

HPD UNIQUE IDENTIFIER: 28133

CLASSIFICATION: 08 44 00 Curtain Wall and Glazed Assemblies

PRODUCT DESCRIPTION: VDS Lite by Forster is a narrow style framing system that meets fire ratings of 20-90 minutes. This non-insulated option provides architects with modern design opportunities where a fire rating is required.

Section 1: Summary

Nested Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format	Threshold Level	Residuals/Impurities	
☒ Nested Materials Method	☐ 100 ppm	Considered in 10 of 10 Materials	<i>All Substances Above the Threshold Indicated Are:</i>
☐ Basic Method	☒ 1,000 ppm	Explanation(s) provided for Residuals/Impurities?	Characterized ☐ Yes Ex/SC ☒ Yes ☐ No
Threshold Disclosed Per	☐ Per GHS SDS		<i>% weight and role provided for all substances.</i>
☐ Material	☐ Other	☒ Yes ☐ No	Screened ☐ Yes Ex/SC ☒ Yes ☐ No
☒ Product			<i>All substances screened using Priority Hazard Lists with results disclosed.</i>
			Identified ☐ Yes Ex/SC ☐ Yes ☒ No
			<i>One or more substances not disclosed by Name (Specific or Generic) and Identifier and/ or one or more Special Condition did not follow guidance.</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.

MATERIAL | SUBSTANCE | RESIDUAL OR IMPURITY
GREENSCREEN SCORE | HAZARD TYPE
HOT ROLLED STEEL [IRON LT-P1 | **END NICKEL** LT-1 | CAN | RES | MUL | SKI | MAM **MOLYBDENUM** LT-UNK **VANADIUM** LT-1 | MUL | CAN | GEN **BORON** LT-UNK **NIOBIUM** LT-UNK **COPPER** LT-P1 | GEN **CHROMIUM** LT-P1 | END | SKI | RES **TITANIUM** LT-UNK **3003-H14 ALUMINUM** BM-1 | END | RES | PHY **NITROGEN** NoGS **SULFUR** LT-UNK | SKI **PHOSPHORUS** BM-2 | MAM | PHY **SILICON** LT-UNK **MANGANESE** LT-P1 | END | MUL | REP **CARBON** LT-UNK **] GASKET 1 [NEOPRENE** LT-UNK **ALUMINA TRIHYDRATE** BM-2 | RES **CHLORINATED PARAFFIN WAXES – GENERIC** LT-P1 | CAN | END | AQU | PBT **CARBON BLACK** BM-1 | CAN **ANTIMONY TRIOXIDE** BM-1 | MUL | CAN **ZINC OXIDE** BM-1 | END | RES | MUL | AQU **2-THIAZOLIDINETHIONE, 3-METHYL-** NoGS **] STEEL BEAD [IRON** LT-P1 | END **SULFUR** LT-UNK | SKI **PHOSPHORUS** BM-2 | MAM | PHY **MANGANESE** LT-P1 | END | MUL | REP **SILICON** LT-UNK **CARBON** LT-UNK **COPPER** LT-P1 | GEN **3003-H14 ALUMINUM** BM-1 | END | RES | PHY **NICKEL** LT-1 | CAN | RES | MUL | SKI | MAM **CHROMIUM** LT-P1 | END | SKI | RES **TITANIUM** LT-UNK **VANADIUM** LT-1 | MUL | CAN | GEN **NITROGEN** NoGS **] HOT DIPPED GALVANIZED STEEL [IRON** LT-P1 | END **CHROMIUM** LT-P1 | END | SKI | RES **PHOSPHORUS** BM-2 | PHY | MAM **NICKEL** LT-1 | CAN | RES | MAM | MUL | SKI **TITANIUM** LT-UNK **VANADIUM** LT-1 | MUL | CAN | GEN **NITROGEN** NoGS **3003-H14 ALUMINUM** BM-1 | END | RES | PHY **COPPER** LT-P1 | GEN **SULFUR** LT-UNK | SKI **MANGANESE** LT-P1 | END | MUL | REP **SILICON** LT-UNK **CARBON** LT-UNK **] WELDING WIRE [IRON** LT-P1 | END **CARBON** LT-UNK **MOLYBDENUM** LT-UNK **VANADIUM** LT-1 | MUL | CAN | GEN **TITANIUM** LT-UNK **NICKEL** LT-1 | CAN | RES | MAM | MUL | SKI **SILICON** LT-UNK **COPPER** LT-UNK **CHROMIUM** LT-P1 | END | SKI | RES **MANGANESE** LT-P1 | END | MUL | REP **] STAINLESS STEEL [IRON** LT-P1 | END **NITROGEN** NoGS **CARBON** LT-UNK **SILICON** LT-UNK **MANGANESE** LT-P1 | END | MUL | REP **PHOSPHORUS** BM-2 | PHY | MAM **SULFUR** LT-UNK | SKI **CHROMIUM** LT-P1 | END | SKI | RES **NICKEL** LT-1 | CAN | RES | MAM | MUL | SKI **] PUTTY [PN-1 RESIN** LT-UNK **TALC** BM-1 | CAN **STYRENE** BM-1 | END | CAN | RES | MUL | REP | SKI | EYE |

Number of Greenscreen BM-4/BM3 contents ... 2
Contents highest concern GreenScreen Benchmark or List translator Score ... BM-1
Nanomaterial ... No

INVENTORY AND SCREENING NOTES:
All substances have been disclosed to at least 1,000 ppm of their respective material. Proprietary substances were disclosed by the suppliers with percentages, roles and hazards provided and entered accordingly. Not all substance name and identifiers are disclosed due to their proprietary nature to the supplier or manufacturer, however all substances are screened with their hazards reported.

