

HPD UNIQUE IDENTIFIER: 1903167755264

CLASSIFICATION: 05 12 00 Structural Steel Framing

PRODUCT DESCRIPTION: Hot-rolled structural steel, including grades: A36, A572, A992, and A6. Hot-Rolled Structural Steel is to be used in metal structures or in composite metal and concrete structures. The product produced is: • H-Beam • I-Beam • Universal Beam • Universal Column • W-Shape • H-Pile • Equal Leg Angle The products are manufactured in accordance with international standards. A complete list of all the compliant standards are located in the "General Notes" section of this HPD.

Section 1: Summary

Nested Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format	Threshold Level	Residuals/Impurities Evaluation	<i>For all contents above the threshold, the manufacturer has:</i>
<input checked="" type="radio"/> Nested Materials Method	<input checked="" type="radio"/> 100 ppm	Completed in 1 of 1 Materials	Characterized <input checked="" type="radio"/> Yes <input type="radio"/> No
<input type="radio"/> Basic Method	<input type="radio"/> 1,000 ppm	Explanation(s) provided for Residuals/Impurities?	<i>Provided weight and role.</i>
Threshold Disclosed Per	<input type="radio"/> Per GHS SDS	<input checked="" type="radio"/> Yes <input type="radio"/> No	Screened <input checked="" type="radio"/> Yes <input type="radio"/> No
<input type="radio"/> Material	<input type="radio"/> Other		<i>Provided screening results using HPDC-approved methods.</i>
<input checked="" type="radio"/> Product			Identified <input checked="" type="radio"/> Yes <input type="radio"/> 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.

NESTED MATERIAL | MATERIAL OR SUBSTANCE | RESIDUAL OR IMPURITY

GREENSCREEN SCORE | HAZARD TYPE

HOT-ROLLED STRUCTURAL STEEL [IRON, ELEMENTAL LT-P1] END
MANGANESE LT-P1 | END | MUL | REP | MAM | AQU **SILICON,**
ELEMENTAL LT-UNK **COPPER** LT-P1 | MUL | AQU | GEN | MAM | EYE |
 SKI **CARBON** LT-UNK **NICKEL** LT-1 | CAN | RES | MUL | MAM | SKI |
 AQU **CHROMIUM** LT-P1 | END | SKI | MAM | REP | RES **ALUMINUM**
BM-1 | END | PHY | MAM **VANADIUM, ELEMENTAL** LT-1 | MUL | CAN |
 GEN **MOLYBDENUM** LT-UNK | MAM | SKI | REP **NIوبيUM** LT-UNK
PHOSPHORUS BM-2 | MAM | PHY | EYE | AQU | SKI **SULFUR,**
PRECIPITATED LT-UNK | SKI | MAM **TITANIUM** LT-UNK | PHY
NITROGEN NoGS **TIN** LT-P1 | MAM | EYE | AQU]

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

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

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

The standards listed in the General Notes do not specify minimum values for any material, only maximum values, therefore all minimum are for the purpose of this HPD and are not exact. Some minimum values may be 0.00 in the actual product. Residuals and impurities are considered in accordance with the HPD Best Practice Guidance, 10.02.17, version 1 "The threshold applied to Residuals and Impurities (R/I) is the same as the threshold applied to intentionally added substances, in terms of level, i.e., 100 ppm or 1000 ppm. Residuals and impurities present below the declared Inventory Threshold do not need to be reported on the HPD." This includes average data as declared in the common product database or in peer-reviewed scientific articles. For this product, no actual material has been tested; therefore residuals and impurities are for informational purposes only and are not a guarantee of presence in the actual building material. The main databases used for researching potential residuals and impurities are Pharos and PubChem (formerly toxnet). Any R/I above the threshold shall be listed on the HPD, otherwise, if none are listed then no residuals or impurities are common in that substance above the threshold. The inventory listed is the inventory as listed for the ASTM International Standard for Hot-Rolled Steel. The actual composition of the steel has not been tested to give exact amounts of each element.

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: Inherently non-emitting source per LEED

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Option 1.

Pre-checked for LEED v4.1 Option 1.

Third Party Verified?

