

# Verb<sup>™</sup> Tables

# **AMERICAS**





# About this product

Verb is an integrated collection of classroom furniture including tables, whiteboards, and instructor lectern and desk stations designed to support a full range of teaching and learning styles.

The reference product is a table covering  $0.93~\text{m}^2$  meaning 1.08 units are required to meet the functional unit of 1 m<sup>2</sup> of physical floor space for a 10-year period.

Date of Issue: September 23, 2024 Date of Expiration: September 23, 2029

# About this document

This declaration describes the Life Cycle Assessment of the Verb™ Tables produced for the Americas market by Steelcase Inc. in the United States. The assessment is performed according to the ISO standards 14040 (2006), 14044 (2006) and 14025 (2006), and BIFMA PCR for Tables: UNCPC 3812 to generate an EPD for business-to-business communication.

#### Learn more

- Explore Steelcase environmental philosophy and commitments overview.
- Find product details and sustainability certifications on product page at steelcase.com.
- See our product warranty.
- Contact epd@steelcase.com for any EPD-related questions or inquiries.

## **ASSESSMENT OVERVIEW**

EPD commissioner	Steelcase® Inc
Corporate Address	901 44th Street SE Grand Rapids, Michigan 49508-7594 United States
Product group	Tables
Product name	Verb™ Tables
Product intended use	Table
Product reference service life	10 years
Reference standards	ISO 14025, ISO 14040, ISO 14044
EPD scope	Cradle to grave
EPD number	EPD10959
Date of issuance	September 23, 2024
Date of expiration	September 23, 2029
EPD type	Product specific
EPD Product Coverage	Verb™ Tables for the Americas market
Intended audience	Business to business (B2B)
Year of reported manufacturer data	2023
Functional unit	One square meter of physical floor space for a reference service life of 10 years
Applicable markets/regions	Americas
LCA software and database version	GaBi 10.6.2.9; GaBi database, 2022.2
LCIA methodology and version number	TRACI 2.1, IPCC AR6
Program administrator	NSF Certification LLC 789 N. Dixboro, Ann Arbor, MI 48105 www.nsf.org
Reference PCR and version number	BIFMA PCR for Tables: UNCPC 3812 (BIFMA PCR, 2022)
PCR reviewer	Review Panel Chaired by Dr. Thomas Gloria
EPD reviewer	External review conducted by:  Jim Mellentine, Thrive ESG This declaration and its Life Cycle Assessment was independently verified in accordance with ISO standards 14040 (2006), 14044 (2006), 14025 (2006), and BIFMA PCR for Seating UNCPC 3811 (2020).
LCA reviewer	External review conducted by:  July J. Mullentine, Thrive ESG The product Life Cycle Assessment was conducted in accordance with ISO 14044 and the reference PCR.
Disclaimer	The PCR this EPD was based on was written to determine the potential environmental impacts of a table 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.

#### **ASSESSMENT PARAMETERS**

#### **Functional unit**

One square meter of physical floor space for a reference service life of 10 years. To fulfill the functional unit, 1.08 units are required.

The height of this table cannot be adjusted by the user. Therefore, there is no energy required during use.

#### **Product scope**

The products assessed are the flip top and non-flip top Verb™ Tables (product number VTRF [flip top], VTR2460 [non-flip top]) with 24"x60" rectangular tabletop, HPL surface, cast leg, 4 locking casters, no side docks, center dock, or stow hooks, and no modesty panel.

One Verb™ Table is intended for use by 1 occupant.

Manufacturing location

Tijuana Mexico



#### Assessment goal and scope

The potential environmental impacts Verb<sup>™</sup> Tables and its packaging throughout its entire life cycle – including raw materials extraction, production, transport, use, and end of life – were assessed. In the absence of primary information, the GaBi database was used for secondary data.

The life cycle stages included in this assessment follow the BIFMA PCR for Tables: UNCPC 3812. Material acquisition and preprocessing (including transportation), production, distribution, use and end-of-life are assessed for the table product.

# **Assessment boundary**

The Life Cycle Assessment considers the full life cycle of the product as described here, cradle to grave. Life cycle stages and phases included in this assessment follow the BIFMA PCR for Tables and are presented in the following table.