MAM | DEV **MAGNESIUM CARBONATE** BM-3dg **CONTINUOUS**
FILAMENT GLASS FIBER, NON-RESPIRABLE LT-UNK **QUATERNARY**
AMMONIUM COMPOUNDS, BIS(HYDROGENATED
TALLOWALKYL)DIMETHYL, MONTMORILLONITES NoGS **LIMESTONE**
BM-3dg **QUARTZ** BM-1 | CAN **TITANIUM DIOXIDE (PRIMARY CASRN IS**
13463-67-7) LT-1 | CAN | END **CHLORITE** NoGS **PAINT PRIMER** [
UNDISCLOSED BM-3 **TITANIUM DIOXIDE** LT-1 | CAN | END **BUTYL**
ACETATE LT-UNK **METHYL N-AMYL KETONE** BM-U **ZINC OXIDE** BM-1 |
END | RES | MUL | AQU **PAINT CATALYST** [
HEXAMETHYLENE
DIISOCYANATE HOMOPOLYMER (HDI HOMOPOLYMER) LT-P1 **BUTYL**
ACETATE LT-UNK **1,6-HEXAMETHYLENE DIISOCYANATE** LT-UNK | RES
| SKI | EYE | MAM **PAINT TOP COAT** [
TITANIUM DIOXIDE LT-1 | CAN |
END **UNDISCLOSED** BM-3 **CYCLOHEXANONE** LT-P1 | CAN | END **BUTYL**
ACETATE LT-UNK **METHYL ETHYL KETONE** LT-P1 | END | EYE | PHY
TOLUENE BM-1 | END | DEV | MUL | REP | SKI | PHY | MAM **XYLENES**
BM-1 | END | MUL | REP | SKI **ETHYLBENZENE** BM-1 | END | SKI | CAN |
REP | PHY | MAM]

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
Other: UL Certificate of Compliance Fire Resistance

CONSISTENCY WITH OTHER PROGRAMS
Pre-checked for LEED v4 Material Ingredients Option 1

Third Party Verified?
☐ Yes
☒ No

PREPARER: Self-Prepared
VERIFIER:
VERIFICATION #:

SCREENING DATE: 2022-04-08
PUBLISHED DATE: 2022-04-08
EXPIRY DATE: 2025-04-08

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

HOT ROLLED STEEL		%: 34.8500 - 34.9500	
PRODUCT THRESHOLD: 1000 ppm		RESIDUALS AND IMPURITIES CONSIDERED: Yes	MATERIAL TYPE: Metal
RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were investigated for this material, however based on supplier documentation it was confirmed that no residuals or impurities are present above 1,000 ppm of the product.			
OTHER MATERIAL NOTES: The raw material range is based on content percent from a range of products and product lines that are supported by this HPD			

IRON		ID: 7439-89-6		
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:21		
%: 99.4330 - 100.0000	GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
END	TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor	
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

NICKEL				ID: 7440-02-0
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:45		
%: 0.0000 - 0.0290	GS: LT-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	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
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
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
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H317 - May cause an allergic skin reaction [Skin sensitization - Category 1]
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]
SUBSTANCE NOTES: Substance ranges based on alloy composition.		

MOLYBDENUM

ID: 7439-98-7

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:47		
%: 0.0000 - 0.0040	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found	No warnings found on HPD Priority Hazard Lists			
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

VANADIUM

ID: 7440-62-2

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:46		
%: 0.0000 - 0.0010	GS: LT-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES	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		

SUBSTANCE NOTES: Substance ranges based on alloy composition.

BORON

ID: 7440-42-8

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2022-04-08 10:32:46

%: 0.0000 - 0.0001

GS: LT-UNK

RC: UNK

NANO: No

SUBSTANCE ROLE: Alloy element

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

None found

No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Substance ranges based on alloy composition.

NIOBIUM

ID: 7440-03-1

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2022-04-08 10:32:46

%: 0.0000 - 0.0001

GS: LT-UNK

RC: UNK

NANO: No

SUBSTANCE ROLE: Alloy element

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

None found

No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Substance ranges based on alloy composition.

COPPER

ID: 7440-50-8

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2022-03-22 13:42:59

%: 0.0000 - 0.0260

GS: LT-P1

RC: UNK

NANO: No

SUBSTANCE ROLE: Alloy element

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

GEN

GHS - New Zealand

Germ cell mutagenicity category 1

SUBSTANCE NOTES: Substance ranges based on alloy composition.

