

HPD UNIQUE IDENTIFIER:

CLASSIFICATION: 09 097 13.23 Finishes: Exterior Steel Coatings

PRODUCT DESCRIPTION: Hot-dip galvanizing is the process of immersing steel in molten zinc. There are three types of zinc run in galvanizing kettles in North America. This HPD covers Prime Western zinc, which are comprised of 98% zinc metal. When applied to the steel product, the zinc coating will account for approximately 2% of the final material weight. This HPD takes into account the 2% zinc coating as well as the base steel - making it a complete HPD for a hot-dip galvanized steel product processed in a kettle with prime western zinc.

Section 1: Summary

Basic Method/Product Threshold

CONTENT INVENTORY

Inventory Reporting Format	Threshold Level	Residuals/Impurities
<input type="radio"/> Nested Materials Method	<input type="radio"/> 100 ppm	<input checked="" type="radio"/> Considered
<input checked="" type="radio"/> Basic Method	<input checked="" type="radio"/> 1,000 ppm	<input type="radio"/> Partially Considered
	<input type="radio"/> Per GHS SDS	<input type="radio"/> Not Considered
Threshold Disclosed Per	<input type="radio"/> Other	Explanation(s) provided for Residuals/Impurities?
<input type="radio"/> Material		<input checked="" type="radio"/> Yes <input type="radio"/> No
<input checked="" type="radio"/> Product		

All Substances Above the Threshold Indicated Are:

Characterized ☐ Yes Ex/SC ☒ Yes ☐ No
% weight and role provided for all substances

Screened ☐ Yes Ex/SC ☒ Yes ☐ No

Screened using Priority Hazard Lists with results disclosed

Identified ☐ Yes Ex/SC ☒ Yes ☐ No
Disclosed by Name (Specific or Generic) and Identifier

CONTENT IN DESCENDING ORDER OF QUANTITY

Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

MATERIAL | SUBSTANCE | RESIDUAL OR IMPURITY
GREENSCREEN SCORE | HAZARD TYPE

HOT-DIP GALVANIZED STEEL - PRIME WESTERN ZINC
[STEEL (STEEL) NoGS ZINC (ZINC) LT-P1 | AQU | END | MUL | PHY]

Number of Greenscreen BM-4/BM-3 contents: UNK

Contents highest concern GreenScreen
Benchmark or List translator Score: LT-P1

Nanomaterial: No contents are characterized as nanomaterial

INVENTORY AND SCREENING NOTES:

Hot-dip galvanized coating comprises approximately only 2% of the final material weight. This HPD takes into account the 2% of Prime Western zinc coating as well as the base metal.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC content data is not applicable for this product category

CERTIFICATIONS AND COMPLIANCE See Section 3 for additional listings.

VOC Emissions: N/A

CONSISTENCY WITH OTHER PROGRAMS

Third Party Verified?	PREPARER:	SCREENING DATE:
<input type="radio"/> Yes	VERIFIER:	PUBLISHED DATE:
<input checked="" type="radio"/> No	VERIFICATION #:	EXPIRY DATE:



This section lists contents in a product based on specific threshold(s) and reports detailed health information including hazards. This HPD uses the inventory method indicated above, which is one of three possible methods:

- Basic Inventory method with Product-level threshold.
- Nested Material Inventory method with Product-level threshold.
- Nested Material Inventory method with individual Material-level thresholds.

Definitions and requirements for the three inventory methods and requirements for each data field can be found in the HPD Open Standard version 2.2, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-2-standard.

PRODUCT NAME Hot-Dip Galvanized Steel - Prime Western Zinc

PRODUCT THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Considered

RESIDUALS/IMPURITIES NOTES:

Zinc per ASTM B6 is the primary material used in the coating for hot-dip galvanized steel. Impurities are noted in ASTM B6.

OTHER PRODUCT NOTES:

Steel is the base material for the hot-dip galvanized coating.

SUBSTANCE NAME STEEL

ID: 12597-69-2

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2021-01-19

%: 98

GS: UNK

RC: UNK

NANO: No

SUBSTANCE ROLE: Structure component

HAZARD TYPES:

AGENCIES AND LIST TITLES:

WARNINGS:

None Found

No warnings on the HPD Priority Lists

SUBSTANCE NOTES:

Steel is the most recycled material in the world. The Steel Recycling Institute reports 56.9% post-consumer recycled content and 31.4% pre-consumer recycled content.

<https://ssabwebsitecdn.azureedge.net/-/media/files/en/americas/025-safety-data-sheet--steel-tube-structural-sds--ssab002-102018.pdf?m=20181107141843>

SUBSTANCE NAME ZINC

ID: 7440-66-6

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2021-01-19

%: 2

GS: UNK

RC: UNK

NANO: No

SUBSTANCE ROLE: Galvanizing

HAZARD TYPES:

AGENCIES AND LIST TITLES:

WARNINGS:

ACUTE AQUATIC

EU - GHS (H-Statements)

CHRON AQUATIC

EU - GHS (H-Statements)

ENDOCRINE

TEDX - Potential Endocrine Disruptors

MUTIPLE

German FEA - Substances Hazardous to Waters

PHYSICAL HAZARD

EU - GHS (H-Statements)

(REACTIVE)

EU - GHS (H-Statements)

PHYSICAL HAZARD

(REACTIVE)

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

Potential Endocrine Disruptor

Class 2 - Hazard to Waters

H250 - Catches fire spontaneously if exposed to air

H260 - In contact with water releases flammable gases which may ignite spontaneously

SUBSTANCE NOTES:

Correct hazard statements if any are listed in the SDS for Prime Western Zinc. General zinc health information can be found at the International Zinc Association's website at <http://www.zinc.org>.

