

HPD UNIQUE IDENTIFIER: 713402368

CLASSIFICATION: 03 15 19 Cast-In Concrete Anchors

PRODUCT DESCRIPTION: HTA-CE(HTA) HZA Anchor Channel – The product portfolio of HALFEN cast-in anchor channel systems comprise cast-in anchor channels type HTA-CE (HTA), and type HZA, with corresponding hook-head channel bolts and hammer-head channel bolts identified as HS (for HTA-CE and HTA), and HZS (for HZA). The anchor channel comprises a C-shaped steel profile with mounted anchors on the channel back. These anchors are formed as round bolt anchors or I-anchors. The anchors are mounted on the channel back by riveting (round bolt anchors) or welding (I-anchors). The assembled channels are the hot dip galvanized to provide corrosion protection. The inner section of the channel is then filled with a PE foam which prevents concrete from entering the channel during casting of the concrete.

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format	Threshold Level	Residuals/Impurities Evaluation	<i>For all contents above the threshold, the manufacturer has:</i>
☐ Nested Materials Method	☒ 100 ppm	☒ Completed	Characterized ☒ Yes ☐ No
☒ Basic Method	☐ 1,000 ppm	☐ Partially Completed	<i>Provided weight and role.</i>
Threshold Disclosed Per	☐ Per GHS SDS	☐ Not Completed	Screened ☒ Yes ☐ No
☐ Material	☐ Other	Explanation(s) provided :	<i>Provided screening results using HPDC-approved methods.</i>
☒ Product		☒ Yes ☐ No	Identified ☒ Yes ☐ No
			<i>Provided name and CAS RN or other identifier.</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.

PRODUCT | **MATERIAL OR SUBSTANCE** | *RESIDUAL OR IMPURITY*

GREENSCREEN SCORE | HAZARD TYPE

HTA & HZA HDG ANCHOR CHANNELS [**STEEL** NoGS **ZINC** LT-P1]

MUL | AQU **POLYETHYLENE** LT-UNK **MANGANESE** LT-P1] END | MUL | REP | MAM | AQU **COPPER** LT-P1] MUL | AQU | MAM **ALUMINUM** BM-1] END | PHY | MAM **CARBON** LT-UNK **PHOSPHORUS** BM-2] MAM | PHY | EYE | AQU | SKI **SILICON** LT-UNK **ISOBUTANE** LT-1] CAN | GEN | PHY | MAM **PROPANE** LT-UNK] PHY **LEAD** BM-1] END | PBT | MUL | CAN | DEV | REP | GEN | AQU | MAM **SULFUR** LT-UNK] SKI | MAM]

Number of Greenscreen BM-4/BM3 contents ... 0

Contents highest-concern GreenScreen score(s) (BM-1, LT-1, LT-P1) ... LT-P1, BM-1, LT-1

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

HALFEN worked with the the HPD Third Party Preparer, ToxServices LLC, to screen all intentionally added ingredients in the two product formulations to 100 ppm (0.01%).

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: MAS Certified Green - VOC Emissions

CONSISTENCY WITH OTHER PROGRAMS

No pre-checks completed or disclosed.

Third Party Verified?	PREPARER: Self-Prepared	SCREENING DATE: 2024-02-29
☐ Yes	VERIFIER:	PUBLISHED DATE: 2024-02-29
☒ No	VERIFICATION #:	EXPIRY DATE: 2027-03-01

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 2.3, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-3-standard

HTA & HZA HDG ANCHOR CHANNELS

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes

RESIDUALS AND IMPURITIES NOTES: HALFEN worked with the HPD Third Party Preparer, ToxServices LLC, to confirm that all residuals and impurities have been considered for both HALFEN product formulations under this current HPD.

OTHER PRODUCT NOTES: N/A

STEEL

ID: 12597-69-2

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2024-02-29 13:39:24		
%: 94.2200 - 95.4100	GreenScreen: NoGS	RC: None	NANO: No	SUBSTANCE ROLE: Alloy element	
HAZARD TYPE	LIST NAME AND SOURCE		WARNINGS		
None found			No warnings found on HPD Priority Hazard Lists		
ADDITIONAL LISTINGS	LIST NAME AND SOURCE		NOTIFICATION		
None found			No listings found on Additional Hazard Lists		
SUBSTANCE NOTES:					

