Steelcase

Sistema Lounge

AMERICAS

About this product

Seating with soul. With the comfort and character of bespoke furniture, yet all the accessibility and efficiency of a pre-existing system, Sistema embodies the soul of the new work seating: a place where anything is possible; a style to fall in love with.

One sofa is required to meet the functional unit of seating for one individual for a 10-year period.

Date of Issue: March 7, 2025
Date of Expiration: March 7, 2030

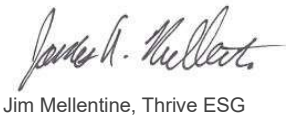
About this document

This declaration describes the Life Cycle Assessment of the Sistema Lounge seating produced for the Americas market by Steelcase Inc. in Mexico. The assessment is performed according to the ISO standards 14040 (2006), 14044 (2006) and 14025 (2006) and BIFMA PCR for Seating: UNCPC 3811 (2020) 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	Seating
Product name	Sistema Lounge
Product intended use	Lounge Seating
Product reference service life	10 years
Reference standards	ISO 14025, ISO 14040, ISO 14044
EPD scope	Cradle to grave
EPD number	EPD11026
Date of issuance	March 7, 2025
Date of expiration	March 7, 2030
EPD type	Product specific
EPD Product Coverage	Sistema Lounge for the Americas markets
Intended audience	Business to business (B2B)
Year of reported manufacturer data	2023
Functional unit	One unit of seating to seat one individual 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
Program administrator	NSF Certification LLC 789 N. Dixboro, Ann Arbor, MI 48105 www.nsf.org
Reference PCR and version number	BIFMA PCR for Seating: UNCPC 3811 (BIFMA PCR, 2020)
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:  Jack Geibig, jgeibig@ecoform.com 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 seating 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 unit of seating to seat one individual for a reference service life of 10 years under ANSI/BIFMA X5.4-2020. One product is required to fulfill the functional unit.

Two sets of results are presented in this EPD: normalized for seating 1 individual, and for the entire product (seating for 3 individuals).

Product scope

One Sistema Lounge with 3-Seat Lounge Frame, (COSISL3), in Low Back / Low Back / Bench configuration with scissor legs and standard fabric.

Assessment goal and scope

The potential environmental impacts of Sistema Lounge 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 Seating: UNCPC 3811 V3. Material acquisition and pre-processing (including transportation), production, distribution, use and end-of-life are assessed for the seating product.

Assessment boundary

The Life Cycle Assessment considers the full life cycle of the product as described here, cradle to grave. Life cycle stages included in this assessment follow the BIFMA PCR for Seating: UNCPC 3811 2020. Life cycle stages and phases are presented according to the PCR for seating.

	Stage	Status
Cradle to inbound gate **MATERIALS ACQUISITION** Raw material extraction and pre-processing.	**A1.** Raw material supply	✓
Transportation up to the factory gate and internal transport.	**A2.** Transport	✓
Gate to gate **PRODUCTION PROCESS** External and internal manufacturing of products, ancillary materials, parts, packaging.	**A3.** Manufacturing	✓
Gate to grave **DISTRIBUTION, USE AND END OF LIFE** Distribution of products, installation, use and end of life.	**A4.** Transport	✓
	A5. Installation	✓
	B1. Use	✓
	B2. Maintenance/cleaning	✓
	B3. Repair	✓
	B4. Replacement	✓
	B5. Refurbishment	✓
	B6. Operational energy use	✓
	B7. Operational water use	✓
	C1. Disassembly	✓
	C2. Transport	✓
	C3. Waste processing	✓
	C4. Disposal	✓
Beyond the boundary	**D.** Reuse/recovery	

RESULTS – SEATING FOR 1 INDIVIDUAL

The product composition, packaging composition, recycled content, and recyclability visuals below relate specifically to the typical configuration of Sistema Lounge produced in Reynosa, Mexico for the Americas. Product numbers represented by these results include: COSISL3.