CHROMIUM

ID: 7440-47-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2022-04-08 10:32:44

%: 0.0000 - 0.0270

GS: LT-P1

RC: UNK

NANO: No

SUBSTANCE ROLE: Alloy element

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

END

TEDX - Potential Endocrine Disruptors

Potential Endocrine Disruptor

SKI

MAK

Sensitizing Substance Sh - Danger of skin sensitization

RES

AOEC - Asthmagens

Asthmagen (Rs) - sensitizer-induced

SUBSTANCE NOTES: Substance ranges based on alloy composition.

TITANIUM

ID: 7440-32-6

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2022-04-08 10:32:44

%: 0.0000 - 0.0250

GS: LT-UNK

RC: UNK

NANO: No

SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists
SUBSTANCE NOTES: Substance ranges based on alloy composition.		

3003-H14 ALUMINUM

ID: 7429-90-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:43			
%: 0.0000 - 0.0320		GS: BM-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS		
END	TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor		
RES	AOEC - Asthmagens		Asthmagen (Rs) - sensitizer-induced		
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1		H228 - Flammable solid [Flammable solids - Category 1 or 2]		
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1		H261 - In contact with water releases flammable gases [Substances and mixtures which, in contact with water, emit flammable gases - Category 2 or 3]		
SUBSTANCE NOTES: Substance ranges based on alloy composition.					

NITROGEN

ID: 7727-37-9

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:43		
%: 0.0000 - 0.0360	GS: NoGS	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found	No warnings found on HPD Priority Hazard Lists			
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

SULFUR

ID: 7704-34-9

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:42		
%: 0.0000 - 0.0060	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1		H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]	
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

PHOSPHORUS

ID: 7723-14-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:50		
%: 0.0000 - 0.0130	GS: BM-2	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MAM	US EPA - EPCRA Extremely Hazardous Substances	Extremely Hazardous Substances
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H228 - Flammable solid [Flammable solids - Category 1 or 2]
SUBSTANCE NOTES: Substance ranges based on alloy composition.		

SILICON

ID: 7440-21-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:50		
%: 0.0000 - 0.0120	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found			No warnings found on HPD Priority Hazard Lists	
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

MANGANESE

ID: 7439-96-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:51			
%: 0.0000 - 0.3300		GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		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]		
SUBSTANCE NOTES: Substance ranges based on alloy composition.					

CARBON

ID: 7440-44-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:51		
%: 0.0000 - 0.0660	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found			No warnings found on HPD Priority Hazard Lists	
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

GASKET 1

%: 20.2700 - 20.3700

PRODUCT THRESHOLD: 1000 ppm	RESIDUALS AND IMPURITIES CONSIDERED: Yes	MATERIAL TYPE: Polymeric Material
RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were investigated for this material, however based on supplier documentation it was confirmed that no residuals or impurities are present above 1,000 ppm of the product.		

OTHER MATERIAL NOTES: The raw material range is based on content percent from a range of products and product lines that are supported by this HPD

NEOPRENE					ID: 9010-98-4
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2022-04-08 10:32:24		
%: 40.0000 - 50.0000		GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Lubricant
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS		
None found			No warnings found on HPD Priority Hazard Lists		
SUBSTANCE NOTES: Substance ranges based on supplier documentation.					

ALUMINA TRIHYDRATE					ID: 21645-51-2
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2022-04-08 10:32:24		
%: 35.0000 - 45.0000		GS: BM-2	RC: UNK	NANO: No	SUBSTANCE ROLE: Flame retardant
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS		
RES	AOEC - Asthmagens		Asthmagen (Rs) - sensitizer-induced		
SUBSTANCE NOTES: Substance ranges based on supplier documentation.					

CHLORINATED PARAFFIN WAXES – GENERIC					ID: 63449-39-8
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2022-04-08 10:32:31		
%: 5.0000 - 10.0000		GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Flame retardant
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS		
CAN	MAK		Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification		
END	TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor		
END	ChemSec - SIN List		Endocrine Disruption		
AQU	US EPA - PPT Chemical Action Plans		Highly toxic to aquatic organisms		
PBT	EC - CEPA DSL		Persistent, Bioaccumulative and inherently Toxic (PBiTE) to the Environment (based on aquatic organisms)		
PBT	OSPAR - Priority PBTs & EDs & equivalent concern		PBT - Substance of Possible Concern		
SUBSTANCE NOTES: Substance ranges based on supplier documentation.					

CARBON BLACK					ID: 1333-86-4
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2022-04-08 10:32:34		
%: 2.0000 - 8.0000		GS: BM-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Filler

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification
CAN	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CAN	IARC	Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources
SUBSTANCE NOTES: Substance ranges based on supplier documentation.		