ZINC

ID: 7440-66-6

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2024-02-29 13:39:25	
%: 2.9400 - 2.9700	GreenScreen: LT-P1	RC: None	NANO: No	SUBSTANCE ROLE: Corrosion inhibitor
HAZARD TYPE	LIST NAME AND SOURCE		WARNINGS	
MUL	German FEA - Substances Hazardous to Waters		Class 2 - Hazard to Waters	
AQU	GHS - New Zealand		Hazardous to the aquatic environment - acute category 1	
AQU	GHS - New Zealand		Hazardous to the aquatic environment - chronic category 1	

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Antimicrobials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Biological and Environmentally Released Materials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Children's Products
SUBSTANCE NOTES: Part of zinc coating in hot dip galvanized components		

POLYETHYLENE				ID: 9002-88-4
HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2024-02-29 13:39:25	
%: 0.9200 - 1.0000	GreenScreen: LT-UNK	RC: None	NANO: No	SUBSTANCE ROLE: Blowing agent
HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS		
None found		No warnings found on HPD Priority Hazard Lists		
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION		
None found		No listings found on Additional Hazard Lists		
SUBSTANCE NOTES: Foam Component				

MANGANESE				ID: 7439-96-5
HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2024-02-29 13:39:25	
%: 0.5400 - 0.6000	GreenScreen: LT-P1	RC: None	NANO: No	SUBSTANCE ROLE: Alloy element

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
REP	GHS - Japan	H360 - May damage fertility or the unborn child [Toxic to reproduction - Category 1B]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
MAM	GHS - Australia	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - Category 1]
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 3
AQU	GHS - Japan	H401 - Toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 2]
AQU	GHS - Japan	H411 - Toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 2]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPH)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022
		Biological and Environmentally Released Materials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPH)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022
		Children's Products
SUBSTANCE NOTES:		

COPPER		ID: 7440-50-8		
HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2024-02-29 13:39:25		
%: 0.4000 - 0.4500	GreenScreen: LT-P1	RC: None	NANO: No	SUBSTANCE ROLE: Alloy element

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H411 - Toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 2]
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Antimicrobials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Biological and Environmentally Released Materials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Children's Products
SUBSTANCE NOTES:		

ALUMINUM

ID: 7429-90-5

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2024-02-29 13:39:26		
%: 0.0190 - 0.1700	GreenScreen: BM-1	RC: None	NANO: No	SUBSTANCE ROLE: Alloy element	

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H250 - Catches fire spontaneously if exposed to air [Pyrophoric liquids; Pyrophoric solids - Category 1]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
PHY	GHS - Japan	H261 - In contact with water releases flammable gas [Substances and mixtures, which in contact with water, emit flammable gases - Category 2]
PHY	GHS - Malaysia	H250 - Catches fire spontaneously if exposed to air [Pyrophoric liquids; Pyrophoric solids - Category 1]
PHY	GHS - Australia	H250 - Catches fire spontaneously if exposed to air [Pyrophoric liquids; Pyrophoric solids - Category 1]
PHY	GHS - New Zealand	Pyrophoric solids category 1
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Biological and Environmentally Released Materials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Children's Products
SUBSTANCE NOTES:		

CARBON

ID: 7440-44-0

HAZARD DATA SOURCE: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2024-02-29 13:39:26

%: 0.1300 - 0.1400

GreenScreen: LT-UNK

RC: None

NANO: No

SUBSTANCE ROLE: Alloy element

HAZARD TYPE

LIST NAME AND SOURCE

WARNINGS

None found

No warnings found on HPD Priority Hazard Lists

ADDITIONAL LISTINGS

LIST NAME AND SOURCE

NOTIFICATION

RESTRICTED LIST

Green Science Policy Institute (GSPI)

GSPI - Six Classes Precautionary List

Antimicrobials

SUBSTANCE NOTES:

HAZARD DATA SOURCE: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2024-02-29 13:39:26

%: 0.0700 - 0.0800

GreenScreen: BM-2

RC: None

NANO: No

SUBSTANCE ROLE: Alloy element

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
MAM	US EPA - EPCRA Extremely Hazardous Substances	Extremely Hazardous Substances
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1
PHY	GHS - New Zealand	Pyrophoric solids category 1
EYE	GHS - New Zealand	Serious eye damage category 1
AQU	GHS - New Zealand	Hazardous to the aquatic environment - acute category 1
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 1
MAM	Québec CSST - WHMIS 1988	Class D1A - Very toxic material causing immediate and serious toxic effects
SKI	GHS - New Zealand	Skin corrosion category 1A
MAM	GHS - New Zealand	Acute dermal toxicity category 1
MAM	GHS - New Zealand	Acute inhalation toxicity category 1
MAM	GHS - New Zealand	Acute oral toxicity category 1
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Cosmetics & Personal Care Products

