

## Allsteel Beyond® Solid Steel Demountable Partition



This Environmental Product Declaration, covering all life cycle stages, was prepared in conformity with ISO 14025, ISO 14044, and ISO 21930, and in accordance with the Earthsure Product Category Rule 30162403:2014 for Interior Wall Systems. PCR Review Chair Thomas Gloria, LCACP# 2008-3. EPDs prepared under other programs may not be comparable.



SCS-EPD-05295 | Dates of Validity: January 14, 2019 to January 13, 2024 Version: May 14, 2020

# Allsteel®

**Product:** Beyond offers built-in flexibility that responds to the constant rhythm of business change. With a large selection of aesthetic choices, move beyond permanent drywall solutions and create flexible workspaces that are ready to reconfigure for whatever change the future brings. This EPD is for a Beyond Solid Steel demountable partition.

**Producer:** At Allsteel, we demystify the office planning process by helping our customers align their workplace strategy with their business strategy. With an accessible team and an adaptable portfolio of systems, seating, casegoods, tables, collaborative furniture and architectural walls, we address our customers' needs for today and tomorrow.

# Summary of Life Cycle Impacts and Inventory

## per m<sup>2</sup>-30 yr-meeting IBC requirements for interior walls

Climate Change	87	kg CO <sub>2</sub> -eq
Acidification	0.42	kg SO <sub>2</sub> -eq
Eutrophication	0.50	kg N-eq
Ozone Depletion	7.7x10 <sup>-6</sup>	kg CFC-11-eq
Photochemical Smog	5.2	kg O₃-eq
Ecotoxicity	1,400	CTUe
Human Health – Air	0.14	kg PM2.5-eq
Primary Energy	900	MJ non-renewable
Consumption	170	MJ renewable
Freshwater Consumption	5,700	L
Waste Production	3.3x10 <sup>-2</sup>	kg hazardous
waste i roddetion	34	kg non-hazardous
Material Resource	INA	kg non-renewable
Consumption	0.0	kg renewable
Land Use	110	m <sup>2</sup> -yr

INA: Indicator not assessed

Declaration Owner:	Allsteel			
Address:	2210 Second Avenue, Muscatine, Iowa 52761			
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Independent critical review of				
the LCA and data, according to	□ internal <b>☑</b> external			
ISO 14044 and ISO 14071		_		
LCA Reviewer:	Thomas Gloria, Ph.D., Industrial Ecology Consultants, LCACP#: 2008-3			
Product Category Rule:	Earthsure Product Category Rule 30162403:2014 for Interior Wall Systems			
PCR Review conducted by:	Thomas P. Gloria, Ph.D. (Chair), Industrial Ecology Consultants			
Independent verification of the declaration and data, according to ISO 14025 and the PCR	□ internal <b>☑</b> external			
EPD Verifier:	Thomas Gloria, Ph.D., Industrial Ecology Consultants, LCACP#: 2008-3			
	Product and Company Information			
	Product Specifications			
Declaration Contents:	Summary of Life Cycle Impacts and Inventory			
	Life Cycle Impact Assessment			
	Life Cycle Inventory. 4			
	Hazardous Material Content			
	Additional Environmental Information4			
	Additional Life Cycle Impacts5	_		

**Disclaimers:** This EPD conforms to ISO 14025, 14040, 14044, and ISO 21930.

**Scope of Results Reported:** The PCR requirements limit the scope of the LCA metrics such that the results exclude environmental and social performance benchmarks and thresholds, and exclude impacts from the depletion of natural resources, land use ecological impacts, ocean impacts related to greenhouse gas emissions, risks from hazardous wastes and impacts linked to hazardous chemical emissions.

**Accuracy of Results:** Due to PCR constraints, this EPD provides estimations of potential impacts that are inherently limited in terms of accuracy.

**Comparability:** The PCR this EPD was based on 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.

### LIFE CYCLE IMPACT ASSESSMENT RESULTS

For one square meter of interior wall conforming to the International Building Code for thirty years, using TRACI 2.1 Life Cycle Indicators (CML in parentheses):

