CERTIFIED
ENVIRONMENTAL PRODUCT DECLARATION
UL.COM/EPD

EPD **Transparency Summary**

COMPANY NAME	**American Galvanizers Assoc.**
PRODUCT TYPE	**Hot-Dip Galvanized Steel**
PRODUCT NAME	Hot-Dip Galvanized Hollow Structural Sections (HSS)
PRODUCT DEFINITION	Hot-dip galvanized steel is used in building, bridge, and industrial applications to combat steel corrosion throughout North America.
PRODUCT CATEGORY RULE (PCR)	North American PCR for Designated Steel Construction Products v1.0, 2015
CERTIFICATION PERIOD	**September 22, 2016 - September 22, 2021**
DECLARATION NUMBER	**11345278.101.1**

LIFECYCLE IMPACT CATEGORIES

The environmental impacts listed below were assessed throughout the product's lifecycle – including raw material extraction, transportation, manufacturing, packaging, use, and disposal at end of life.

	ATMOSPHERE			WATER		EARTH	
	Global Warming Potential refers to long-term changes in global weather patterns – including temperature and precipitation – that are caused by increased concentrations of greenhouse gases in the atmosphere.	**Ozone Depletion Potential** is the destruction of the stratospheric ozone layer, which shields the earth from ultraviolet radiation that's harmful to life, caused by human-made air pollution.	**Photochemical Ozone Creation Potential** happens when sunlight reacts with hydrocarbons, nitrogen oxides, and volatile organic compounds, to produce a type of air pollution known as smog.	**Acidification Potential** is the result of human-made emissions and refers to the decrease in pH and increase in acidity of oceans, lakes, rivers, and streams – a phenomenon that pollutes groundwater and harms aquatic life.	**Eutrophication Potential** occurs when excessive nutrients cause increased algae growth in lakes, blocking the underwater penetration of sunlight needed to produce oxygen and resulting in the loss of aquatic life.	**Depletion of Abiotic Resources (Elements)** refers to the reduction of available non-renewable resources, such as metals and gases, that are found on the periodic table of elements, due to human activity.	**Depletion of Abiotic Resources (Fossil Fuels)** refers to the decreasing availability of non-renewable carbon-based compounds, such as oil and coal, due to human activity.
TRACI	**2.66** metric ton CO2 eq	**Not Reported**	**0.0116** metric ton O3 eq	**0.00988** metric ton SO2 eq	**0.000502** metric ton N eq	**Not Reported**	
CML	**2.66** metric ton CO2 eq	**Not Reported**	**0.00167** metric ton C2H2 eq	**0.00967** metric ton SO2 eq	**0.0008087** metric ton PO43- eq	**Not Reported**	**29,475** MJ

FUNCTIONAL UNIT: One metric ton (1000kg) of galvanized structural steel product

Environment

MATERIAL CONTENT

Material content measured to 1%.

COMPONENT	MATERIAL	AVAILABILITY	MASS%	ORIGIN
Building Material	Steel	Recyclable	96-99	Worldwide
Protective Coating	Zinc	Reyclable	1-4	Worldwide

ADDITIONAL ENVIRONMENTAL INFORMATION

PRE-CONSUMER RECYCLED CONTENT	15.6 %
POST-CONSUMER RECYCLED CONTENT	56.1 %
VOC EMISSIONS	None
WATER CONSUMPTION	

RECYCLING OR REUSE

The primary components (zinc and steel) are both 100% recyclable.

The material can either be reused, by stripping and regalvanizing the steel (without reprocessing) or it can be recycled at a steel recycling facility, where the zinc will be captured in the EAF dust and sent to a zinc recycler for reprocessing.

ENERGY

RENEWABLE ENERGY	4 %	1169.7 MJ
NON-RENEWABLE ENERGY	96 %	31,200 MJ

STANDARDS

ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanizing) Coatings on Iron and Steel Products

CERTIFICATIONS

MANUFACTURER CONTACT INFO

NAME	American Galvanizers Association (AGA)
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