ANTIMONY TRIOXIDE
ID: **1309-64-4**

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:35				
%: 1.0000 - 2.5000		GS: BM-1		RC: UNK	NANO: No	SUBSTANCE ROLE: Flame retardant
HAZARD TYPE		AGENCY AND LIST TITLES		WARNINGS		
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		
CAN		GHS - Japan		H350 - May cause cancer [Carcinogenicity - Category 1B]		
CAN		EU - GHS (H-Statements) Annex 6 Table 3-1		H351 - Suspected of causing cancer [Carcinogenicity - Category 2]		
SUBSTANCE NOTES: Substance ranges based on supplier documentation.						

ZINC OXIDE
ID: **1314-13-2**

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:34			
%: 1.0000 - 3.0000		GS: BM-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Curing agent
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS		
END	TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor		
RES	AOEC - Asthmagens		Asthmagen (Rs) - sensitizer-induced		
MUL	German FEA - Substances Hazardous to Waters		Class 2 - Hazard to Waters		
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]		
SUBSTANCE NOTES: Substance ranges based on supplier documentation.					

2-THIAZOLIDINETHIONE, 3-METHYL-				ID: 1908-87-8	
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2022-04-08 10:32:36		
%: 0.5000 - 2.0000		GS: NoGS	RC: UNK	NANO: No	SUBSTANCE ROLE: Curing agent
HAZARD TYPE		AGENCY AND LIST TITLES		WARNINGS	
None found		No warnings found on HPD Priority Hazard Lists			
SUBSTANCE NOTES: Substance ranges based on supplier documentation.					

STEEL BEAD		%: 14.2200 - 14.4200			
PRODUCT THRESHOLD: 1000 ppm		RESIDUALS AND IMPURITIES CONSIDERED: Yes		MATERIAL TYPE: Metal	
RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were investigated for this material, however based on supplier documentation it was confirmed that no residuals or impurities are present above 1,000 ppm of the product.					
OTHER MATERIAL NOTES: The raw material range is based on content percent from a range of products and product lines that are supported by this HPD					

IRON				ID: 7439-89-6	
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2022-04-08 10:32:21		
%: 99.6120 - 100.0000		GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS		
END	TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor		
SUBSTANCE NOTES: Substance ranges based on alloy composition.					

SULFUR				ID: 7704-34-9	
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2022-04-08 10:32:59		
%: 0.0000 - 0.0077		GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS		
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1		H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]		
SUBSTANCE NOTES: Substance ranges based on alloy composition.					

PHOSPHORUS					ID: 7723-14-0
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2022-04-08 10:32:49		
%: 0.0000 - 0.0104		GS: BM-2	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MAM	US EPA - EPCRA Extremely Hazardous Substances	Extremely Hazardous Substances
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H228 - Flammable solid [Flammable solids - Category 1 or 2]
SUBSTANCE NOTES: Substance ranges based on alloy composition.		

MANGANESE

ID: 7439-96-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:48		
#: 0.0000 - 0.2159	GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		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]	
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

SILICON

ID: 7440-21-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:48		
%: 0.0000 - 0.0074	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found	No warnings found on HPD Priority Hazard Lists			
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

CARBON

ID: 7440-44-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:47		
%: 0.0000 - 0.0429	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
None found		No warnings found on HPD Priority Hazard Lists		
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

COPPER

ID: 7440-50-8

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:59		
#: 0.0000 - 0.0216	GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
GEN	GHS - New Zealand	Germ cell mutagenicity category 1
SUBSTANCE NOTES: Substance ranges based on alloy composition.		

3003-H14 ALUMINUM

ID: 7429-90-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:33:04		
%: 0.0000 - 0.0312	GS: BM-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
END	TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor	
RES	AOEC - Asthmagens		Asthmagen (Rs) - sensitizer-induced	
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1		H228 - Flammable solid [Flammable solids - Category 1 or 2]	
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1		H261 - In contact with water releases flammable gases [Substances and mixtures which, in contact with water, emit flammable gases - Category 2 or 3]	
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

NICKEL

ID: 7440-02-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:33:04		
%: 0.0000 - 0.0209	GS: LT-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	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
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
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
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H317 - May cause an allergic skin reaction [Skin sensitization - Category 1]
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]
SUBSTANCE NOTES: Substance ranges based on alloy composition.		

CHROMIUM

ID: 7440-47-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:33:05			
%: 0.0000 - 0.0246		GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE		AGENCY AND LIST TITLES		WARNINGS	
END		TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor	
SKI		MAK		Sensitizing Substance Sh - Danger of skin sensitization	
RES		AOEC - Asthmagens		Asthmagen (Rs) - sensitizer-induced	
SUBSTANCE NOTES: Substance ranges based on alloy composition.					

TITANIUM

ID: 7440-32-6

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:33:06		
%: 0.0000 - 0.0008	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found	No warnings found on HPD Priority Hazard Lists			
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:33:06			
%: 0.0000 - 0.0012		GS: LT-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		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		
SUBSTANCE NOTES: Substance ranges based on alloy composition.					

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2022-04-08 10:33:06		
%: 0.0000 - 0.0030		GS: NoGS	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS		
None found			No warnings found on HPD Priority Hazard Lists		
SUBSTANCE NOTES: Substance ranges based on alloy composition.					

