

# **HD** Storage

# **AMERICAS**





# About this product

High Density Storage offers ample organizational space with the added benefit of expandable privacy.

The reference product is HDSTG single door storage unit with 10-year service life and 0.15 m³ of storage capacity.

Date of Issue: April 23, 2025 Date of Expiration: April 23, 2030

# About this document

This declaration describes the Life Cycle Assessment of HD Storage (style HDSTG) 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 Storage: 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 <u>product page</u> 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	Storage			
Product name	HD Storage			
Product intended use	Storage			
Product reference service life	10 years			
Reference standards	ISO 14025, ISO 14040, ISO 14044			
EPD scope	Cradle to grave			
EPD number	EPD11007			
Date of issuance	April 23, 2025			
Date of expiration	April 23, 2030			
EPD type	Product specific			
EPD Product Coverage	HD Storage for the Americas market			
Intended audience	Business to business (B2B)			
Year of reported manufacturer data	2023			
Functional unit	Storage unit with retractable storage area, 0.15 m³ for a reference service life of 10 years			
Applicable markets/regions	AMER			
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 Storage: UNCPC 3812 (BIFMA PCR, September 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 Storage UNCPC 3812 (2022).			
LCA reviewer	External review conducted by:  July 1. Mellevit.  Jim Mellentine, 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 storage 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**

 $0.15~\text{m}^3$  of storage space including packaging, for a reference service life of 10 years under ANSI/BIFMA X5.9.

## **Product scope**

The products modeled is one High Density Cabinet (HDSTG) with a bag drop configuration, HPL exterior case with a steel interior complete with shelving and a standard mirror. Specified with right handedness, a nile pull, and a standard lock. HDSTG with a storage volume of 0.310 m3. To match the functional unit of 0.15 m3, the results in this EPD were scaled down to 0.484.



Manufacturing location Grand Rapids, MI

## Assessment goal and scope

The potential environmental impacts of HD Storage 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 Storage: UNCPC 3812 September 2022. Material acquisition and pre-processing (including transportation), production, distribution, use and end-of-life are assessed for the storage 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 Storage and are presented in the following table.

		Stage	Status
F)	Cradle to inbound gate  MATERIALS ACQUISITION  Raw material extraction, pre-processing and transportation.  Transportation up to the factory gate and internal transport.	A1. Raw material supply  A2. Transport	√ √
<u>~</u>	Gate to gate  PRODUCTION PROCESS  External and internal manufacturing of products, ancillary materials, parts, packaging.	A3. Manufacturing	<b>✓</b>
		A4. Transport	<b>√</b>
	Gate to grave  DISTRIBUTION, USE AND END OF LIFE  Distribution of products, installation, use and end of life.	A5. Installation	<b>√</b>
		B1. Use	<b>✓</b>
		B2. Maintenance/cleaning	<b>✓</b>
		B3. Repair	<b>✓</b>
		B4. Replacement	✓
JH		B5. Refurbishment	✓
		B6. Operational energy use	✓
		B7. Operational water use	✓
		C1. Disassembly	✓
		C2. Transport	<b>√</b>
		C3. Waste processing	✓
		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 0.15m³ (0.484 units) of the HD Storage configuration listed above.

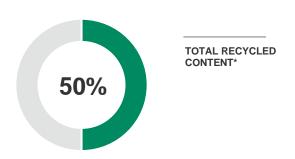
## **Product composition**

Material	Weight (kg)	Weight (%)	Resource Type
Particle Board	27.959	55.27%	Recycled, Virgin Non- renewable
Steel	19.860	39.26%	Recycled, Virgin Non- renewable
Nylon (PA 66)	2.297	4.54%	Virgin Non-renewable
Zamak	0.230	0.45%	Virgin Non-renewable
Acrylic	0.090	0.18%	Virgin Non-renewable
Polypropylene (PP)	0.087	0.17%	Virgin Non-renewable
Fabric polyester	0.043	0.09%	Virgin Non-renewable
Plywood	0.015	0.03%	Virgin and renewable
Other	0.009	0.02%	Virgin Non-renewable
Total	50.589	100%	