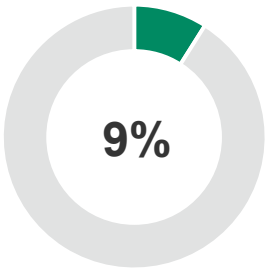
Product composition

Material	Weight (kg)	Weight (%)	Resource Type
Nylon PA6	0.022	0.12%	Recycled, virgin non-renewable
Steel	6.330	34.63%	Recycled, virgin non-renewable
Polypropylene (PP)	0.016	0.09%	Recycled, virgin non-renewable
Plywood	8.421	46.07%	Recycled, virgin non-renewable
Polyurethane (PU) foam	3.417	18.69%	Virgin non-renewable
Polyester fiber	0.015	0.08%	Recycled, virgin non-renewable
Polyester fabric	0.058	0.32%	Virgin non-renewable
Other	0.001	0.00%	Virgin non-renewable
Total	18.280	100%	

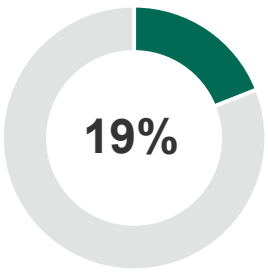
Product packaging composition

Material	Weight (kg)	Weight (%)	Resource Type
Cardboard	3.528	19.94%	Renewable
Paper	0.001	0.01%	Renewable
HDPE	0.000	0.00%	Non-renewable
PP	0.002	0.01%	Non-renewable
Solid wood	0.831	4.69%	Renewable
Pallet	13.335	75.35%	Renewable
Total	17.697	100%	

Product recycled content* and recyclability** summary



TOTAL RECYCLED CONTENT*



RECYCLABILITY BY WEIGHT**

*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. Excluding packaging.

**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. Excluding packaging.

Results shown below are for the typical configuration of Sistema Lounge (COSISL3), produced in the Mexico for the Americas, and are normalized for seating 1 individual.

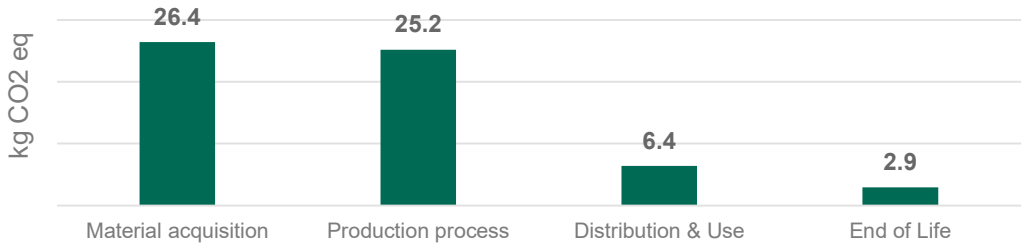
Life cycle impact by category and stage

Environmental impacts were calculated using the GaBi software platform. Impact results according to the BIFMA PCR have been calculated using TRACI 2.1 characterization factors. LCI indicators for primary energy and water usage were obtained. Results presented in this report are for one seat maintained for one individual 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** (100years) Warming of the atmosphere caused by the global release of greenhouse gases.	kg CO2 eq	2.64E+01	2.52E+01	6.37E+00	2.90E+00	6.08E+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	1.30E-01	6.70E-02	2.16E-02	2.11E-02	2.39E-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	1.68E+00	1.01E+00	4.60E-01	8.25E-02	3.23E+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	5.30E-03	5.67E-03	2.28E-03	4.62E-03	1.79E-02
***Ozone depletion** Reduction of the stratospheric ozone layer due to anthropogenic emissions of ozone depleting substances.	kg CFC-11 eq	3.33E-08	1.15E-09	3.03E-14	5.69E-13	3.45E-08
Primary energy demand Energy consumption at the source.	MJ	6.14E+02	7.16E+02	5.52E+01	4.96E+00	1.39E+03
Net freshwater usage Freshwater used and otherwise not recoverable.	kg	3.31E+03	1.35E+02	1.33E+01	4.35E+00	3.47E+03

*Methods: TRACI 2.1

Global warming potential summary



60.8 kg total CO_2-eq footprint

RESULTS – ENTIRE 3-SEATER LOUNGE

The product composition, packaging composition, recycled content, and recyclability visuals below relate specifically to the typical configuration of Sistema Lounge produced in Reynosa, Mexico for the Americas. Product numbers represented by these results include: COSISL3.

