



## High-Density Storage

Product Environmental Profile is an environmental declaration according to the objectives of ISO 14021. Precise, accurate, verifiable and relevant information on sustainability attributes of High-Density Storage.

**High Density Storage**—a new personal storage solution—offers ample organizational space with the added benefit of expandable privacy. In the Shelf versions, resident workers have room for papers, files and supplies needed to support their work flow, while Bag Drop versions offer mobile workers temporary storage and ease of access to their belongings.

The model chosen for analysis is the most representative line (reference # HDSTG) from the High-Density Storage range. Standard features on this model include:

- 48" H
- Laminate case
- Nile pull
- Shelf configuration

# Environmental Overview

## Final Assembly Location

Final assembly of High-Density Storage is in Grand Rapids, Michigan, USA for Steelcase for the NA (North America) market.

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## Life Cycle Performance ›

Steelcase considers each phase of the life cycle: from materials extraction, production, transport, use and reuse, through the end of its life.

## Materials ›

### Materials Composition

A break down of the basic materials in High-Density Storage.

### Materials Chemistry

Steelcase's materials chemistry practice aims to design products with materials that support human and environmental health, throughout all phases of the life cycle.

### Recycled Materials and Recyclability

High-Density Storage contains 65.0% recycled materials, by weight (58.0% pre-consumer + 7.0% post-consumer).

At the end of its useful life, High-Density Storage is 42% effectively recyclable by weight.

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## Certifications and Labels ›

The environmental and social performance of High-Density Storage is communicated through the following voluntary labels/certifications:

- SCS Indoor Advantage™ Gold

### Other targeted labels and certificates:

- BIFMA level® 2

## LEED Contribution ›

High-Density Storage may contribute in the following areas:

- Recycled content
- Materials reuse
- Regional materials
- Low-emitting materials
- Interiors life-cycle impact reduction
- Daylight and views
- Building product disclosure and optimization - sourcing of raw materials
- Quality Views
- Construction & Demolition Waste Planning & Management
- Environmentally Preferable finishes and furnishings
- Social equity in the supply chain

# Life Cycle Performance

Steelcase considers each phase of the life cycle: from materials extraction, production, transport, use and reuse, through the end of its life.

## Materials

This phase includes raw materials extraction and transformation into material ready to be used.

- **High-Density Storage contains 65.0% recycled materials**, by weight (58.0% pre-consumer + 7.0% post-consumer).
- **Materials chemistry assessment in progress** for this product.
- **Low formaldehyde & VOC emissions** / concentration according to ANSI/BIFMA X7.1 and ANSI/BIFMA e.3 VOC's of concern.
- Product can be ordered with **PVC-free edge banding**.
- **Packaged with 45% recycled cardboard** and 10% recycled LDPE film.

## Production

This phase comprises all production and assembly processes taking place at Steelcase or at their suppliers and sub-suppliers.

- This plant is ISO 14001 and LEED
- Water-based adhesives used in assembly.

## Transport

This phase includes downstream transports.

- **Optimized packaging** to keep transportation volumes as low as possible and improve filling rates.
- **Bulk packaging used for this product**, wherever possible, to optimize volume in shipping.
- **Product is shipped bulk packaging in all possible scenarios** - allowing for optimization of transport volume.
- Made in North America

## Use

During the use phase of the product - the longest phase of the life cycle - no significant environmental impacts occur.

- **Product meets ANSI/BIFMA Standards M7.1/X7.1** for low- VOC emissions to indoor air quality - SCS Indoor Advantage™ Gold.
- **Designed for a long product life**, with replaceable parts that are easy to change.

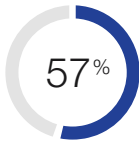
## End of Use

Any product can become a resource itself, or be responsibly disposed of in different ways.