Yes

No

PREPARER: Self-Prepared

VERIFIER:

VERIFICATION #:

SCREENING DATE: 2023-08-11

PUBLISHED DATE: 2023-09-07

EXPIRY DATE: 2026-08-11

Section 2: Content in Descending Order of Quantity

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

HOT-ROLLED STRUCTURAL STEEL %: 99.9000 - 100.0000

PRODUCT THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes MATERIAL TYPE: Metal

RESIDUALS AND IMPURITIES NOTES: Residuals and impurities are considered in accordance with the HPD Best Practice Guidance, 10.02.17, version 1 "The threshold applied to Residuals and Impurities (R/I) is the same as the threshold applied to intentionally added substances, in terms of level, i.e., 100 ppm or 1000 ppm. Residuals and impurities present below the declared Inventory Threshold do not need to be reported on the HPD." This includes average data as declared in the common product database or in peer-reviewed scientific articles. For this product, no actual material has been tested therefore residuals and impurities are for informational purposes only and are not a guarantee of presence in the actual building material. The main databases used for researching potential residuals and impurities are Pharos and PubChem (formerly toxnet). Any R/I above the threshold shall be listed on the HPD, otherwise, if none are listed then no residuals or impurities are common in that substance above the threshold.

OTHER MATERIAL NOTES: The metal alloys for the structural steel grades are listed as an average since all products are produced at the facility in various amounts.

IRON, ELEMENTAL

ID: 7439-89-6

HAZARD DATA SOURCE: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2023-08-11 12:50:20

%: 96.0000 - 98.0000 GreenScreen: LT-P1 RC: UNK NANO: No SUBSTANCE ROLE: Structure component

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: Per the Pharos database possible impurities include ACETIC ANHYDRIDE (108-24-7) and Mica (12001-26-2) at amounts below the threshold or in unknown quantities respectively.

MANGANESE

ID: 7439-96-5

HAZARD DATA SOURCE: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2023-08-11 12:52:54

%: 0.5000 - 1.6500 GreenScreen: LT-P1 RC: UNK 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]
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 3

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: The actual minimum value should be noted at <0.050. The actual minimum may be 0.00 as the standards do not require a minimum value, only a maximum.
Per the Pharos database, all impurities/residuals are below the HPD product threshold.

SILICON, ELEMENTAL

ID: 7440-21-3

HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2023-08-11 12:59:51		
%: 0.1000 - 0.6000	GreenScreen: LT-UNK	RC: UNK	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: The actual minimum value should be noted at <0.10. The actual minimum may be 0.00 as the standards do not require a minimum value, only a maximum.
Per the Pharos database, all possible residuals and impurities are below the HPD product threshold.

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-09-07 8:36:20**%: **0.0010 - 0.4000** GreenScreen: **LT-P1** RC: **UNK** 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]
GEN	GHS - New Zealand	Germ cell mutagenicity category 1
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]
EYE	GHS - New Zealand	Eye irritation category 2
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
SKI	GHS - New Zealand	Skin sensitisation category 1
MAM	GHS - New Zealand	Acute inhalation toxicity category 2
MAM	GHS - New Zealand	Acute oral toxicity category 2
AQU	GHS - New Zealand	Hazardous to the aquatic environment - acute category 1
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 2
AQU	GHS - Australia	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	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 (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: The actual minimum value should be noted at <0.001. The actual minimum may be 0.00 as the standards do not require a minimum value, only a maximum.

Per the Pharos database, all possible residuals and impurities are below the HPD product threshold.

CARBON

ID: 7440-44-0

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-08-11 12:54:56**%: **0.1000 - 0.3000** GreenScreen: **LT-UNK** RC: **UNK** 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 of Problematic Chemicals Antimicrobials

SUBSTANCE NOTES: The actual minimum value should be noted at <0.10. The actual minimum may be 0.00 as the standards do not require a minimum value, only a maximum.

Per the Pharos database, all residuals/impurities are unknown or below the HPD product threshold.

NICKEL

ID: 7440-02-0

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-09-07 8:37:14**%: **0.0010 - 0.3000** GreenScreen: **LT-1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Alloy element**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
CAN	IARC	Group 1 - Agent is Carcinogenic to humans
CAN	CA EPA - Prop 65	Carcinogen
CAN	US NIH - Report on Carcinogens	Known to be a human Carcinogen
CAN	IARC	Group 2b - Possibly carcinogenic to humans
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
RES	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - 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]
MAM	GHS - Australia	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - Category 1]
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
CAN	EU - Annex VI CMRs	Carcinogen Category 2 - Suspected human Carcinogen
SKI	GHS - New Zealand	Skin sensitisation 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
CAN	GHS - Australia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
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 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 Footwear, Apparel & Jewelry Products

SUBSTANCE NOTES: The actual minimum value should be noted at <0.001. The actual minimum may be 0.00 as the standards do not require a minimum value, only a maximum.
Per the Pharos database, all possible residuals and impurities are below the HPD product threshold.