HOT DIPPED GALVANIZED STEEL

%: 13.0000 - 13.1700

PRODUCT THRESHOLD: 1000 ppm	RESIDUALS AND IMPURITIES CONSIDERED: Yes	MATERIAL TYPE: Metal
RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were investigated for this material, however based on supplier documentation it was confirmed that no residuals or impurities are present above 1,000 ppm of the product.		
OTHER MATERIAL NOTES: The raw material range is based on content percent from a range of products and product lines that are supported by this HPD		

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:20		
%: 99.6120 - 100.0000	GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor		
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2018-11-30 15:51:35		
%: 0.0000 - 0.0250		GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
SKI	MAK	Sensitizing Substance Sh - Danger of skin sensitization
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
SUBSTANCE NOTES: Substance ranges based on alloy composition.		

PHOSPHORUS

ID: 7723-14-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2018-11-30 15:51:35		
%: 0.0000 - 0.0100	GS: BM-2	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
PHY	EU - GHS (H-Statements)		H228 - Flammable solid	
MAM	US EPA - EPCRA Extremely Hazardous Substances		Extremely Hazardous Substances	
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

NICKEL

ID: 7440-02-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2018-11-30 15:51:35		
%: 0.0000 - 0.0210	GS: LT-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	EU - GHS (H-Statements)	H351 - Suspected of causing cancer
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	US NIH - Report on Carcinogens	Known to be a human Carcinogen
CAN	IARC	Group 2b - Possibly carcinogenic to humans
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
MAM	EU - GHS (H-Statements)	H372 - Causes damage to organs through prolonged or repeated exposure
RES	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
SKI	EU - GHS (H-Statements)	H317 - May cause an allergic skin reaction
CAN	CA EPA - Prop 65	Carcinogen

SUBSTANCE NOTES: Substance ranges based on alloy composition.

TITANIUM

ID: 7440-32-6

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2018-11-30 15:51:35

%: 0.0000 - 0.0010
 GS: LT-UNK
 RC: UNK
 NANO: No
 SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Substance ranges based on alloy composition.

VANADIUM

ID: 7440-62-2

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2022-04-08 10:32:56

%: 0.0000 - 0.0010
 GS: LT-1
 RC: UNK
 NANO: No
 SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	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

SUBSTANCE NOTES: Substance ranges based on alloy composition.

NITROGEN				ID: 7727-37-9	
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2022-04-08 10:33:00		
%: 0.0000 - 0.0030		GS: NoGS	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS		
None found			No warnings found on HPD Priority Hazard Lists		
SUBSTANCE NOTES: Substance ranges based on alloy composition.					

3003-H14 ALUMINUM

ID: 7429-90-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:33:00		
%: 0.0000 - 0.0310	GS: BM-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor		
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced		
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H228 - Flammable solid [Flammable solids - Category 1 or 2]		
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H261 - In contact with water releases flammable gases [Substances and mixtures which, in contact with water, emit flammable gases - Category 2 or 3]		
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

COPPER					ID: 7440-50-8
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2022-04-08 10:33:01		
%: 0.0000 - 0.0220		GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS		
GEN	GHS - New Zealand		Germ cell mutagenicity category 1		
SUBSTANCE NOTES: Substance ranges based on alloy composition.					

SULFUR				ID: 7704-34-9
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:33:01		
%: 0.0000 - 0.0080	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1		H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]	
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

MANGANESE				ID: 7439-96-5
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:33:02		

%: 0.0000 - 0.2160		GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		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]		
SUBSTANCE NOTES: Substance ranges based on alloy composition.					

SILICON				ID: 7440-21-3	
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2022-04-08 10:33:03		
%: 0.0000 - 0.0070		GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS		
None found			No warnings found on HPD Priority Hazard Lists		
SUBSTANCE NOTES: Substance ranges based on alloy composition.					

CARBON				ID: 7440-44-0	
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2022-04-08 10:33:03		
%: 0.0000 - 0.0430		GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS		
None found			No warnings found on HPD Priority Hazard Lists		
SUBSTANCE NOTES: Substance ranges based on alloy composition.					

WELDING WIRE		%: 9.6600 - 9.8600			
PRODUCT THRESHOLD: 1000 ppm		RESIDUALS AND IMPURITIES CONSIDERED: Yes		MATERIAL TYPE: Metal	
RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were investigated for this material, however based on supplier documentation it was confirmed that no residuals or impurities are present above 1,000 ppm of the product.					
OTHER MATERIAL NOTES: The raw material range is based on content percent from a range of products and product lines that are supported by this HPD					

IRON				ID: 7439-89-6	
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2022-04-08 10:32:22		
%: 80.0000 - 100.0000		GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE		AGENCY AND LIST TITLES		WARNINGS	
END		TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor	
SUBSTANCE NOTES: Substance ranges based on alloy composition.					

CARBON			ID: 7440-44-0		
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2018-11-30 15:51:35		

%: 0.0000 - 1.5000	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found			No warnings found on HPD Priority Hazard Lists	
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

MOLYBDENUM

ID: 7439-98-7

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2018-11-30 15:51:35		
%: 0.0000 - 4.0000	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found	No warnings found on HPD Priority Hazard Lists			
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

VANADIUM

ID: 7440-62-2

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2018-11-30 15:51:35			
%: 0.0000 - 1.0000		GS: LT-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		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		
SUBSTANCE NOTES: Substance ranges based on alloy composition.					

