

CLASSIFICATION: 09 097 13.23 Finishes: Exterior Steel Coatings

created via: HPD Fillable Form

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 High Grade and/or Special High Grade zinc, which are comprised of 99% 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 high grade or special high grade zinc.

 **Section 1: Summary**

Basic Method/Product Threshold

CONTENT INVENTORY

Inventory Reporting Format	Threshold Level	Residuals/Impurities	<i>Are All Substances Above the Threshold Indicated:</i>
<input type="radio"/> Nested Materials Method	<input type="radio"/> 100 ppm	<input checked="" type="radio"/> Considered	Characterized <input checked="" type="radio"/> Yes <input type="radio"/> No
<input checked="" type="radio"/> Basic Method	<input type="radio"/> 1,000 ppm	<input type="radio"/> Partially Considered	<i>Percent Weight and Role Provided?</i>
Threshold Disclosed Per	<input checked="" type="radio"/> Per GHS SDS	<input type="radio"/> Not Considered	Screened <input checked="" type="radio"/> Yes <input type="radio"/> No
<input checked="" type="radio"/> Material	<input type="radio"/> Per OSHA MSDS	Explanation(s) provided for Residuals/Impurities?	<i>Using Priority Hazard Lists with Results Disclosed?</i>
<input type="radio"/> Product	<input type="radio"/> Other	<input checked="" type="radio"/> Yes <input type="radio"/> No	Identified <input checked="" type="radio"/> Yes <input type="radio"/> No
			<i>Name and Identifier Provided?</i>

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.

Number of Greenscreen BM-4/BM-3 contents: UNK
 Contents highest concern GreenScreen Benchmark or List translator Score: UNK
 Nanomaterial:

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

Steel, 98% - UNK, Not found on HPD Priority List
 Zinc, 2% - UNK, Not found on HPD Priority List

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 High Grade or Special High Grade 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

N/A

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 2.1, available on the HPDC website at: www.hpdc-collaborative.org/hpd-2-1-standard

Hot-Dip Galvanized Steel - Special High Grade Zinc

PRODUCT THRESHOLD: per GHS SDS

RESIDUALS AND IMPURITIES CONSIDERED: Considered

RESIDUALS/IMPURITIES NOTES:

Zinc per ASTM B 6 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.

Steel

ID: 12597-69-2

%: 98 GS: UNK RC: UNK NANO: No ROLE: Base

HAZARDS: None Found AGENCY(IES) WITH WARNINGS: No warnings found 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://ssabwebsitescdn.azureedge.net/-/media/files/en/americas/025-safety-data-sheet--steel-tube-structural-sds--ssab002-102018.pdf?m=20181107141843>

High Grade or Special High Grade Zinc

ID: 7440-66-6

%: 2 GS: UNK RC: UNK NANO: No ROLE: Coating

HAZARDS: None AGENCY(IES) WITH WARNINGS: No warnings found on the HPD Priority Lists

Correct hazard statements if any are listed in the SDS for Special High Grade Zinc. General zinc health information can be found at the International Zinc Association's website at <http://www.zinc.org>. <https://www.teck.com/media/Zinc-Metal-2018-SDS-.pdf>

ID:

%, GS:, RC:, NANO:, ROLE:

HAZARDS AGENCY(IES) WITH WARNINGS:

SUBSTANCE NOTES:

ID:

%, GS:, RC:, NANO:, ROLE:

HAZARDS AGENCY(IES) WITH WARNINGS:

SUBSTANCE NOTES:



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

Not Applicable - No VOC Emissions

CERTIFYING PARTY:
CERTIFIER OR LAB:
APPLICABLE FACILITIES:
CERTIFICATE URL:
CERTIFICATION AND COMPLIANCE NOTES:

Type of Certification

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 www.galvanizeit.org/galvanizers/**
CERTIFICATE URL:
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.

CERTIFYING PARTY:
CERTIFIER OR LAB:
APPLICABLE FACILITIES:
CERTIFICATE URL:
CERTIFICATION AND COMPLIANCE NOTES:

CERTIFYING PARTY:
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CERTIFICATION AND COMPLIANCE NOTES:



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.

Not Applicable

HPD URL:

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:



Section 5: General Notes



MANUFACTURER INFORMATION

MANUFACTURER: American Galvanizers Association

CONTACT NAME: Thomas Langill, Ph.D.

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KEY

OSHA MSDS Occupational Safety and Health Administration Material Safety Data Sheet
GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

Hazard Types

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

GreenScreen (GS)

- BM-4 Benchmark 4 (prefer-safer chemical)
BM-3 Benchmark 3 (use but still opportunity for improvement)
BM-2 Benchmark 2 (use but search for safer substitutes)
BM-1 Benchmark 1 (avoid - chemical of high concern)
BM-U Benchmark Unspecified (insufficient data to benchmark)
LT-P1 List Translator Possible Benchmark 1
LT-1 List Translator Likely Benchmark 1
LT-UNK List Translator Benchmark Unknown (insufficient information from List Translator lists to benchmark)
NoGS Unknown (no data on List Translator Lists)

Recycled 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

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 v2.1 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.