Example SDS for Prime Western Zinc <https://www.teck.com/media/Zinc-with-controlled-Lead.pdf>



Section 3: Certifications and Compliance

This section lists applicable certification and standards compliance information for VOC emissions and VOC content. Other types of health or environmental performance testing or certifications completed for the product may be provided.

VOC Emissions - N/A

CERTIFYING PARTY: _____ ISSUE DATE: _____ EXPIRY DATE: _____

CERTIFIER OR LAB:

APPLICABLE FACILITIES:

CERTIFICATE URL:

CERTIFICATION AND COMPLIANCE NOTES:

Environmental Product Declaration for Hot-Dip Galvanized Structural Steel (LCA)

CERTIFYING PARTY: Self-Declared ISSUE DATE: 9/22/2016 EXPIRY DATE: 9/22/2021

CERTIFIER OR LAB: Underwriters Laboratory (EPD)

APPLICABLE FACILITIES: Member names are available at <https://galvanizeit.org/education-and-resources/publications/galvasource>

CERTIFICATE URL: <https://galvanizeit.org/hot-dip-galvanizing/is-galvanizing-sustainable/hdg-and-leed/environmental-product-declaration-epd>

CERTIFICATION AND COMPLIANCE NOTES:

Certification is for the Environmental Product Declaration (EPD) for Hot-Dip Galvanized Structural Steel. The EPD covers the Life Cycle Analysis (LCA) of hot-dip galvanizing.



Section 4: Accessories

This section lists related products or materials that the manufacturer requires or recommends for installation (such as adhesives or fasteners), maintenance, cleaning, or operations. For information relating to the contents of these related products, refer to their applicable Health Product Declarations, if available.

No accessories are required for this product



Section 5: General Notes

**MANUFACTURER INFORMATION**

MANUFACTURER: American Galvanizers Association

ADDRESS: 6881 S. Holly Circle, Suite 108
Centennial, CO 80112WEBSITE: www.galvanizeit.org

CONTACT NAME: Thomas Langill, Ph.D.

TITLE: Technical Director

PHONE: 720.361.4486

EMAIL: aga@galvanizeit.org*The listed contact is responsible for the validity of this HPD and attests that it is accurate and complete to the best of his or her knowledge.***KEY**

Hazard Types

AQU Aquatic toxicity	GLO Global warming	OZO Ozone depletion
CAN Cancer	LAN Land Toxicity	PBT Persistent Bioaccumulative Toxic
DEV Developmental toxicity	MAM Mammalian/systemic/organ toxicity	PHY Physical Hazard (reactive)
END Endocrine activity	MUL Multiple hazards	REP Reproductive toxicity
EYE Eye irritation/corrosivity	NEU Neurotoxicity	RES Respiratory sensitization
GEN Gene mutation	NF Not found on Priority Hazard Lists	SKI Skin sensitization/irritation/corrosivity
		UNK Unknown

GreenScreen

BM-4 Benchmark-4 (prefer – safer chemical)	LT-P1 List Translator Possible Benchmark-1 (possible Benchmark-1)
BM-3 Benchmark-3 (use but still opportunity for improvement)	LT-1 List Translator Likely Benchmark-1 (likely Benchmark-1)
BM-2 Benchmark-2 (use but search for safer substitutes)	LT-UNK List Translator Benchmark Unknown
BM-1 Benchmark-1 (avoid – chemical of high concern)	NoGS No GreenScreen
BM-U Benchmark Unspecified (due to insufficient data)	

GreenScreen Benchmark scores sometimes also carry subscripts, which provide more context for how the score was determined. These are DG (data gap), TP (transformation product), and CoHC (chemical of high concern). For more information, see 2.2.2.4 GreenScreen® for Safer Chemicals, www.greenscreenchemicals.org, and Best Practices for Hazard Screening on the HPDC website (hpd-collaborative.org).

Recycled Content Types

PreC Preconsumer (Post-Industrial)
PostC Postconsumer
Both Both Preconsumer and Postconsumer
UNK Inclusion of recycled content is unknown
None Does not include recycled content

Other Terms

GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

Inventory Methods:

Nested Method / Material Threshold Substances listed within each material per threshold indicated per material
Nested Method / Product Threshold Substances listed within each material per threshold indicated per product
Basic Method / Product Threshold Substances listed individually per threshold indicated per product
Nano Composed of nano scale particles or nanotechnology
Third-Party Verified Verification by independent certifier approved by HPDC
Preparer Third-party preparer, if not self-prepared by manufacturer
Applicable facilities Manufacturing sites to which testing applies

The Health Product Declaration (HPD) Open Standard provides for the disclosure of product contents and potential associated human and environmental health hazards. Hazard associations are based on the HPD Priority Hazard Lists, the GreenScreen List Translator™, and when available, full GreenScreen® assessments. The HPD Open Standard is not:

- a method for the assessment of exposure or risk associated with product handling or use,
- a method for assessing potential health impacts of: (i) substances used or created during the manufacturing process or (ii) substances created after the product is delivered for end use.

Information about life cycle, exposure and/or risk assessments performed on the product may be reported by the manufacturer in appropriate Notes sections, and/or, where applicable, in the Certifications section.

The HPD Open Standard was created and is supported by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry that is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.

The product manufacturer and any applicable independent verifier are solely responsible for the accuracy of statements and claims made in this HPD and for compliance with the HPD standard noted.