TITANIUM

ID: 7440-32-6

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2018-11-30 15:51:35		
%: 0.0000 - 1.0000	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found	No warnings found on HPD Priority Hazard Lists			
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

NICKEL

ID: 7440-02-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2018-11-30 15:51:35		
%: 0.0000 - 3.0000	GS: LT-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	EU - GHS (H-Statements)	H351 - Suspected of causing cancer
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	US NIH - Report on Carcinogens	Known to be a human Carcinogen
CAN	IARC	Group 2b - Possibly carcinogenic to humans
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
MAM	EU - GHS (H-Statements)	H372 - Causes damage to organs through prolonged or repeated exposure
RES	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
SKI	EU - GHS (H-Statements)	H317 - May cause an allergic skin reaction
CAN	CA EPA - Prop 65	Carcinogen
SUBSTANCE NOTES: Substance ranges based on alloy composition.		

SILICON

ID: 7440-21-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2018-11-30 15:51:35		
%: 0.0000 - 1.0000	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found		No warnings found on HPD Priority Hazard Lists		
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

COPPER

ID: 7440-50-8

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2018-11-30 15:51:35		
%: 0.0000 - 1.0000	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found	No warnings found on HPD Priority Hazard Lists			
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

CHROMIUM

ID: 7440-47-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2021-11-01 10:07:11		
?: 0.0000 - 10.0000	GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
SKI	MAK	Sensitizing Substance Sh - Danger of skin sensitization
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
SUBSTANCE NOTES: Substance ranges based on alloy composition.		

MANGANESE

ID: 7439-96-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:33:02		
%: 0.0000 - 3.0000	GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		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]	
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

STAINLESS STEEL

%: 2.5000 - 2.5300

PRODUCT THRESHOLD: 1000 ppm	RESIDUALS AND IMPURITIES CONSIDERED: Yes	MATERIAL TYPE: Metal
RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were investigated for this material, however based on supplier documentation it was confirmed that no residuals or impurities are present above 1,000 ppm of the product.		
OTHER MATERIAL NOTES: The raw material range is based on content percent from a range of products and product lines that are supported by this HPD		

IRON

ID: 7439-89-6

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:23			
%: 67.1170 - 100.0000		GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS		
END	TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor		
SUBSTANCE NOTES: Substance ranges based on alloy composition.					

NITROGEN

ID: 7727-37-9

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2018-11-30 15:51:35		
%: 0.0000 - 4.8000	GS: NoGS	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found			No warnings found on HPD Priority Hazard Lists	
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

CARBON

ID: 7440-44-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2018-11-30 15:51:35				
%: 0.0000 - 0.0400	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element			
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS					
None found		No warnings found on HPD Priority Hazard Lists					
SUBSTANCE NOTES: Substance ranges based on alloy composition.							

SILICON

ID: 7440-21-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2018-11-30 15:51:35		
%: 0.0000 - 0.5000	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
None found		No warnings found on HPD Priority Hazard Lists		
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

MANGANESE

ID: 7439-96-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2018-11-30 15:51:35		
%: 0.0000 - 1.2100	GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor		
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters		
REP	Japan - GHS	Toxic to reproduction - Category 1B		
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

PHOSPHORUS

ID: 7723-14-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2018-11-30 15:51:35		
%: 0.0000 - 0.0320	GS: BM-2	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
PHY	EU - GHS (H-Statements)	H228 - Flammable solid		
MAM	US EPA - EPCRA Extremely Hazardous Substances	Extremely Hazardous Substances		
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

SULFUR

ID: 7704-34-9

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2018-11-30 15:51:35		
%: 0.0000 - 0.0010	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element	

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
SKI	EU - GHS (H-Statements)	H315 - Causes skin irritation
SUBSTANCE NOTES: Substance ranges based on alloy composition.		
CHROMIUM		ID: 7440-47-3
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2018-11-30 15:51:35
%: 0.0000 - 18.2000	GS: LT-P1	RC: UNK NANO: No SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
SKI	MAK	Sensitizing Substance Sh - Danger of skin sensitization
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
SUBSTANCE NOTES: Substance ranges based on alloy composition.		
NICKEL		ID: 7440-02-0
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2018-11-30 15:51:35
%: 0.0000 - 8.1000	GS: LT-1	RC: UNK NANO: No SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	EU - GHS (H-Statements)	H351 - Suspected of causing cancer
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	US NIH - Report on Carcinogens	Known to be a human Carcinogen
CAN	IARC	Group 2b - Possibly carcinogenic to humans
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
MAM	EU - GHS (H-Statements)	H372 - Causes damage to organs through prolonged or repeated exposure
RES	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
SKI	EU - GHS (H-Statements)	H317 - May cause an allergic skin reaction
CAN	CA EPA - Prop 65	Carcinogen
SUBSTANCE NOTES: Substance ranges based on alloy composition.		

