



Canadian Institute of Steel Construction (CISC) Environmental Product Declaration (EPD)

Fabricated Structural Steel Plates (Unpainted)



Environmental
Product
Declaration

CSA Group Registered
Based on ISO 14025
and Other Requirements

For more information visit
csaregistries.ca/epd

#1750-6104
Dec 2021 - 2026

The development of this industry average environmental product declaration (EPD) for **fabricated structural steel plates (unpainted) manufactured in Canada** was commissioned by the **Canadian Institute of Steel Construction (CISC)**. This Type III EPD was developed in compliance with CAN/CSA-ISO 14025.

This EPD includes life cycle assessment (LCA) results for raw material supply, transport and manufacturing (cradle-to-gate). The LCA was performed by Groupe AGÉCO.


CISC fabricators authorized to use this industry average EPD are listed here: <http://www.cisc-icca.ca/sustainability/EPD>.


For more information about CISC, please go to www.cisc-icca.ca.

Issue date: December 13, 2021

Minor amendment: May 6, 2022

This environmental product declaration (EPD) is in accordance with CAN/CSA-ISO 14025, ISO 21930:2017 and the PCR noted below. EPDs within the same product category but from different programs may not be comparable.

EPD program operator	CSA Group  178 Rexdale Blvd, Toronto, ON, Canada M9W 1R3 www.csagroup.org
General program instructions	CSA-SDP-5-13 CSA Group program operator rules for Type III environmental product declarations (2013)
Manufacturer name and address	Canadian Institute of Steel Construction (CISC) 445 Apple Creek Blvd., Suite 102, Markham ON, Canada L3R 9X7 www.cisc-icca.ca
Declaration number	#1750-6104
Declaration product & declared unit	1 metric ton and 1 short ton of unpainted fabricated structural steel plates with a density of 7,800 kg/m ³ or 487 lb/ft ³
Reference PCR and version number	Product Category Rule Guidance for Building-Related Products and Services Part A: Life Cycle Assessment Calculation Rules and Report Requirements (version 3.2) UL Environment Product Category Rule Guidance for Building-Related Products and Services Part B: Designated Steel Construction Product EPD Requirements (version 2.0) UL Environment Valid until August 2025 UN CPC code: 412
Markets of applicability	Canada
Date of issue	December 13, 2021
Period of validity	December 13, 2021 - December 12, 2026
EPD type	Industry-average
Dataset variability	See Table 7, page 16
EPD scope	Cradle-to-gate A1-A3
Year(s) of reported primary data	January 2019-December 2020
LCA software & version number	SimaPro 9
LCI database(s) & version number	Ecoinvent 3.6 Background dataset for North American steel plate, published by American Iron and Steel Institute (AISI, 2020) LCI of steel scrap from Worldsteel Association (2021)

LCIA methodology & version number	TRACI 2.1	
The sub-category PCR review was conducted by:	Thomas Gloria, Industrial Ecology Consultants (chair) Brandie Sebastian, JBE Consultants James Littlefield, Independent Consultant	
This declaration was independently verified in accordance with ISO 14025:2006. The UL Environment "Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Project Report," v3.2 (December 2018), in conformance with ISO 21930:2017, serves as the core PCR, with additional considerations from the USGBC/UL Environment Part A Enhancement (2017).	<input type="checkbox"/> Internal	<input checked="" type="checkbox"/> External
This life cycle assessment was conducted in accordance with ISO 14044 and the reference PCR by:	Groupe AGÉCO 1995, Frank-Carrel Street, suite 219 Quebec (Quebec) G1N 4H9	
The life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	Thomas Gloria, Ph.D. Industrial Ecology Consultants 35 Bracebridge Rd., Newton, MA 02459-1728 t.gloria@industrial-ecology.com www.industrial-ecology.com	
Limitations The environmental impact results of steel products in this document are based on a declared unit and therefore do not provide sufficient information to establish comparisons. The results shall not be used for comparisons without knowledge of how the physical properties of the steel product impact the precise function at the construction level. The environmental impact results shall be converted to a functional unit basis before any comparison is attempted. See Section 3.10 for additional EPD comparability guidelines. Environmental declarations from different programs (ISO 14025) may not be comparable.		



CISC
Environmental Product
Declaration
Summary sheet

Fabricated
Structural Steel
Plates
(Unpainted)

This is a summary of the industry average environmental product declaration (EPD) describing the environmental performance of fabricated structural steel plates (unpainted) manufactured in Canada. This EPD is only applicable to structural steel sourced from Canadian and US steel mills. CISC fabricators authorized to use this EPD are listed on the CISC website: www.cisc-icca.ca/sustainability/EPD.

cisc icca
CANADIAN INSTITUTE OF STEEL CONSTRUCTION
INSTITUT CANADIEN DE LA CONSTRUCTION EN ACIER



EPD commissioner and owner Canadian Institute of Steel Construction (CISC)	Period of validity December 13, 2021- December 12, 2026	Program operator and registration number CSA Group #1750-6104	Product Category Rule Product Category Rule Guidance for Building-Related Products and Services Part B: Designated Steel Construction Product EPD Requirements v.2	LCA and EPD consultants Groupe AGÉCO
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Product description

Unpainted fabricated structural steel plates as specified by CSA G40.21, ASTM A36, ASTM A709 and ASTM A514 standards (ASTM A36 / A36 M-19, 2019; ASTM A514 / A514M-18e1, 2014; ASTM A709 / A709M-18 2044; CSA, 2020)

Declared units

1 metric ton and 1 short ton of unpainted fabricated structural steel plate with a density of 7,800 kg/m³ or 487 lb/ft³.

Material content (% of total product mass)

Steel: 100%

Scope and system boundary

Cradle-to-gate: production (A1 to A3).

What is a Life Cycle Assessment (LCA)?

LCA is a science-based and internationally recognized tool to evaluate the relative potential environmental and human health impacts of products and services throughout their life cycle, beginning with raw material extraction and including all aspects of transportation, production, use, and end-of-life treatment. The method is defined by the International Organization for Standardization (ISO) 14040 and 14044 standards.

Why an Environmental Product Declaration (EPD)?

CISC fabricator members are seeking to communicate their environmental performances to clients and to position their products through a rigorous and recognized approach, an EPD. By selecting products with an EPD, building projects can earn credits towards the Leadership in Energy and Environmental Design (LEED) rating system certification, among others. In the latest versions of the program (LEED v4 and v4.1), points are awarded in the Materials and Resources category.

This EPD summary provides an overview of the full ISO 14025 compliant EPD registered with CSA Group.