- **Designed to enable responsible end of use strategies** - re-selling, refurbishing, charitable donation or recycling.
- **42% effectively recyclable by weight**, according to the current waste disposal schemes.
- **100% effectively recyclable packaging**.
- **Primary plastic parts clearly labelled for easy sorting and effective recycling**, according to ISO 11469.
- **Disassembly and recycling directions available upon request**, for a representative configuration.
- The Steelcase Phase 2 Program provides end-of-use, end-of-need and end-of-life disposition solutions that align with your Corporate Social Responsibility Goals. For more information, and to see if this service is available in your area, please contact your Steelcase sales representative for more information.

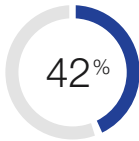
# Materials

High-Density Storage materials composition is listed below\*.



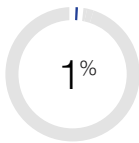
## WOOD BASED MATERIALS

	kg	lb	%
Particle board	47.94	105.7	57.39
Solid wood	<0.1	0.1	<0.1



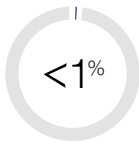
## METALS

	kg	lb	%
Steel	34.35	75.7	41.12
Zinc (Zamak)	0.47	1.0	0.56



## PLASTICS

	kg	lb	%
Nylon (PA)	0.16	0.4	0.19
High density polyethylene (HDPE)	<0.1	—	<0.1
Other:	0.29	0.6	0.34



## OTHER MATERIALS

	kg	lb	%
Acrylic	0.19	0.4	0.22
Polyurethane foam	<0.1	0.2	0.11

**TOTAL WEIGHT** **83.5** **184.2**

\*The list of materials does not contain all materials used in the product (adhesives, coatings, residuals, etc.).

## Materials Chemistry

Steelcase's goal in its materials chemistry practice is to design products with materials that have been evaluated or assessed for several human and environmental health criteria – all in an effort to understand and optimize the products throughout their life cycle.

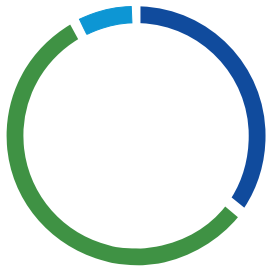
Steelcase is working with our supply chain to inventory and assess materials in this product down to 0.01% (or 100 ppm) in each homogeneous material with the intent to eliminate chemicals of concern and optimize with healthier materials of equal or greater functionality.

Steelcase intends to refrain purchasing products, components, or materials containing any “Democratic Republic of the Congo (DRC) Conflict Minerals” (coltan (from which tantalum is derived), cassiterite (tin), gold, wolframite (tungsten), or their derivatives), and any other minerals or derivatives which the U.S. Secretary of State determines to be financing conflict in the DRC or an adjoining country.

## Recycled Materials and Recyclability

Recycled materials are determined by weight and defined in accordance with the ISO 14021. They may include pre- and post-consumer materials:

- Pre-consumer materials (or post-industrial recycled materials) are materials diverted from the waste stream during a manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.
- Post-consumer materials are materials generated by households or by commercial, industrial and institutional facilities in their role as end-users of the final product, which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.



### HIGH-DENSITY STORAGE

	kg	lb	%
Pre-consumer recycled content	48.4	106.7	58
Post-consumer recycled content	6.2	13.7	7
<b>Total recycled content</b>	<b>54.6</b>	<b>120.4</b>	<b>65</b>

- Pre-consumer - Recycled content
- Post-consumer - Recycled content
- Virgin material

\*Calculations of recycled materials are based on data provided by professional organizations, suppliers and other available information. Recycled content figures are based off of product weight only, and exclude packaging for evaluation to LEED contribution and other purposes. This data may include industry averages, ranges or other broadly based information. Steelcase makes conservative assumptions when compiling this information to provide the most accurate recycled content calculations possible but variability in market conditions or manufacturing processes may result in higher or lower content. This document will be reviewed and updated periodically and is subject to change without notice.

