

Brody WorkLounge

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

Brody WorkLounge is a lounge seating product that is designed to provide a space-efficient work environment for individuals to get focused work done, with technology, in a comfortable lounge posture.

The model chosen for analysis is the most representative line (reference # 488WE) from the Brody WorkLounge range. Standard features on this model include:

- Live-Lumbar back support
- Adaptive Bolstering seat pan design
- Depth-adjustable, tiltable personal worksurface
- Privacy Screen in semi-opaque acrylic or fabric-wrapped steel
- Convenience power and personal task lighting

Steelcase

Environmental Overview

Final Assembly Location

Final assembly of Brody WorkLounge is in Holland, MI, USA, Grand Haven, MI, USA, and Rockford, MI, 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.

To measure the environmental impacts of Brody WorkLounge, Steelcase performed a Life-Cycle Assessment (ISO 14040-44), the results of which are disclosed in an Environmental Product Declaration (EPD – ISO 14025).

Materials

Materials Composition

A break down of the basic materials in Brody WorkLounge.

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

Brody WorkLounge contains 14.0% recycled materials, by weight (6.0% pre-consumer + 8.0% post-consumer).

At the end of its useful life, Brody WorkLounge is 72% effectively recyclable by weight.

Certifications and Labels

The environmental and social performance of Brody WorkLounge is communicated through the following voluntary labels/certifications:

- SCS Indoor Advantage™ Gold
- BIFMA level® 2
- Oeko-Tex
- Cradle to Cradle Certified™

Other targeted labels and certificates:

• Environmental Product Declaration (EPD)

LEED Contribution

Brody WorkLounge may contribute in the following areas:

- Recycled content
- Materials reuse
- · Regional materials
- Low-emitting materials
- Interior life cycle impact reduction
- · Design for flexibility
- Environmental Product Declarations
- · Material ingredients
- · Daylight and views
- Sourcing of Raw Materials
- Quality Views
- 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.

- Brody WorkLounge contains 14.0% recycled materials, by weight (6.0% pre-consumer + 8.0% post-consumer).
- Materials chemistry assessment completed for this product.
- Low formaldehyde & VOC emissions / concentration according to ANSI/BIFMA X7.1 and ANSI/BIFMA e.3 VOC's of concern.
- Eco-labelled textiles OekoTex / EU Ecolabel / Cradle to Cradle Certified™ and rapidly renewable wool textiles available to specify with product.
- Product can be ordered with PVC-free wiring and edge banding.
- Materials used in the manufacturing and assembly of our products are not specified to contain nanomaterials.

Production

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

- The plant in Holland, MI, USA is ISO 14001 certified.
- · Water-based adhesives used in assembly.

 Final assembly of Brody WorkLounge is in Holland, MI, USA, Grand Haven, MI, USA, and Rockford, MI, USA for Steelcase for the Americas, EMEA (Europe, Middle East, Africa), and AP (Asia Pacific) markets.

Transport

This phase includes downstream transports.

- **Optimized packaging** to keep transportation volumes as low as possible and improve filling rates.
- Product is shipped knocked down 3 pieces 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.
- Product is equipped with LED lighting, which are longer lasting and significantly reduce energy consumption.
- 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.
- 72% effectively recyclable by weight, according to the current waste disposal schemes.
- 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

Brody WorkLounge materials composition is listed below*.



METALS

	kg	lb	%
Steel	22.9	50.6	33.7
Aluminum	4.0	8.8	5.9
Zinc (Zamak)	0.1	0.2	0.1



WOOD BASED MATERIALS

	kg	lb	%
Plywood	12.7	28.0	18.7
Particleboard	4.7	10.4	6.9
MDF	1.9	4.2	2.8
Paper	1.5	1.5	2.2
Cardboard	0.8	1.8	1.2
Hardboard (pressure-molded	0.3	0.7	0.4
wood fibers)			



PLASTICS

	kg	lb	%
Polypropylene (PP)	7.1	15.7	10.5
Polyester (PET)	0.7	1.5	1.0
Nylon 66 (PA66)	0.3	0.7	0.5
Glass-filled nylon (PA-GF)	0.3	0.7	0.5
High density polyethylene (HDPE)	0.2	0.4	0.3
Polyoxymethylene (POM)	<0.1	<0.1	<0.1
Other	2.0	4.3	2.9



OTHER MATERIALS

	kg	lb	%
Acrylic	5.0	11.0	7.3
Polyurethane foam	3.5	7.8	5.2
Other	0.3	0.7	<0.1

TOTAL WEIGHT	68.0	174.4
I O IAL WEIGHT	00.0	117.7

^{*}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.

At least 90% of the materials in this product have been assessed and rated against 24 human health and environmental criteria.

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.



BRODY WORKLOUNGE

Total recycled content	11.4	25.1	14
Post-consumer recycled content	6.5	14.3	8
Pre-consumer recycled content	4.9	10.8	6
	kg	lb	%

- 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.



72%

According to the available waste management infrastructures, we estimate that 72% 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

EPD

This product is currently going through the LCA methodology, which results will be communicated through a voluntary Type III Environmental Product Declaration, according to the objectives of ISO 14025.

BIFMA level®

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

Cradle to Cradle Certified™

This product is Cradle to Cradle certified™
Bronze which assesses and rates products for material health, material reutilization, renewable energy and carbon management, water stewardship, and social fairness.