PUTTY

%: 0.1500 - 0.1800

PRODUCT THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were investigated for this material based on supplier documentation and were noted when present above 1000 ppm.

OTHER MATERIAL NOTES: The raw material range is based on content percent from a range of products and product lines that are supported by this HPD

PN-1 RESIN

ID: 26123-45-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2022-04-08 10:32:28

%: 15.0000 - 40.0000

GS: LT-UNK

RC: None

NANO: No

SUBSTANCE ROLE: Polymer species

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

None found

No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Residuals and impurities were investigated for this material based on supplier documentation and were noted when present above 1000 ppm.

TALC

ID: 14807-96-6

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2022-04-08 10:32:29

%: 10.0000 - 30.0000

GS: BM-1

RC: None

NANO: No

SUBSTANCE ROLE: Structure component

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

CAN

MAK

Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification

CAN

IARC

Group 2b - Possibly carcinogenic to humans

SUBSTANCE NOTES: Residuals and impurities were investigated for this material based on supplier documentation and were noted when present above 1000 ppm.

STYRENE

ID: 100-42-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2022-04-08 10:32:29

%: 10.0000 - 30.0000

GS: BM-1

RC: None

NANO: No

SUBSTANCE ROLE: Polymer species

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
END	ChemSec - SIN List	Endocrine Disruption
CAN	CA EPA - Prop 65	Carcinogen
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
CAN	IARC	Group 2a - Agent is probably Carcinogenic to humans
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
CAN	MAK	Carcinogen Group 5 - Genotoxic carcinogen with very slight risk under MAK/BAT levels
END	EU - Priority Endocrine Disruptors	Category 1 - In vivo evidence of Endocrine Disruption Activity
REP	GHS - Japan	H360 - May damage fertility or the unborn child [Toxic to reproduction - Category 1B]
REP	GHS - Japan	H360 - May damage fertility or the unborn child [Toxic to reproduction - Category 1A]
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
EYE	EU - GHS (H-Statements) Annex 6 Table 3-1	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
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]
DEV	EU - GHS (H-Statements) Annex 6 Table 3-1	H361d - Suspected of damaging the unborn child [Reproductive toxicity - Category 2]
SUBSTANCE NOTES: Residuals and impurities were investigated for this material based on supplier documentation and were noted when present above 1000 ppm.		

MAGNESIUM CARBONATE

ID: 546-93-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:30		
%: 7.0000 - 15.0000	GS: BM-3dg	RC: None	NANO: No	SUBSTANCE ROLE: Structure component
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found			No warnings found on HPD Priority Hazard Lists	
SUBSTANCE NOTES: Residuals and impurities were investigated for this material based on supplier documentation and were noted when present above 1000 ppm.				

CONTINUOUS FILAMENT GLASS FIBER, NON-RESPIRABLE

ID: 65997-17-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:32		
%: 5.0000 - 10.0000	GS: LT-UNK	RC: None	NANO: No	SUBSTANCE ROLE: Structure component

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists
SUBSTANCE NOTES: Residuals and impurities were investigated for this material based on supplier documentation and were noted when present above 1000 ppm.		

QUATERNARY AMMONIUM COMPOUNDS, BIS(HYDROGENATED TALLOWALKYL)DIMETHYL, MONTMORILLONITES

ID: 68911-87-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:35		
%: 1.0000 - 5.0000	GS: NoGS	RC: None	NANO: No	SUBSTANCE ROLE: Polymer species
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found	No warnings found on HPD Priority Hazard Lists			
SUBSTANCE NOTES: Residuals and impurities were investigated for this material based on supplier documentation and were noted when present above 1000 ppm.				

LIMESTONE

ID: 1317-65-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:36		
%: 1.0000 - 5.0000	GS: BM-3dg	RC: None	NANO: No	SUBSTANCE ROLE: Structure component
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found			No warnings found on HPD Priority Hazard Lists	
SUBSTANCE NOTES: Residuals and impurities were investigated for this material based on supplier documentation and were noted when present above 1000 ppm.				

QUARTZ

ID: 14808-60-7

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:39		
%: Impurity/Residual	GS: BM-1	RC: None	NANO: Unknown	SUBSTANCE ROLE: Impurity/Residual
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen		
CAN	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route		
CAN	US NIH - Report on Carcinogens	Known to be Human Carcinogen (respirable size - occupational setting)		
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man		
CAN	IARC	Group 1 - Agent is carcinogenic to humans - inhaled from occupational sources		
CAN	IARC	Group 1 - Agent is Carcinogenic to humans		
CAN	GHS - Japan	H350 - May cause cancer [Carcinogenicity - Category 1A]		
CAN	GHS - Australia	H350i - May cause cancer by inhalation [Carcinogenicity - Category 1A or 1B]		
CAN	GHS - New Zealand	Carcinogenicity category 1		

SUBSTANCE NOTES: Residuals and impurities were investigated for this material based on supplier documentation and were noted when present above 1000 ppm.