CHROMIUM

ID: 7440-47-3

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-09-07 8:38:17**

%: **0.0010 - 0.3000** GreenScreen: **LT-P1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Alloy element**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
SKI	MAK	Sensitizing Substance Sh - Danger of skin sensitization
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]
REP	GHS - New Zealand	Reproductive toxicity category 2
RES	GHS - Japan	H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled [Respiratory sensitization - 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 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 Cosmetics & Personal Care Products

SUBSTANCE NOTES: The actual minimum value should be noted at <0.001. The actual minimum may be 0.00 as the standards do not require a minimum value, only a maximum.

Per the Pharos database, all possible residuals and impurities are below the HPD product threshold.

ALUMINUM

ID: 7429-90-5

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-09-07 8:44:29**

%: **0.0010 - 0.3000** GreenScreen: **BM-1** RC: **UNK** 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]
PHY	GHS - New Zealand	Flammable solids 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 (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: The actual minimum value should be noted at <0.001. The actual minimum may be 0.00 as the standards do not require a minimum value, only a maximum.

Per the Pharos database, all possible residuals and impurities are below the HPD product threshold.

VANADIUM, ELEMENTAL

ID: 7440-62-2

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-09-07 8:42:28**

%: **0.0010 - 0.1000** GreenScreen: **LT-1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Alloy element**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
CAN	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
GEN	MAK	Germ Cell Mutagen 2
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: The actual minimum value should be noted at <0.001. The actual minimum may be 0.00 as the standards do not require a minimum value, only a maximum.
Per the Pharos database, all possible residuals and impurities are below the HPD product threshold.

MOLYBDENUM

ID: 7439-98-7

HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2023-09-07 8:39:25		
%: 0.0010 - 0.0800	GreenScreen: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS		
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]		
SKI	GHS - Japan	H315 - Causes skin irritation [Skin corrosion / irritation - Category 2]		
REP	GHS - New Zealand	Reproductive toxicity category 2		
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION		
None found		No listings found on Additional Hazard Lists		

SUBSTANCE NOTES: The actual minimum value should be noted at <0.001. The actual minimum may be 0.00 as the standards do not require a minimum value, only a maximum.
Per the Pharos database, all possible residuals and impurities are below the HPD product threshold.

NIOBIUM

ID: 7440-03-1

HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2023-09-07 8:40:53		
%: 0.0010 - 0.0600	GreenScreen: LT-UNK	RC: UNK	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: The actual minimum value should be noted at <0.001. The actual minimum may be 0.00 as the standards do not require a minimum value, only a maximum.

Per the Pharos database, all possible residuals and impurities are below the HPD product threshold.

PHOSPHORUS

ID: 7723-14-0

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-08-11 12:58:23**

%: **0.0010 - 0.0500** GreenScreen: **BM-2** RC: **UNK** 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: The actual minimum value should be noted at <0.001. The actual minimum may be 0.00 as the standards do not require a minimum value, only a maximum.

Per the Pharos database, all possible residuals and impurities are below the HPD product threshold.

SULFUR, PRECIPITATED

ID: 7704-34-9

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-08-11 13:01:25**

%: **0.0010 - 0.0500** GreenScreen: **LT-UNK** RC: **UNK** 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 of Problematic Chemicals Antimicrobials

SUBSTANCE NOTES: The actual minimum value should be noted at <0.001. The actual minimum may be 0.00, as the standards do not require a minimum value, only a maximum.
Per the Pharos database, all possible residuals and impurities are below the HPD product threshold.

TITANIUM

ID: 7440-32-6

HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2023-09-07 8:43:31		
%: 0.0010 - 0.0500	GreenScreen: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS		
PHY	GHS - Japan	H225 - Highly flammable liquid and vapour [Flammable solids - Category 1]		
PHY	GHS - Japan	H250 - Catches fire spontaneously if exposed to air [Pyrophoric solids - Category 1]		
PHY	GHS - Japan	H251 - Self-heating;; may catch fire [Self-heating substances and mixtures - Category 1]		
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION		
None found		No listings found on Additional Hazard Lists		

SUBSTANCE NOTES: The actual minimum value should be noted at <0.001. The actual minimum may be 0.00 as the standards do not require a minimum value, only a maximum.
Per the Pharos database, all possible residuals and impurities are below the HPD product threshold.

