIFMA Furniture Emissions Standard (M7.1/X7.1-2011 R2016) and ANSI/BIFMA e.3-2019 (Credits 7.6.1, 7.6.2, 7.6.3) for seating parameters. Also conforms to the CDPH/EHLB Standard Method (CA 01350) v1.2-2017 for seating. See registration number located in the Life Cycle section on page 3 of this document. The certificate can be found on Keilhauer's website under the sustainability section.

**Materials Reuse:** Keilhauer products are designed for durability and offer a long useful life with a ten year warranty. Some products may be refurbished and reused to contribute to this point on future projects.

**Recycled Content:** The majority of Keilhauer products contain some recycled content and may assist in contributing to this credit. Reference the chart on pages 7-8 for model specific recycled content percentages.

## LEED Pilot Credit (PC)




### BD+C: Building Design + Construction, ID+C: Interior Design + Construction

**PC 112: Certified Multi-Attribute Products and Materials**

Many Keilhauer products are certified by SCS Global Services for BIFMA LEVEL certification. The registration number is located in the Life Cycle section of this document. The certificate can be found on Keilhauer's website under the sustainability section.

# Materials & Recycled Content

Product			Recycled Content			Material Content					
	MODEL #	DESCRIPTION	POST CONSUMER	POST INDUSTRIAL	TOTAL	WOOD	PLASTIC	FOAM	STEEL	ALUMINUM	OTHER
	WUNDER 78000	SIDE CHAIR, ASH LEGS	28.29%	3.29%	31.59%	13.57%	0.10%	50.95%	35.26%	0.00%	0.11%
	WUNDER 78001	SIDE CHAIR, WALNUT LEGS	28.29%	3.29%	31.59%	13.57%	0.10%	50.95%	35.26%	0.00%	0.11%
	WUNDER 78002	SIDE CHAIR, ALUMINUM LEGS	23.51%	2.20%	25.71%	3.09%	0.05%	32.34%	23.10%	41.14%	0.29%
	WUNDER 78010	LOUNGE CHAIR, ASH LEGS	20.48%	2.33%	22.81%	16.08%	0.07%	58.49%	25.31%	0.00%	0.05%
	WUNDER 78011	LOUNGE CHAIR, WALNUT LEGS	20.48%	2.33%	22.81%	16.08%	0.07%	58.49%	25.31%	0.00%	0.05%
	WUNDER 78023	FULL LOUNGE CHAIR, GLIDES	8.74%	1.18%	9.92%	16.99%	0.29%	71.22%	11.50%	0.00%	0.00%
	WUNDER 78024	FULL LOUNGE CHAIR, LOCKING CASTORS	8.67%	1.17%	9.84%	16.87%	0.13%	70.70%	11.42%	0.00%	0.88%
	WUNDER 78030	COUNTER STOOL, ASH LEGS	34.22%	3.95%	38.18%	20.61%	0.10%	36.44%	42.73%	0.00%	0.12%
	WUNDER 78031	COUNTER STOOL, WALNUT LEGS	34.22%	3.95%	38.18%	20.61%	0.10%	36.44%	42.73%	0.00%	0.12%
	WUNDER 78040	BAR STOOL, ASH LEGS	33.97%	3.92%	37.90%	21.19%	0.10%	36.17%	42.41%	0.00%	0.12%

Product			Recycled Content			Material Content					
	MODEL #	DESCRIPTION	POST CONSUMER	POST INDUSTRIAL	TOTAL	WOOD	PLASTIC	FOAM	STEEL	ALUMINUM	OTHER
	WUNDER 78041	BAR STOOL, WALNUT LEGS	33.97%	3.92%	37.90%	21.19%	0.10%	36.17%	42.41%	0.00%	0.12%
	WUNDER 78060	MIDBACK LOUNGE CHAIR, ASH LEGS	20.79%	3.17%	23.96%	15.67%	0.33%	55.11%	28.85%	0.00%	0.04%
	WUNDER 78061	MIDBACK LOUNGE CHAIR, WALNUT LEGS	20.79%	3.17%	23.96%	15.67%	0.33%	55.11%	28.85%	0.00%	0.04%

Document Disclaimer:

This document will be reviewed and updated periodically and is subject to change without notice. Keilhauer is not responsible for slight deviations in the data and information contained in this document.

Recycled content data is calculated using data from suppliers, manufacturers and industry averages. Keilhauer makes conservative assumptions to ensure disclosure of the most accurate recycled content as possible. Variability of manufacturing processes may result in higher or lower content. Textiles and associated weights are not accounted for in the analysis. Recycled content and material content data is calculated using base models only.