		Stage	Status
$\hookrightarrow$	Cradle to inbound gate  MATERIALS ACQUISITION	A1. Raw material supply	✓
<b>⊘</b> √	Raw material extraction, pre-processing and transportation of materials to suppliers.	A2. Transport	<b>√</b>
<u></u>	Gate to gate  PRODUCTION PROCESS  Transportation of furniture components and materials from Tier 1 suppliers to Steelcase final manufacturing facility. External and internal production.	A3. Manufacturing	<b>√</b>
		A4. Transport	✓
		A5. Installation	✓
	Gate to grave  DISTRIBUTION, USE AND END OF LIFE  Distribution of products, installation, use and end of life.	B1. Use	<b>√</b>
		B2. Maintenance/cleaning	<b>√</b>
		B3. Repair	<b>√</b>
무		B4. Replacement	<b>√</b>
		B5. Refurbishment	✓
		B6. Operational energy use	<b>√</b>
		B7. Operational water use	<b>√</b>
	- - -	C1. Disassembly	<b>√</b>
		C2. Transport	✓
		C3. Waste processing	<b>√</b>
		C4. Disposal	<b>√</b>
	Beyond the boundary	D. Reuse/recovery	✓

#### **RESULTS**

The product composition, packaging composition, recycled content, recyclability visuals, and life cycle impacts below relate specifically to one m² (1.08 units) of the Verb™ Flip Tables configurations.

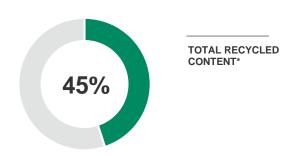
#### Product composition per m<sup>2</sup>

Material	Weight (kg)	Weight (%)	) Resource Type
Particle Board	14.107	51.39%	Recycled, Virgin and renewable
Steel	5.717	20.83%	Recycled, Virgin Non- renewable
Aluminum	5.355	19.51%	Recycled, Virgin Non- renewable
Other metals	0.225	0.82%	Virgin Non-renewable
Nylon (PA6 and PA66)	1.094	3.99%	Virgin Non-renewable
Polypropylene	0.204	0.74%	Virgin Non-renewable
ABS	0.070	0.26%	Virgin Non-renewable
PMMA	0.060	0.22%	Virgin Non-renewable
Electrical parts	0.071	0.26%	Virgin Non-renewable
Other plastics	0.054	0.20%	Virgin Non-renewable
Other	0.494	1.80%	Virgin Non-renewable
Total	27.450	100%	

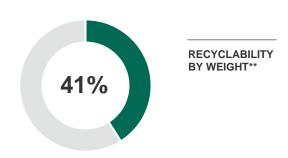
## Product packaging composition per m<sup>2</sup>

Material	Weight (kg)	Weight (%)	Resource Type
Cardboard	8.328	91.15%	Renewable
Polystyrene	0.245	2.68%	Non-renewable
Polyethylene	0.416	4.56%	Non-renewable
Arcel	0.147	1.61%	Non-renewable
Total	9.136	100.00%	

## Product recycled content\* and recyclability\*\* summary







<sup>\*\*</sup>Recyclability: this recyclability rate is the maximum amount of the product that is recyclable, based on the availability of recycling facilities in the specified regions and the ability of the product to be disassembled. Note that, per the requirements of the PCR, the end-of-life results presented in this EPD were calculated using the US EPA's recycling rates within the 2020 Municipal Solid Waste Report for parts that can be disassembled. Packaging excluded.

# Life cycle impact by category and stage

Environmental impacts were calculated using the GaBi software platform. Impact results according to the BIFMA PCR have been calculated using TRACI 2.1, IPCC AR6 characterization factors, and ISO 21930 LCI indicators for primary energy and water usage. Results presented in this report are for one m² (1.08 units) of a Verb™ Flip Table, maintained for 10 years. Additionally, the results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins, or risks.