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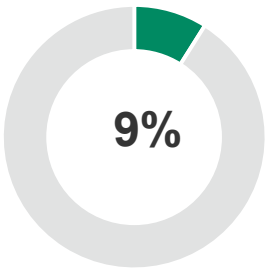
Product composition

Material	Weight (kg)	Weight (%)	Resource Type
Nylon PA6	0.066	0.12%	Recycled, virgin non-renewable
Steel	18.991	34.63%	Recycled, virgin non-renewable
Polypropylene (PP)	0.047	0.09%	Recycled, virgin non-renewable
Plywood	25.264	46.07%	Recycled, virgin non-renewable
Polyurethane (PU) foam	10.251	18.69%	Virgin non-renewable
Polyester fiber	0.045	0.08%	Recycled, virgin non-renewable
Polyester fabric	0.175	0.32%	Virgin non-renewable
Other	0.002	0.00%	Virgin non-renewable
Total	54.841	100%	

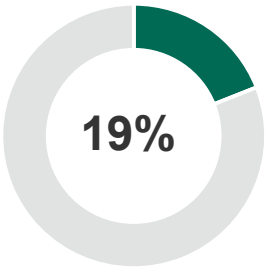
Product packaging composition

Material	Weight (kg)	Weight (%)	Resource Type
Cardboard	10.585	19.94%	Renewable
Paper	0.004	0.01%	Renewable
HDPE	0.0005	0.00%	Non-renewable
PP	0.005	0.01%	Non-renewable
Solid wood	2.492	4.69%	Renewable
Pallet	40.004	75.35%	Renewable
Total	53.091	100%	

Product recycled content* and recyclability** summary



TOTAL RECYCLED CONTENT*



RECYCLABILITY BY WEIGHT**

*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.

**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.

Results shown below are for the typical configuration of Sistema Lounge (COSISL3), produced in the Mexico for the Americas, and represent the entire 3-seat lounge product for seating 3 individuals.

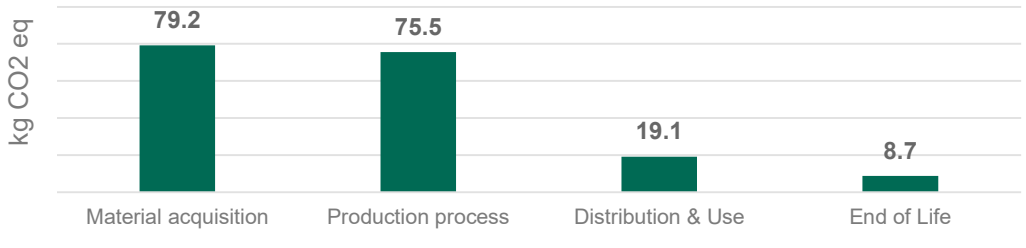
Life cycle impact by category and stage

Environmental impacts were calculated using the GaBi software platform. Impact results according to the BIFMA PCR have been calculated using TRACI 2.1 characterization factors, as well as LCI indicators for primary energy and water usage. Results presented in this report are for one seat maintained for one individual 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** (100years) Warming of the atmosphere caused by the global release of greenhouse gases.	kg CO2 eq	7.92E+01	7.55E+01	1.91E+01	8.71E+00	1.83E+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	3.89E-01	2.01E-01	6.48E-02	6.32E-02	7.18E-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	5.03E+00	3.02E+00	1.38E+00	2.47E-01	9.68E+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	1.59E-02	1.70E-02	6.83E-03	1.39E-02	5.36E-02
***Ozone depletion** Reduction of the stratospheric ozone layer due to anthropogenic emissions of ozone depleting substances.	kg CFC-11 eq	9.99E-08	3.46E-09	9.09E-14	1.71E-12	1.03E-07
Primary energy demand Energy consumption at the source.	MJ	1.84E+03	2.15E+03	1.66E+02	1.49E+01	4.17E+03
Net freshwater usage Freshwater used and otherwise not recoverable.	kg	9.94E+03	4.05E+02	4.00E+01	1.30E+01	1.04E+04

*Methods: TRACI 2.1

Global warming potential summary



183 kg total CO_2-eq footprint

NOTE: Packaging enters the product system in Production process (A3). Packaging contributes 49 kg CO2-eq to Production process GWP due to the pallet used for transporting the 3-seat sofa. The pallet contributes 34 kg CO2-eq and cardboard 14 kg.

ADDITIONAL ENVIRONMENTAL INFORMATION

Indoor air: Steelcase seating 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 for seating. The certification can be found here.

REFERENCES

Life Cycle Assessment, LCA Report for Steelcase. WAP Sustainability Consulting. August 2023.

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.

Product Category Rule for Environmental Product Declarations, BIFMA PCR for Seating: UNCPC 3811 (ext. 2020-111)

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