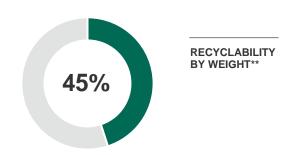
## **Product** packaging composition

Material	Weight (kg)	Weight (%)	Resource Type
Cardboard	2.341	94.62%	Renewable
Paper	0.022	0.90%	Renewable
PE foam	0.089	3.6%	Non-renewable
PE	0.022	0.9%	Non-renewable
Total	2.474	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 IPCC AR6, TRACI 2.1 characterization factors, as well as LCI indicators for primary energy and water usage. Results presented in this report are for 0.15 m³ (0.484 units) of HD Storage 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-A3 Production stage	A4-A5 Construction stage	B1-B7 Use Stage	C1-C4 End of life stage	
kg CO2 eq	9.14E+01	7.32E+00	0.00E+00	3.00E+00	1.02E+02
kg SO2 eq	3.41E-01	4.04E-02	0.00E+00	1.26E-02	3.94E-01
kg O3 eq	5.32E+00	1.03E+00	0.00E+00	1.35E-01	6.48E+00
kg N eq	2.09E-02	3.49E-03	0.00E+00	2.32E-03	2.67E-02
kg CFC-11 eq	5.53E-08	2.16E-14	0.00E+00	2.00E-12	5.53E-08
MJ	1.84E+03	9.57E+01	0.00E+00	1.26E+01	1.95E+03
kg	2.06E+03	1.40E+01	0.00E+00	8.00E+00	2.09E+03
MJ	4.37E+02	4.08E+00	0.00E+00	6.69E-01	4.41E+02
MJ	3.31E+01	0.00E+00	0.00E+00	0.00E+00	3.31E+01
MJ	1.11E+03	9.16E+01	0.00E+00	1.20E+01	1.21E+03
MJ	1.16E+02	0.00E+00	0.00E+00	0.00E+00	1.16E+02
MJ	1.46E-01	4.23E-01	0.00E+00	3.42E+00	3.99E+00
MJ	6.20E-02	2.33E-01	0.00E+00	3.60E+00	3.89E+00
	kg CO2 eq kg SO2 eq kg SO3 eq kg N eq MJ MJ MJ MJ MJ	Unit       A1-A3 Production stage         kg CO2 eq       9.14E+01         kg SO2 eq       3.41E-01         kg O3 eq       5.32E+00         kg N eq       2.09E-02         kg CFC-11 eq       5.53E-08         MJ       1.84E+03         kg       2.06E+03         MJ       4.37E+02         MJ       1.11E+03         MJ       1.16E+02         MJ       1.46E-01         MJ       6.20E-02	Unit         A1-A3 Production stage         A4-A5 Construction stage           kg CO2 eq         9.14E+01         7.32E+00           kg SO2 eq         3.41E-01         4.04E-02           kg O3 eq         5.32E+00         1.03E+00           kg N eq         2.09E-02         3.49E-03           kg CFC-11 eq         5.53E-08         2.16E-14           MJ         1.84E+03         9.57E+01           kg         2.06E+03         1.40E+01           MJ         4.37E+02         4.08E+00           MJ         1.11E+03         9.16E+01           MJ         1.16E+02         0.00E+00           MJ         1.46E-01         4.23E-01           MJ         6.20E-02         2.33E-01	Unit         A1-A3 Production stage         A4-A5 Construction stage         B1-B7 Construction stage           kg CO2 eq         9.14E+01         7.32E+00         0.00E+00           kg SO2 eq         3.41E-01         4.04E-02         0.00E+00           kg O3 eq         5.32E+00         1.03E+00         0.00E+00           kg N eq         2.09E-02         3.49E-03         0.00E+00           MJ         1.84E+03         9.57E+01         0.00E+00           kg         2.06E+03         1.40E+01         0.00E+00           MJ         4.37E+02         4.08E+00         0.00E+00           MJ         1.11E+03         9.16E+01         0.00E+00           MJ         1.16E+02         0.00E+00         0.00E+00           MJ         1.46E-01         4.23E-01         0.00E+00	Unit         A1-A3 Production stage         A4-A5 Construction stage         B1-B7 Construction stage         C1-C4 End of life stage           kg CO2 eq         9.14E+01         7.32E+00         0.00E+00         3.00E+00           kg SO2 eq         3.41E-01         4.04E-02         0.00E+00         1.26E-02           kg O3 eq         5.32E+00         1.03E+00         0.00E+00         1.35E-01           kg N eq         2.09E-02         3.49E-03         0.00E+00         2.32E-03           kg CFC-11 eq         5.53E-08         2.16E-14         0.00E+00         2.00E-12           MJ         1.84E+03         9.57E+01         0.00E+00         1.26E+01           kg         2.06E+03         1.40E+01         0.00E+00         8.00E+00           MJ         4.37E+02         4.08E+00         0.00E+00         0.00E+00           MJ         1.11E+03         9.16E+01         0.00E+00         1.20E+01           MJ         1.46E-01         4.23E-01         0.00E+00         0.00E+00           MJ         1.46E-01         4.23E-01         0.00E+00         3.60E+00

\*Methods: TRACI 2.1, IPCC AR6

## Global warming potential summary



This EPD 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, the specifics of the product modeled, and the software tool used to conduct the study.

#### ADDITIONAL ENVIRONMENTAL INFORMATION

**Indoor air:** Steelcase storage 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 <u>here</u>.

**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, Global Storage. Steelcase Inc. December 2024.

NSF BIFMA Product Category Rule (PCR) for Storage: 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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