SUBSTANCE NOTES:

HAZARD DATA SOURCE: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2024-02-29 13:39:26

%: 0.0400 - 0.0500

GreenScreen: LT-UNK

RC: None

NANO: No

SUBSTANCE ROLE: Alloy element

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES:

%: **0.0000 - 0.0500**

GreenScreen: **LT-1**

RC: **None**

NANO: **No**

SUBSTANCE ROLE: **Blowing agent**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	EU - Annex VI CMRs	Carcinogen Category 1B - Presumed Carcinogen based on animal evidence
GEN	EU - Annex VI CMRs	Mutagen - Category 1B
CAN	GHS - Australia	H350 - May cause cancer [Carcinogenicity - Category 1A or 1B]
GEN	GHS - Australia	H340 - May cause genetic defects [Germ cell mutagenicity - Category 1A or 1B]
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H350 - May cause cancer [Carcinogenicity - Category 1A or 1B]
GEN	EU - GHS (H-Statements) Annex 6 Table 3-1	H340 - May cause genetic defects [Germ cell mutagenicity - Category 1A or 1B]
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H220 - Extremely flammable gas [Flammable gases - Category 1]
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
PHY	Québec CSST - WHMIS 1988	Class B1 - Flammable gases
PHY	GHS - Japan	H220 - Extremely flammable gas [Flammable gases - Category 1]
PHY	GHS - New Zealand	Flammable gas category 1A
PHY	GHS - Australia	H220 - Extremely flammable gas [Flammable gases - Category 1]
GEN	EU - REACH Annex XVII CMRs	Germ cell mutagens: Category 1B
CAN	EU - REACH Annex XVII CMRs	Carcinogens: Category 1A
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Children's Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Formulated Consumer Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Cosmetics & Personal Care Products

SUBSTANCE NOTES: Component of Foam Filler within the channel

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2024-02-29 13:39:27	
%: 0.0000 - 0.0500	GreenScreen: LT-UNK	RC: None	NANO: No	SUBSTANCE ROLE: Blowing agent
HAZARD TYPE	LIST NAME AND SOURCE		WARNINGS	
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1		H220 - Extremely flammable gas [Flammable gases - Category 1]	
PHY	Québec CSST - WHMIS 1988		Class B1 - Flammable gases	
PHY	GHS - Japan		H220 - Extremely flammable gas [Flammable gases - Category 1]	
PHY	GHS - New Zealand		Flammable gas category 1A	
PHY	GHS - Australia		H220 - Extremely flammable gas [Flammable gases - Category 1]	
ADDITIONAL LISTINGS	LIST NAME AND SOURCE		NOTIFICATION	
None found			No listings found on Additional Hazard Lists	
SUBSTANCE NOTES: Foam Component				

LEAD

ID: 7439-92-1

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2024-02-29 13:39:27	
?: 0.0420 - 0.0420	GreenScreen: BM-1	RC: None	NANO: No	SUBSTANCE ROLE: Corrosion inhibitor
HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS		
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor		
PBT	OSPAR - Priority PBTs & EDs & equivalent concern	PBT - Chemical for Priority Action		
PBT	OR DEQ - Priority Persistent Pollutants	Priority Persistent Pollutant - Tier 1		
MUL	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant		
CAN	CA EPA - Prop 65	Carcinogen		
CAN	IARC	Group 2b - Possibly carcinogenic to humans		
CAN	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man		
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen		
DEV	G&L - Neurotoxic Chemicals	Developmental Neurotoxicant		
CAN	US EPA - IRIS Carcinogens	(1986) Group B2 - Probable human Carcinogen		
CAN	IARC	Group 2a - Agent is probably Carcinogenic to humans		
DEV	CA EPA - Prop 65	Developmental toxicity		
PBT	US EPA - Priority PBTs (NWMP)	Priority PBT		
PBT	US EPA - Toxics Release Inventory PBTs	PBT		