## Recyclability

Steelcase considers a material recyclable if it can be effectively collected, sorted, processed, and converted into raw materials to be used in the production of new products.\*Recyclability calculation does not include packaging.



42%

According to the available waste management infrastructures, we estimate that 42% is effectively recyclable.

\*Excludes packaging. To be compliant with applicable regulations, Steelcase calculations are based on the materials having physical properties that allow recycling, our evaluation of the ability to disassemble the products and the actual availability of recycling services in the markets where the products are sold.

# Certificates

To show continuous improvements, Steelcase communicates the environmental and social performance of its products through voluntary labels and declarations.

## ON THE PRODUCTS

### **BIFMA level®**

This product is targeted for level® 2 certification, BIFMA's sustainability certification program for furniture. This certification program assesses a products impact to materials, energy & atmosphere, human & ecosystem health, and social responsibility.

### **SCS Indoor Advantage™ Gold**

This product is SCS Indoor Advantage™ Gold, certified according to the indoor air quality emissions requirements defined by the ANSI/ BIFMA M7.1- 2011.

## ON THE PLANTS

### **ISO 14001**

The plant in Grand Rapids, Michigan, USA is ISO (International Organization for Standardization) 14001 - Environmental management system certified.

### **LEED**

The manufacturing plant in Grand Rapids, Michigan, USA is LEED® (Leadership in Energy and Environmental Design) certified.

<sup>1</sup> Indoor Advantage™ and Indoor Advantage™ Gold are trademarks of Scientific Certification Systems.

# LEED V3 – 2009

LEED, or Leadership in Energy & Environmental Design, is a green building certification program that recognizes best-in-class building strategies and practices. High-Density Storage may contribute to a project's pursuit of LEED certification across the three rating systems:

- LEED-ID+C - Interior Design & Construction 2009 (formerly LEED-CI)
- LEED-BD+C - Building Design & Construction 2009 (formerly LEED-NC, LEED-Core & Shell & LEED-Schools)
- LEED-O+M - Operations & Maintenance (formerly LEED-EB)

CREDITS	RATING SYSTEM			POTENTIAL CONTRIBUTION*
	ID+C	BD+C	O+M	
<b>Materials &amp; Resources</b>				
Recycled content	MRc4	MRc4 Healthcare: MRc5 Option 3	MRc2.2: Sustainable purchasing- Furniture	High-Density Storage contributes to the project recycled content criteria: post-consumer (7.0)% + ½ pre-consumer (58.0)% = 36.0%.
Materials reuse	MRc3.2	Healthcare: MRc5 Option 3		If chosen for reuse, this product can contribute to the 30% valuation of the furniture & furnishings budget.
Regional materials	MRc5	Healthcare: MRc5 Option 3		High-Density Storage is assembled in Grand Rapids, Michigan, USA for NA orders. Projects <500 miles from this location qualify.
<b>Indoor Environmental Quality</b>				
Low emitting materials	EQc4.5	Healthcare: MRc5 Option 2	N/A	High-Density Storage is SCS Indoor Advantage™ Gold (depending on options) certified for indoor air quality in NA.
Daylight and views	EQc8.1 & 8.2	EQc8.1 & 8.2*	EQc2.4	Steelcase offers a range of products and application thought starters to assist customers in achieving these credits.

\*For Potential Contribution: These are the probable contributions; exact contributions will be dependent on the LEED rating system and the specific product.

\*\*For LEED BD+C: New Construction, these standards do not currently apply to furniture in the IEQ credit; however, the USGBC has allowed equivalent credit for furniture / furnishings when submitted as an Innovation in Design credit.