NITROGEN

ID: 7727-37-9

HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2023-09-07 8:34:58		
%: 0.0010 - 0.0200	GreenScreen: NoGS	RC: UNK	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
EXEMPT	European Union / European Commission (EU EC)	EU - REACH Exemptions Exempted from REACH Annex IV listing due to intrinsic safety

SUBSTANCE NOTES: The actual minimum value should be noted at <0.001. The actual minimum may be 0.00 as the standards do not require a minimum value, only a maximum.
Per the Pharos database, all possible residuals and impurities are below the HPD product threshold.

TIN

ID: 7440-31-5

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2023-09-07 8:45:27**

#: **0.0010 - 0.0200** GreenScreen: **LT-P1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Alloy element**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]
EYE	GHS - New Zealand	Eye irritation 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]
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
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: The actual minimum value should be noted at <0.001. The actual minimum may be 0.00 as the standards do not require a minimum value, only a maximum.
Per the Pharos database, all possible residuals and impurities are below the HPD product threshold.

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	Inherently non-emitting source per LEED	
CERTIFYING PARTY: Self-declared	ISSUE DATE: 2023-08-11	CERTIFIER OR LAB: None
APPLICABLE FACILITIES: This declaration is not facility specific.	EXPIRY DATE:	
CERTIFICATE URL:		
CERTIFICATION AND COMPLIANCE NOTES: Inherently nonemitting sources: Product is an inherently nonemitting source of VOCs (stone, ceramic, powder-coated metals, plated or anodized metal, glass, concrete, clay brick, and unfinished or untreated solid wood) and has no binders, surface coatings, or sealants that include organic chemicals.		

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

No other information is provided for the product.

The actual minimum value for each substance listed in the section "Substance & Materials" should be noted at <0.001. The actual minimum may be 0.00 as the standards do not require a minimum value, only a maximum.

The products are manufactured in accordance with the following international standards:

ASTM International:

- A36/A36M Standard Specification for Carbon Structural Steel
- A572/A572M Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel
- A992/A992M Standard Specification for Structural Steel Shapes
- A6/A6M Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes and Sheet Piling

EN (European Norms):

- EN 10025-1 Hot rolled products of structural steels - Part 1: General technical delivery conditions
- EN 10025-2 Hot rolled products of structural steels - Part 2: Technical delivery conditions for non-alloy structural steels
- EN 10365 Hot rolled steel channels, I and H sections - Dimensions and masses
- EN 10034 Structural steel I and H sections – Tolerances on shape and dimensions
- EN 10056-1 Structural steel equal and unequal leg angles - Part 1: Dimensions
- EN 10056-2 Structural steel equal and unequal leg angles - Part 2: Tolerances on shape and dimensions

AS/NZS (Australia / New Zealand):

- AS/NZS 3679.1 Structural steel. Part 1: Hot rolled bars and sections

JIS (Japanese Industrial Standards): • JIS G 3101 Rolled steels for general structure

- JIS G 3106 Rolled steels for welded structure
- JIS G 3136 Rolled steels for building structure
- JIS G 3192 Dimensions, shape, mass and permissible variations of hot rolled steel sections

KS (Korean Standards):

- KS D 3503 Rolled steels for general structure
- KS D 3515 Rolled steels for welded structure
- KS D 3866 Hot rolled steel sections for building structure
- KS D 3502 Dimensions, mass and permissible variations of hot rolled steel sections

CSA (Canadian Standards Association):

- CSA G40.20 General requirements for rolled or welded structural quality steel/Structural quality steel

CNS (Chinese National Standard):

- CNS 2947 Rolled steels for welded structure
- CNS 13812 Rolled steels for building structure

IS (Bureau of Indian Standards):

MANUFACTURER INFORMATION

MANUFACTURER: SULB Company B.S.C.(c)
ADDRESS: PO Box 50177
 5MXH+7F Al Hidd
 Hidd Hidd 00000, Kingdom of Bahrain
WEBSITE: <https://www.sulb.com.bh/#!/home>

CONTACT NAME: Robert East
TITLE: Quality Assurance Manager
PHONE: +973 1735-2098
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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