		Life cycle stages				
	Unit	A1-A2 Materials acquisition	A3 Production process	A4-B7 Distribution & Use	C1-C4 End of life	 Totals
*Global warming potential (100 years) Warming of the atmosphere caused by the global release of greenhouse gases.	kg CO2 eq	1.15E+02	4.80E+01	1.26E+01	3.68E+00	1.79E+02
*Acidification Emissions that increase the acidity of the environment due to various chemical reactions and/or biological activity, or by natural circumstances.	kg SO2 eq	5.25E-01	1.23E-01	7.00E-02	1.82E-02	7.36E-01
*Photochemical ozone creation (Smog) Through various chemical reactions, which occur between nitrogen oxides (NOx) and volatile organic compounds (VOCs) in sunlight.	kg O3 eq	6.49E+00	1.75E+00	1.46E+00	1.27E-01	9.83E+00
*Eutrophication Enrichment of an aquatic ecosystem with nutrients (nitrates, phosphates) that accelerate biological productivity and an undesirable accumulation of algal biomass.	kg N eq	2.21E-02	2.04E-02	5.74E-03	3.42E-03	5.17E-02
*Ozone depletion Reduction of the stratospheric ozone layer due to anthropogenic emissions of ozone depleting substances.	kg CFC-11 eq	5.18E-08	4.64E-12	3.76E-14	3.48E-12	5.18E-08
Primary energy demand Energy consumption at the source.	MJ	1.89E+03	1.08E+03	1.52E+02	1.41E+01	3.14E+03
Net freshwater usage Freshwater used and otherwise not recoverable.	kg	1.64E+00	3.01E+02	2.30E-02	2.67E+00	3.05E+02
Renewable primary resources used as an energy carrier (RPRe) First use materials from renewable sources with energy content used as a fuel	MJ	4.64E+02	6.85E+01	6.39E+00	3.45E-01	5.39E+02
Renewable primary resources used as material (RPRm) First use materials from renewable sources with energy content used as a material	MJ	0.00E+00	1.16E+02	0.00E+00	0.00E+00	1.16E+02
Non-renewable primary resources used as an energy carrier First use materials from non-renewable sources with energy content used as a fuel	MJ	1.14E+03	7.11E+02	1.46E+02	1.37E+01	2.01E+03
Non-renewable primary resources used as material First use materials from non-renewable sources with energy content used as a material	MJ	1.47E+02	3.42E+01	0.00E+00	0.00E+00	1.81E+02
Recovered electrical energy (EEE) Electrical energy recovered from disposal of waste in previous systems	MJ	0.00E+00	2.99E+01	1.77E+00	1.60E+00	3.33E+01
Recovered thermal energy (EET) Thermal energy recovered from disposal of waste in previous systems	MJ	0.00E+00	9.54E+00	1.32E+00	1.90E+00	1.28E+01

\*Methods: TRACI 2.1, IPCC AR6

# Global warming potential summary



179 kg total CO<sub>2</sub>-eq footprint

#### **RESULTS**

The product composition, packaging composition, recycled content, recyclability visuals, and life cycle impacts below relate specifically to one m² (1.08 units) of the Verb™ Non-Flip Table configuration.

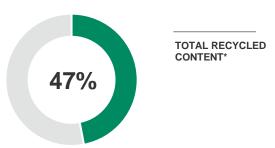
#### Product composition per m<sup>2</sup>

Material	Weight (kg)	Weight (%	) Resource Type
Particle Board	22.926	87.25%	Recycled, Virgin and renewable
HPL	0.001	0.01%	Virgin Non-renewable
Steel	2.152	8.19%	Recycled, Virgin Non- renewable
Adhesive	0.250	0.95%	Virgin Non-renewable
Nylon (PA6 and PA66)	0.447	1.70%	Virgin Non-renewable
PVC	0.009	0.03%	Virgin Non-renewable
Polyethylene	0.490	1.86%	Virgin Non-renewable
Total	26.275	100%	

### Product packaging composition per m<sup>2</sup>

Material	Weight (kg)	Weight (%)	Resource Type
Cardboard	8.328	91.15%	Renewable
Polystyrene	0.245	2.68%	Non-renewable
Polyethylene	0.416	4.56%	Non-renewable
Arcel	0.147	1.61%	Non-renewable
Total	9.136	100.00%	

## Product recycled content\* and recyclability\*\* summary







10%

<sup>\*</sup>Total recycled content based on supplier's data. The source of recycled content of various materials could be either post-industrial or post-consumer based on market availability. Packaging excluded.

<sup>\*\*</sup>Recyclability: this recyclability rate is the maximum amount of the product that is recyclable, based on the availability of recycling facilities in the specified regions and the ability of the product to be disassembled. Note that, per the requirements of the PCR, the end-of-life results presented in this EPD were calculated using the US EPA's recycling rates within the 2020 Municipal Solid Waste Report for parts that can be disassembled. Packaging excluded.

#### Life cycle impact by category and stage

Environmental impacts were calculated using the GaBi software platform. Impact results according to the BIFMA PCR have been calculated using TRACI 2.1, IPCC AR6 characterization factors, and ISO 21930 LCI indicators for primary energy and water usage. Results presented in this report are for one m² (1.08 units) of a Verb™ Non-Flip Table, maintained for 10 years. Additionally, the results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins, or risks.