# LEED V4

LEED is a rating system that drives integrated design thinking as it relates to various aspects of green buildings. High-Density Storage can contribute to a project's pursuit of LEED Certification across the three rating systems:

- LEED-ID+C - Interior Design & Construction
- LEED-BD+C - Building Design & Construction
- LEED-O+M - Operations & Maintenance

CREDITS	RATING SYSTEM			POTENTIAL CONTRIBUTION*
	ID+C	BD+C	O+M	
<b>Materials &amp; Resources</b>				
Interiors life-cycle impact reduction	Option 2: Furniture Reuse	N/A		Steelcase products are designed to be long lasting and durable-- often making reuse a feasible option, depending on project needs and desirability.
Interiors life-cycle impact reduction	Option 3: Design for flexibility	N/A		If chosen for reuse, this product can contribute to the 30% valuation of the furniture & furnishings budget.
Building product disclosure and optimization - sourcing of raw materials	Option 2: Leadership extraction practices	Option 2: Leadership extraction practices	Purchasing - facility maintenance and renovation	Extended Producer Responsibility - Steelcase offers different end of use / end of life programs for different markets, to reuse, resell, refurbish, donate, or recycle the mix of existing assets – all in an effort to divert materials from the landfill (See notes below).
		Healthcare - Medical furniture & furnishings	Option 2: furniture	Bio-based materials - Steelcase offers select textile and surface material options that may contribute to this credit.
		Option 3: Multi-attribute assessment		Wood products - Steelcase offers FSC™ certified wood as an option on select products, which contributes to this option.
				Materials Reuse - If chosen for reuse, this product can contribute.
				Recycled content - (7.0%) post-consumer + ½ pre-consumer (58.0%) = 36.0%.
Building product disclosure and optimization - material ingredients	Option 1: Material Ingredient Reporting	Option 1: Material Ingredient Reporting	Purchasing - facility maintenance and renovation	High-Density Storage has achieved ANSI/BIFMA e3-2014 credit 7.5.1.3 at 90% or greater which contributes to this credit.
		Furniture and medical furnishings	Option 2: Furniture	
		Option 1: Minimal chemical content		
Construction & Demolition Waste Planning & Management	Required	Required	N/A	Steelcase uses several innovative packaging initiatives to minimize our waste impact (see transport section). These efforts may help to contribute, in part, towards achieving this prerequisite or credit.

\*For Potential Contribution: These are the probable contributions; exact contributions will be dependent on the LEED rating system and the specific product.



CREDITS	RATING SYSTEM			POTENTIAL CONTRIBUTION*
	ID+C	BD+C	O+M	
<b>Indoor Environmental Quality</b>				
Low emitting materials	Option 1: Product Category Calculations or Option 2: Budget Calculation Method	Required  Option 1: Product Category Calculations or Option 2: Budget Calculation Method  Furniture and medical furnishings  Option 2: testing and modeling of chemical content	Purchasing - facility maintenance and renovation  Option 2: Furniture	High-Density Storage is SCS Indoor Advantage™ Gold certified for indoor air quality in North America.
Quality views	Credit	Credit	Daylight and quality views  Option 2: Quality views	Steelcase offers a range of products and application thought starters, though several other factors play into achieving this credit, beyond the scope of furniture.

## Other Potential LEED V4 Contributions

<b>Pilot Credits: The following credits are potential contribution areas for Steelcase products and applications</b>				
Environmentally preferable finishes and furnishings	MR Pilot	MR Pilot	N/A	High-Density Storage is SCS Indoor Advantage™ Gold certified, which contributes to this pilot credit.
Social equity in the supply chain	N/A	MR Pilot	N/A	High-Density Storage is SCS Indoor Advantage™ Gold certified, which contributes to this pilot credit which demonstrates compliance to ANSI/BIFMA e3 Sustainability Standard – Social Responsibility sections 8.7.2.1 and 8.7.2.2

\*For Potential Contribution: These are the probable contributions; exact contributions will be dependent on the LEED rating system and the specific product

Refer to [www.usgbc.org](http://www.usgbc.org) for LEED Program details.

Steelcase sustainability related actions and results are communicated annually in the **Corporate Sustainability Report**. [▶](#)

**Steelcase®**

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