DEV	US NIH - Reproductive & Developmental Monographs	Clear Evidence of Adverse Effects - Developmental Toxicity
REP	US NIH - Reproductive & Developmental Monographs	Clear Evidence of Adverse Effects - Reproductive Toxicity
REP	EU - Annex VI CMRs	Reproductive Toxicity - Category 1A
GEN	MAK	Germ Cell Mutagen 3a
REP	CA EPA - Prop 65	Reproductive Toxicity - Female
REP	CA EPA - Prop 65	Reproductive Toxicity - Male
CAN	GHS - Korea	H350 - May cause cancer [Carcinogenicity - Category 1]
REP	GHS - Korea	H360 - May damage fertility or the unborn child [Reproductive toxicity - Category 1]
REP	GHS - Japan	H360 - May damage fertility or the unborn child [Toxic to reproduction - Category 1A]
DEV	GHS - Australia	H360Df - May damage the unborn child. Suspected of damaging fertility [Reproductive toxicity - Category 1A or 1B]
REP	EU - GHS (H-Statements) Annex 6 Table 3-1	H360FD - May damage fertility. May damage the unborn child [Reproductive toxicity - Category 1A or 1B]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
DEV	EU - GHS (H-Statements) Annex 6 Table 3-1	H362 - May cause harm to breast-fed children [Reproductive toxicity, effects on or via lactation]
REP	GHS - New Zealand	Reproductive toxicity category 1
CAN	GHS - New Zealand	Carcinogenicity category 2
CAN	GHS - Japan	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
GEN	GHS - Australia	H341 - Suspected of causing genetic defects [Germ cell mutagenicity - Category 2]
GEN	GHS - Japan	H341 - Suspected of causing genetic defects [Germ cell mutagenicity - Category 2]
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1
AQU	GHS - New Zealand	Hazardous to the aquatic environment - acute category 1
AQU	GHS - Australia	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 1
AQU	GHS - Korea	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]

AQU	GHS - Korea	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
GEN	GHS - New Zealand	Germ cell mutagenicity category 2
MAM	GHS - New Zealand	Acute oral toxicity category 3
REP	GHS - New Zealand	Effects on or via lactation
CAN	GHS - Australia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
REP	EU - SVHC List	Toxic to reproduction - Candidate list
REP	EU - SVHC List	Toxic to reproduction - Prioritized for listing
REP	EU - REACH Annex XVII CMRs	Reproductive toxicants: Category 1A
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Certain Metals
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Core Restrictions
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Biological and Environmentally Released Materials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Children's Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Formulated Consumer Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Footwear, Apparel & Jewelry Products
RESTRICTED LIST	International Living Future Institute (ILFI)	Living Building Challenge 4.0 - Red List of Materials & Chemicals - Effective April 1, 2023 Red List substances to avoid in Living Building Challenge V4.0 projects
SUBSTANCE NOTES: component of hot dip galvanized components		

HAZARD DATA SOURCE: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2024-02-29 13:39:27

%: 0.0200 - 0.0300

GreenScreen: LT-UNK

RC: None

NANO: No

SUBSTANCE ROLE: Alloy element

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
SKI	GHS - New Zealand	Skin irritation category 2
SKI	GHS - Australia	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List
		Antimicrobials

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	MAS Certified Green - VOC Emissions	
CERTIFYING PARTY: Self-declared	ISSUE DATE: 2019-03-19 00:00:00	CERTIFIER OR LAB: Christopher
APPLICABLE FACILITIES: HALFEN USA - Windcrest, Texas HALFEN Gmbh - Langenfeld, Germany	EXPIRY DATE:	Hurd
CERTIFICATE URL:		
CERTIFICATION AND COMPLIANCE NOTES: One is not available for this product (N/A)		

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.

HS T-BOLTS AND HZS T-BOLTS
MANUFACTURER (OR GENERIC): HALFEN
HPD URL: No HPD Available
ACCESSORY TYPE: Fastner
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: HALFEN carbon steel HS T-bolts (for HTA-CE and HTA) and HZS T-bolts (for HZA) are hook-head and hammer head channel bolts that are used to fasten components to the HTA/HZA HDG Anchor Channels. The channels bolts consist of a threaded bolt , hexagonal nut and washer.

Section 5: General Notes

HALFEN worked with the HPD Third Party Preparer, ToxServices LLC, to confirm that full formulation disclosure was obtained to the 100 ppm level, and that all residuals and impurities have been considered under the preparation of this HPD.

MANUFACTURER INFORMATION

MANUFACTURER: **HALFEN GmbH**
ADDRESS: **6467 S Falkenburg Rd**
Riverview, Florida 33578
COUNTRY: **United States**

WEBSITE: **www.halfen.com**
CONTACT NAME: **Cristian Toquica**
TITLE: **VA/VE Engineer**
PHONE: **+1 813 528 0947**
EMAIL: **cristian.toquica@leviat.us**

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

GreenScreen (GS)

BM-4 Benchmark 4 (prefer-safer chemical)	LT-P1 List Translator Possible 1 (Possible Benchmark-1)
BM-3 Benchmark 3 (use but still opportunity for improvement)	LT-1 List Translator 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 Types

PreC Pre-consumer recycled content
PostC Post-consumer recycled content
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 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

