Product pictured is not the exact style of the product studied in this document.

Max-Stacker III

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

Max-Stacker III offers proven performance and durability in a stackable chair. With a wide range of colors and finishes, it seamlessly integrates with today's Steelcase furniture for a cohesive design aesthetic.

The model chosen for analysis from the Max-Stacker III range is reference # 477100. Standard features for Max-Stacker III include:

- Stacks 45 high on a dolly and 12 high on the floor
- Refined surface texture on seat and back
- Optional left- or right-hand wood tablet arm and/or metal bookrack
- Clear plastic or soft glides available

Published on 05/2017

Steelcase

Environmental Overview

Final Assembly Location

Final assembly of Max-Stacker III is in Holland, Michigan, USA for Steelcase for the Americas Market.

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 Max-Stacker III.

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

Max-Stacker III contains 26.0% recycled materials, by weight (11.0% pre-consumer + 15.0% post-consumer).

At the end of its useful life, Max-Stacker III is 90.0% recyclable by weight.

Certifications and Labels

The environmental and social performance of Max-Stacker III is communicated through the following voluntary labels/certifications:

- FSC™
- SCS Indoor Advantage™ Gold
- BIFMA level® 1

LEED Contribution

Max-Stacker III may contribute in the following areas:

- Recycled content
- Materials reuse
- Regional materials
- Certified wood
- 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.

- **Max-Stacker III contains 26.0% recycled materials,** by weight (11.0% pre-consumer + 15.0% post-consumer).
- **Low formaldehyde & VOC emissions** / concentration according to ANSI/BIFMA X7.1 and ANSI/BIFMA e.3 VOC's of concern.
- **Packaged with 48% recycled cardboard and 0% recycled HDPE film.**
- **Max-Stacker III may meet the Healthier Interiors goal of the Safer Chemical Challenge,** depending on options. Please visit Healthier Hospitals for a complete list of Steelcase products that may contribute to the Safer Chemicals Challenge.
- **Max-Stacker III contains 10.0% new wood by weight.** FSC certified wood is available as a special for some product lines.

Production

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

- Final assembly of Max-Stacker III is in Holland, Michigan, USA for Steelcase for the Americas Market.

Transport

This phase includes downstream transports.

- **Optimized packaging** to keep transportation volumes as low as possible and improve filling rates.
- 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.
- Cleaning instructions available.

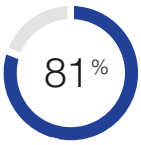
End of Use

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.
- **90% recyclable by weight,** according to the current waste disposal schemes.
- **100% recyclable packaging.**
- **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.

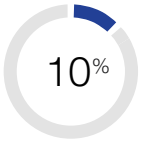
Materials

Max-Stacker III materials composition is listed below*.



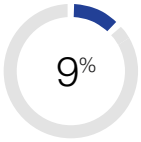
METALS

	kg	lb	%
Steel	10.8	23.9	80.3
Stainless steel	0.1	0.3	1.0



WOOD BASED MATERIALS

	kg	lb	%
Plywood	1.4	3.0	10.1



PLASTICS

	kg	lb	%
Polypropylene (PP)	1.1	2.5	8.3
Polycarbonate (PC)	<0.1	0.1	0.3

TOTAL WEIGHT	**13.5**	**29.7**

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

Materials Chemistry

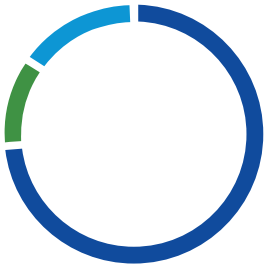
Steelcase's goal in its materials chemistry practice is to design products with materials that have been evaluated or assessed for several human and environmental health criteria – all in an effort to understand and optimize the products throughout their life cycle.

Steelcase 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.



MAX-STACKER III

	kg	lb	%
Pre-consumer recycled content	1.5	3.3	11
Post-consumer recycled content	2.0	4.4	15
Total recycled content	**3.5**	**7.7**	**26**

- 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.

90%

According to the available waste management infrastructures, we estimate that 90% is 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 level® 1 certified. BIFMA level® is 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 [1] according to the indoor air quality emissions requirements defined by the ANSI/ BIFMA M7.1- 2011.

ON THE MATERIALS

FSC™

This product can be ordered with Forestry Stewardship Council (FSC™) labeled wood, ensuring that these components originate from responsibly managed forests. Chain of custody: BV-COC-020349.

[1] 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. Max-Stacker III 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	
Materials & Resources				
Recycled content	MRc4	MRc4 Healthcare: MRc5 Option 3	MRc2.2: Sustainable purchasing-Furniture	Max-Stacker III contributes to the project recycled content criteria: post-consumer (15.0)% + ½ pre-consumer (11.0)% = 20.5%.
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		Max-Stacker III is assembled in Holland, Michigan, USA for Americas orders. Projects <500 miles (800 km) from this location qualify.
Certified wood	MRc7	MRc7 Healthcare: MRc5 Option 3		Steelcase offers FSC™ certified wood, as an option on select products, which contributes to this credit.
Indoor Enviromental Quality				
Low emitting materials	EQc4.5	Healthcare: MRc5 Option 2	N/A	Max-Stacker III 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. Max-Stacker III 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	
Materials & Resources				
Interiors life-cycle impact reduction	Option 2: Furniture Reuse	N/A	Purchasing - facility maintenance and renovation Option 2: furniture	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		Max-Stacker III is designed to be adaptable for design needs today and in the future-- and can easily be changed to remain on pace with evolving business needs.
Building product disclosure and optimization - sourcing of raw materials	Option 2: Leadership extraction practices	Option 2: Leadership extraction practices Healthcare - Medical furniture & furnishings Option 3: Multi-attribute assessment		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). Bio-based materials - Steelcase offers select textile and surface material options that may contribute to this credit. 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 - (15.0%) post-consumer + ½ pre-consumer (11.0%) = 20.5%.
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	
Indoor Enviromental Quality				
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	Max-Stacker III is SCS Indoor Advantage™ Gold certified for indoor air quality in NA.
Quality views	Credit	Credit	Credit	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

Pilot Credits: **The following credits are potential contribution areas for Steelcase products and applications**				
Certified Multi-attribute Products and Materials	MR Pilot	MR Pilot	N/A	Max-Stacker III is level® 1 certified, which contributes to this pilot credit.
Social equity in the supply chain	N/A	MR Pilot	N/A	Max-Stacker III is level® 1 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 for LEED Program details.

Steelcase sustainability related actions and results are communicated annually in the **Corporate Sustainability Report.**

Steelcase®

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