Life C	ycle Impact	Total	Stage I Production	Stage II Installation	Stage III Use	Stage IV End of Life	Units
Climate Change	87	69	17	0.0	0.36	kg CO₂ eq	
	Childre Change	(88)	(70)	(18)	(0.0)	(0.38)	kg CO₂ eq
SO <sub>2</sub>	Acidification	0.42	0.34	8.1x10 <sup>-2</sup>	0.0	2.0x10 <sup>-3</sup>	kg SO₂ eq
2000	Acidification	(0.41)	(0.33)	(7.5x10 <sup>-2</sup> )	(0.0)	(1.6x10 <sup>-3</sup> )	kg SO₂ eq
*****	Futrophication	0.50	0.42	0.08	0.0	1.6x10 <sup>-3</sup>	kg N eq
90	Eutrophication	(0.24)	(0.20)	(4.6×10 <sup>-2</sup> )	(0.0)	(8.0×10 <sup>-4</sup> )	kg PO <sub>4</sub> ³- eq
	Ozone	7.7x10 <sup>-6</sup>	5.0x10 <sup>-6</sup>	2.6x10 <sup>-6</sup>	0.0	7.2x10 <sup>-8</sup>	kg CFC-11 eq
\	Depletion	(6.0x10 <sup>-6</sup> )	(4.0x10 <sup>-6</sup> )	(2.0×10 <sup>-6</sup> )	(0.0)	(5.4x10 <sup>-8</sup> )	kg CFC-11 eq
	Photochemical	5.2	3.7	1.5	0.0	3.8x10 <sup>-2</sup>	kg O₃ eq
	Smog	(3.3x10 <sup>-2</sup> )	(2.8x10 <sup>-2</sup> )	(5.1x10 <sup>-3</sup> )	(0.0)	(9.6x10 <sup>-5</sup> )	kg C <sub>2</sub> H <sub>4</sub> eq
	Ecotoxicity	1,400	1,300	86	0.0	57	CTUe
Ecotoxicity	Leotometry	(630)	(580)	(48)	(0.0)	(5.4)	kg 1,4-DB eq
	Human Health- Air	0.14	0.12	2.5x10 <sup>-2</sup>	0.0	2.8x10 <sup>-4</sup>	kg PM2.5 eq

### LIFE CYCLE INVENTORY INFORMATION

For one square meter of interior wall conforming to the International Building Code for thirty years:

Inventory Item	Amount	Units
Primary Energy Consumption	900	MJ non- renewable
	170	MJ renewable
Freshwater Consumption	5,700	L
Waste Production	3.3x10 <sup>-2</sup>	kg hazardous
	34	kg non-hazardous
Material Resource Consumption	INA	kg non-renewable
	0.0	kg renewable
Land use	110	m² yr

INA: Indicator not assessed

#### **HAZARDOUS MATERIAL CONTENT**

For one square meter of interior wall conforming to the International Building Code for thirty years (at least 0.1% using California DTSC Candidate Chemical List).

Material	CAS number	Amount (%)
Aluminum	7429-90-5	20%
Zinc	7440-66-6	1.5%

#### ADDITIONAL ENVIRONMENTAL INFORMATION

VOC emissions per BIFMA X7.1	Passed	
Recycled Content	18% (pre-consumer) 7.2% (post-consumer)	
Other environmental certification programs	Indoor Advantage <sup>TM</sup> Gold; level®2	

#### ADDITIONAL LIFE CYCLE IMPACTS

Additional life cycle impact results are reported below as optional parameters of concern. These impacts are calculated using the LEO-SCS-002 framework, which complements the ISO 14044 standard for LCA with additional guidance on conducting a more comprehensive impact assessment. Results are shown for one square meter of interior wall conforming to the International Building Code for thirty years.

Category Indicator (LEO-SCS-002 Parameters)	Total	Units
Global Climate Change	81	kg CO₂ eq
Ocean Acidification	110	kg H₂CO₃ eq
Energy Resource Depletion	390	MJ eq

Some equivalency factors were determined with the purpose of communicating and interpreting critical environmental impact results in simplified terms for better understanding. The table below provides a summary of select LCI inventory results and impact indicators translated to routine activities which will aid a consumer interpret the scale of potential environmental impact attributed to the product. For example, the primary energy demand for the 1 m<sup>2</sup> of the Allsteel Beyond movable wall system is equivalent to operating a refrigerator for approximately 53 days.

Category Indicator	Life Cycle Impact Assessment Results for 1 m <sup>2</sup> of wall system for 30 years	Basis of Equivalency Metric	1 m <sup>2</sup> of wall system maintained for 30 years
Global Warming Potential (IPCC 100 year time horizon)	87 kg CO₂ eq	Number of miles driven in a typical passenger vehicle	210 miles
Net Water Use	5,700 liters	Number of cycles run in a dishwasher	130 cycles
Primary Energy Demand	1,000 MJ	Number of days operating a refrigerator	53 days
Global Climate Change (LEO-SCS-002)	81 kg CO <sub>2</sub> eq	Number of miles driven in a typical passenger vehicle	180 miles
Energy Resource Depletion (LEO-SCS-002)	390 MJ eq	Number of days operating a refrigerator	21 days



For more information contact:

#### Allsteel Inc

2210 Second Avenue, Muscatine, IA 52761 800.255.7833 | http://www.allsteeloffice.com/



#### **SCS Global Services**

2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA Main +1.510.452.8000 | fax +1.510.452.8001