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 MATERIALS

European Ecolabel

A selection of pure wool fabrics are labelled with the European Ecolabel, guaranteeing that it meets stringent quality and environmental performance criteria.

Oeko-Tex

A selection of fabrics are certified with the Oeko-Tex 100 Standard, guaranteeing a limited presence of harmful substances.

ON THE PLANTS

ISO 14001

The plant in Holland, MI is ISO (International Organization for Standardization) 14001 - Environmental management system certified.

¹ Cradle to Cradle Certified™ is a certification mark licensed by the Cradle to Cradle Products Innovation Institute.

² Indoor Advantage™ and Indoor Advantage™ Gold are trademarks of Scientific Certification Systems.

LEED V3 - 2009

Daylight and views

LEED, or Leadership in Energy & Environmental Design, is a green building certification program that recognizes best-in-class building strategies and practices. Brody WorkLounge 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)

EQc8.1 & 8.2

- 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					
		MRc4		Brody WorkLounge contributes to the project recycled	
Recycled content	MRc4	Healthcare: MRc5 Option 3		content criteria: post-consumer (8%) + ½ pre-consumer (6%) = 11.0%.	
Materials reuse	MRc3.2	Healthcare: MRc5 Option 3	MRc2.2: Sustainable purchasing- Furniture	If chosen for reuse, this product can contribute to the 30% valuation of the furniture & furnishings budget.	
Regional materials	MRc5	Healthcare: MRc5 Option 3		Brody WorkLounge is assembled in Holland, MI, Grand Haven, MI and Rockford, MI for Americas, EMEA (Europe, Middle East, Africa), and AP (Asia Pacific) orders. Projects <500 miles from these locations qualify.	
Rapidly renewable materials	MRc6	MRc6		Steelcase offers select textile and surface material options that may contribute to this credit.	
Indoor Enviromental Quality	/				
Low emitting materials	EQc4.5	Healthcare: MRc5 Option 2	N/A	Brody WorkLounge is SCS Indoor Advantage™ Gold (depending on options) certified for indoor air quality in NA.	
Daylight and views	FQc81 & 8 2	FOc8 1 & 8 2*	FOc2 4	Steelcase offers a range of products and application thought	

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

EQc2.4

starters to assist customers in achieving these credits.

EQc8.1 & 8.2*

^{**}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. Brody WorkLounge 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			ING SYSTEM POTENTIAL CONTRIBUTION*	
	ID+C	BD+C	O+M	1	
Materials & Resources					
Interior life cycle impact reduction	MRc2 Option 2: Furniture Reuse	N/A	MRc2.2:	Steelcase products are designed to be long lasting and durable often making reuse a feasible option, depending on project needs and desirability.	
Interior life cycle impact reduction	MRc2 Option 3: Design for flexibility	N/A	Sustainable purchasing- Furniture	If chosen for reuse, this product can contribute to the 30% valuation of the furniture & furnishings budget.	
				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).	
	MRc4 Option 2:	MRc3 Option 2:	MRc5	Bio-based materials - Steelcase offers select textile and surface material options that may contribute to this credit.	
Sourcing of raw materials	Leadership extraction practices	Leadership extraction practices		Wood products - Steelcase offers FSC™ certified wood as an option on select products, which contributes to this option.	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	practices		Materials Reuse (See MRc2) - If chosen for reuse, this product can contribute.	
				Recycled content - Brody WorkLounge [contributes to the project recycled content criteria]: post-consumer (8.0%) + ½ pre-consumer (6.0%) = 11.0%.	
Environmental Product Declarations	MRc3 Option 1: Environmental Product Declaration	MRc2 Option 1: Healthcare MRc7 Option 3: Environmental Product Declaration	N/A	A life cycle assessment is being performed on Brody WorkLounge, the results of which are published through a Type III Environmental Product Declaration (available for viewing).	
		MRc5	MRc4		
Material ingredients	MRc5	Option 1: Material Ingredient Reporting	Option 1: Material Ingredient Reporting	Brody WorkLounge is Cradle to Cradle Certified™, Bronze, which contributes to this credit.	
Indoor Enviromental Quality					
		EQc2			
Low emitting materials	EQc2	Healthcare MRc7 Option 2:	MRc5 Option 2:	Brody WorkLounge is SCS Indoor Advantage™ Gold certified	

Furniture

for indoor air quality in North America.

Option 2:

testing and modeling of chemical content

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

Other Potential LEED V4 Contributions

CREDITS	F	RATING SYSTEM		POTENTIAL CONTRIBUTION*
	ID+C	BD+C	O+M	
Construction & Demolition Waste Planning & Managemen	t			
Planning	MR p2	MR p2	N/A	Steelcase uses several innovative packaging initiatives
		MRc5		to minimize our waste impact (see transport section).
Management	MRc6	Healthcare: MRc9	N/A	These efforts may help to contribute, in part, towards achieving this prerequisite or credit.
				Charles a effect a support of much the analysis that the collection the collection the collection the collection that the collection the collection that the collectio
Quality views	EQc8	EQc8	General	Steelcase offers a range of products and application thought starters, though several other factors play into achieving this credit, beyond the scope of furniture.

Pilot Credits: The following credits are potential contribution areas for Steelcase products and applications					
Environmentally preferable finishes and furnishings	MR Pilot	MR Pilot	N/A	Brody WorkLounge is level® 2 certified, which contributes to this pilot credit.	
Social equity in the supply chain	N/A	MR Pilot	N/A	Brody WorkLounge is level® 2 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.

Output

Description:



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