

## TOOLBOX TALK #1

# Understanding an Environmental Product Declaration (EPD)

(10 minutes)



Sustainability is a driving force in today's construction industry, and structural steel is uniquely positioned to lead the way. The structural steel industry is committed to unparalleled transparency and accessibility. Domestic structural steel delivers on this, even without special procurement considerations. The domestic structural steel industry naturally supports full project team alignment in meeting shared sustainability goals—helping GCs, designers, and fabricators work more efficiently toward environmental and performance benchmarks.

### QUESTION: What is an EPD?

An Environmental Product Declaration (EPD) summarizes and declares the results of a Life Cycle Assessment (LCA). It's a standardized document that provides detailed and third-party verified information about the environmental impacts of a product throughout its lifecycle. It follows international standards and covers aspects such as raw material extraction and collection, production, transportation, use, and end-of-life disposal or recycling. For specifiers, an EPD offers transparent data that can inform sustainable design decisions, support green building certifications like LEED or GreenGlobes, and help in selecting materials that align with environmental performance goals.

EPDs are analogous to a food nutrition label that is associated with a particular building material. It includes information that includes:

- Manufacturer / company information
- Product identification information
- Life Cycle Assessment (LCA) methodology
- Product Category Rules (PCR)
- Data on raw material acquisition
- Content of materials
- Chemical substances
- Efficiency and energy use
- Emissions (to air, soil, and water)
- Waste generation
- Analysis of the LCA Results

<b>Nutrition Facts</b>	
<b>8 servings per container</b>	
Serving size 2/3 cup (55g)	
Amount per 2/3 cup	
<b>Calories</b>	<b>230</b>
% DV*	
<b>12%</b> Total Fat	8g
<b>5%</b> Saturated Fat	1g
	Trans Fat 0g
<b>0%</b> Cholesterol	0mg
<b>7%</b> Sodium	160mg
<b>12%</b> Total Carbs	37g
<b>14%</b> Dietary Fiber	4g
	Sugars 1g
	Added Sugars 0g
	Protein 3g
<b>10%</b> Vitamin D	2mcg
<b>20%</b> Calcium	260mg
<b>45%</b> Iron	8mg
<b>5%</b> Potassium	235mg

<b>Environmental Facts</b>	
<b>3 servings per box culvert</b>	
Serving size 1 ton	
Amount per ton	
<b>GWP</b>	<b>305</b> kg CO2 eq
2.34E-05	Ozone Depletion Potential
1.04 kg	Acidification Potential
0.09 kg	Eutrophication Potential
2870 MJ	Total primary energy consumption
2340 MJ	Nonrenewable energy
530 MJ	Renewable energy
Total Waste Disposed	
3.20 kg	Non-hazardous waste generated
0 kg	Hazardous waste generated
Material resources consumption	
780 kg	Nonrenewable material
24 kg	Renewable material
2510 L	Net fresh water

## TOOLBOX TALKS

What if you could help your clients build a sustainable structure without incurring any additional costs or schedule delays?

The American structural steel you're already working with—even without specifying anything special—is the most sustainable structural material on the market.

Owners may not know this. You can be an expert partner in their sustainability-minded projects.

[aisc.org/sustainability](https://aisc.org/sustainability)

# TOOLBOX TALK #1

# Understanding an Environmental Product Declaration (EPD)

(10 minutes)

**ENVIRONMENTAL PRODUCT DECLARATION**  
**FABRICATED HOT-ROLLED STRUCTURAL SECTIONS**  
 AMERICAN INSTITUTE OF STEEL CONSTRUCTION



The United States structural steel industry is a leading manufacturer of steel products and services for the U.S. building, bridge, and industrial markets. The American Institute of Steel Construction (AISC) is the industry's leading authority on steel design and construction. AISC is committed to providing the highest quality steel products and services to its customers. AISC is also committed to environmental stewardship and has developed the Environmental Product Declaration (EPD) program to provide transparency and accountability in the steel supply chain.

Use of this EPD is limited to AISC members. Member names are available at [www.aisc.org](http://www.aisc.org).



There are two types for the structural steel industry, industry average and mill specific.

« Industry-wide EPDs report weighted average results from all domestic suppliers. They are an appropriate reference for initial whole-building life cycle assessments (WBLCA) before you've made specific procurement decisions. AISC publishes three EPDs that cover the major types of structural steel found in construction: hot-rolled sections (such as wide flange beams), plate, and hollow structural sections (HSS).

**ENVIRONMENTAL PRODUCT DECLARATION**  
**FABRICATED STEEL PLATE**  
 AMERICAN INSTITUTE OF STEEL CONSTRUCTION



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Mill-specific EPDs » report environmental results from one specific location, which are representative of the particular steel delivered to your jobsite. Once you have settled on procurement, you can use mill-specific EPDs for a customized WBLCA for your project. Nearly 100% of all domestic structural steel products are covered by mill specific EPDs, which is a level of coverage unmatched by any other material. Whether your fabricator is sourcing from a steel distribution center or a mill order, an EPD for that product can be found at [aisc.org/epd](http://aisc.org/epd).

**ENVIRONMENTAL PRODUCT DECLARATION**  
**FABRICATED HOLLOW STRUCTURAL SECTIONS**  
 AMERICAN INSTITUTE OF STEEL CONSTRUCTION  
 STEEL TUBE INSTITUTE



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A new 2025 life cycle assessment (LCA) report is available for hot-rolled structural steel sections, which shows an 11% reduction in embodied carbon from the current 2021 industry-wide EPD. Learn more at [aisc.org/11-percent](http://aisc.org/11-percent).

**ENVIRONMENTAL PRODUCT DECLARATION**  
**FABRICATED HOLLOW STRUCTURAL SECTIONS**  
 ATLAS TUBE A DIVISION OF ZIEHL-INGENIEURWERKE



Atlas Tube is a leading manufacturer of hollow structural sections (HSS) for the U.S. building, bridge, and industrial markets. Atlas Tube is committed to providing the highest quality steel products and services to its customers. Atlas Tube is also committed to environmental stewardship and has developed the Environmental Product Declaration (EPD) program to provide transparency and accountability in the steel supply chain.

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**Environmental Product Declaration**  
 Form 341-100-1000

**Fabricated Structural Steel Sections**



**Steel Dynamics, Inc.**  
 Lead Product Group  
 Structural and Rail Division

Issue Date: June 30, 2022  
 Valid Until: June 30, 2027

Declaration Number: 341

Expires 12/31/2024. All other terms, conditions, and restrictions apply.

**ENVIRONMENTAL PRODUCT DECLARATION**  
**FABRICATED HOT-ROLLED STRUCTURAL STEEL SECTIONS**  
 NUCOR CORPORATION



Nucor is a leading manufacturer of hot-rolled structural steel sections for the U.S. building, bridge, and industrial markets. Nucor is committed to providing the highest quality steel products and services to its customers. Nucor is also committed to environmental stewardship and has developed the Environmental Product Declaration (EPD) program to provide transparency and accountability in the steel supply chain.

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[aisc.org/askaisc](http://aisc.org/askaisc)  
[solutions@aisc.org](mailto:solutions@aisc.org)  
 866.ASK.AISC