	Life cycle stages					
	Unit	A1-A2 Materials acquisition	A3 Production process	A4-B7 Distribution & Use	C1-C4 End of life	Totals
*Global warming potential (100 years) Warming of the atmosphere caused by the global release of	kg CO2 eq					
greenhouse gases.		2.81E+01	3.98E+01	1.21E+01	1.76E+00	8.18E+01
*Acidification Emissions that increase the acidity of the environment due to various chemical reactions and/or biological activity, or by natural circumstances.	kg SO2 eq	1.80E-01	1.03E-01	6.71E-02	8.79E-03	3.59E-01
*Photochemical ozone creation (Smog) Through various chemical	kg O3 eq					
reactions, which occur between nitrogen oxides (NOx) and volatile organic compounds (VOCs) in sunlight.	kg O5 eq	2.47E+00	1.42E+00	1.40E+00	3.61E-02	5.32E+00
*Eutrophication Enrichment of an aquatic ecosystem with nutrients (nitrates, phosphates)	kg N eq					
that accelerate biological productivity and an undesirable accumulation of algal biomass.		7.85E-03	1.93E-02	5.51E-03	2.04E-03	3.47E-02
*Ozone depletion Reduction of the stratospheric ozone layer due to anthropogenic	kg CFC-11 eq					
emissions of ozone depleting substances.		6.75E-08	3.86E-12	3.61E-14	2.24E-13	6.75E-08
Primary energy demand Energy consumption at the source.	MJ	9.58E+02	9.55E+02	1.45E+02	2.21E+00	2.06E+03
Net freshwater usage Freshwater used and otherwise not recoverable.	kg	4.12E-01	2.42E+02	2.21E-02	2.61E+00	2.45E+02
Renewable primary resources used as an energy carrier (RPRe)	MJ					
First use materials from renewable sources with energy content used as a fuel		4.76E+02	4.25E+01	6.11E+00	1.59E-01	5.25E+02
Renewable primary resources used as material (RPRm)	MJ					
First use materials from renewable sources with energy content used as a material		0.00E+00	1.16E+02	0.00E+00	0.00E+00	1.16E+02
Non-renewable primary resources used as an energy carrier	MJ					
First use materials from non-renewable sources with energy content used as a fuel		3.87E+02	6.12E+02	1.39E+02	2.05E+00	1.14E+03
Non-renewable primary resources used as material First use materials from non-renewable sources with energy content used as a material	MJ	4.75E+01	3.42E+01	0.00E+00	0.00E+00	8.17E+01
Recovered electrical energy (EEE) Electrical energy recovered from disposal of waste in previous systems	MJ	0.00E+00	2.99E+01	1.77E+00	6.22E-01	3.22E+01
Recovered thermal energy (EET) Thermal energy recovered from disposal of waste in previous systems	MJ	0.00E+00	9.50E+00	1.32E+00	8.45E-01	1.17E+01

\*Methods: TRACI 2.1, IPCC AR6

#### Global warming potential summary



81.8 kg total CO₂-eq footprint

#### ADDITIONAL ENVIRONMENTAL INFORMATION

Indoor air: Steelcase tables products are certified with SCS's Indoor Advantage Gold™ program, conforming to the ANSI/BIFMA Furniture Emissions Standard (M7.1/X7.1-2011 R2021) and CDPH/EHLB Standard Method (CA 01350) v1.2-2017. The certification can be found here.

**Improper disposal of product:** At the end of its useful life, manage Steelcase products correctly in accordance with all applicable regulations for effective end-of-life management, including recycling, disposal, or incineration. Improper management may result in the release of chemicals that may represent a risk to the environment and human health & safety.

#### **REFERENCES**

Life Cycle Assessment, LCA Report for Steelcase. WAP Sustainability Consulting. November 2022. *Updated by Steelcase March* 2024.

NSF BIFMA Product Category Rule (PCR) for Tables: UNCPC 3812.

NSF Certification Policies for Environmental Product Declarations (EPD). November 1, 2022.

ISO 14025:2006 Environmental Labels and Declarations - Type III Environmental Declarations - Principles and Procedures.

ISO 14040:2006 Environmental Management – Life Cycle Assessment – Principles and Framework, Requirements and Guidelines.

ISO 14044:2006 Environmental Management – Life cycle assessment – Requirements and Guidelines.

ISO 14044: 2006/ Amd 1:2017 Environmental Management – Life cycle assessment – Requirements and Guidelines – Amendment 1.



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