TITANIUM DIOXIDE (PRIMARY CASRN IS 13463-67-7)

ID: 946525-05-9

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2022-04-08 10:32:38

%, 0.1000 - 1.0000 GS: LT-1 RC: None NANO: No SUBSTANCE ROLE: Brightener

HAZARD TYPE AGENCY AND LIST TITLES WARNINGS

PAINT PRIMER

CAN %: 0.0000 - 4.5100 US CDC - Occupational Carcinogens Occupational Carcinogen

PRODUCT THRESHOLD: 1000 ppm CAN RESIDUALS AND IMPURITIES CONSIDERED: Yes MATERIAL TYPE: Other: Paint
CAN CA EPA - Prop 65 Carcinogen - specific to chemical form or exposure route

RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were not considered as not all substances in this material are screened down to
CAN IARC Group 2B - Possibly carcinogenic to humans - inhaled from
1,000 ppm. occupational sources

OTHER MATERIAL NOTES: The raw material range is based on content percent from a range of products and product lines that are supported by
CAN MAK Carcinogen Group 3A - Evidence of carcinogenic effects
this HPD but not sufficient to establish MAK/BAT value

UNDISCLOSED

END TEDX - Potential Endocrine Disruptors Potential Endocrine Disruptor

ID: Undisclosed

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2022-04-08 10:32:23
CAN MAK Carcinogen Group 4 - Non-genotoxic carcinogen with low

%, 49.5000 - 50.5000 GS: BM-3 RC: None NANO: No SUBSTANCE ROLE: Pigment

CAN EU - GHS (H-Statements) Annex 6 Table 3-1 H351 - Suspected of causing cancer [Carcinogenicity -
HAZARD TYPE AGENCY AND LIST TITLES WARNINGS Category 2]

None found No warnings found on HPD Priority Hazard Lists
SUBSTANCE NOTES: Residuals and impurities were investigated for this material based on supplier documentation and were noted when present
above 1000 ppm.

SUBSTANCE NOTES: This material has been screened but not disclosed as it is deemed proprietary by the supplier.

CHLORITE
TITANIUM DIOXIDE

ID: 1318-59-8
ID: 13463-67-7

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2022-04-08 10:32:38
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2022-04-08 10:32:26

%, 0.1000 - 2.0000 GS: NoGS RC: None NANO: No SUBSTANCE ROLE: Brightener
%, 20.6200 - 20.7200 GS: LT-1 RC: UNK NANO: No SUBSTANCE ROLE: Brightener

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CAN	IARC	Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources
CAN	MAK	Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]

SUBSTANCE NOTES: Substance ranges based on supplier documentation.

BUTYL ACETATE

ID: 123-86-4

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:27		
#: 18.4600 - 18.6600	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Binder
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
None found		No warnings found on HPD Priority Hazard Lists		

SUBSTANCE NOTES: Substance ranges based on supplier documentation.

METHYL N-AMYL KETONE

ID: 110-43-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:30		
#: 8.4000 - 8.5000	GS: BM-U	RC: UNK	NANO: No	SUBSTANCE ROLE: Accelerator
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
None found		No warnings found on HPD Priority Hazard Lists		

SUBSTANCE NOTES: Substance ranges based on supplier documentation.

ZINC OXIDE

ID: 1314-13-2

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:33		
#: 2.5400 - 2.5500	GS: BM-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Curing agent

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
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]
SUBSTANCE NOTES: Substance ranges based on alloy composition.		

PAINT CATALYST

?: 0.0000 - 4.5100

PRODUCT THRESHOLD: 1000 ppm	RESIDUALS AND IMPURITIES CONSIDERED: Yes	MATERIAL TYPE: Other: Catalyst
RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were investigated for this material, however based on supplier documentation it was confirmed that no residuals or impurities are present above 1,000 ppm of the product.		
OTHER MATERIAL NOTES: The raw material range is based on content percent from a range of products and product lines that are supported by this HPD		

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:22		
%: 74.7000 - 74.8000	GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Binder
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found			No warnings found on HPD Priority Hazard Lists	
SUBSTANCE NOTES: HEXAMETHYLENE				

BUTYL ACETATE

ID: 123-86-4

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:26		
%: 25.0000	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Binder
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found			No warnings found on HPD Priority Hazard Lists	
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

1,6-HEXAMETHYLENE DIISOCYANATE

ID: 822-06-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:37		
%: 0.3000 - 0.3500	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Catalyst
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
RES	AOEC - Asthmagens		Asthmagen (G) - generally accepted	
RES	MAK		Sensitizing Substance Sah - Danger of airway & skin sensitization	
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1		H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]	
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1		H317 - May cause an allergic skin reaction [Skin sensitization - Category 1]	
EYE	EU - GHS (H-Statements) Annex 6 Table 3-1		H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]	
RES	EU - GHS (H-Statements) Annex 6 Table 3-1		H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled [Respiratory sensitization - Category 1]	
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1		H331 - Toxic if inhaled [Acute toxicity (inhalation) - Category 3]	
SUBSTANCE NOTES: Substance ranges based on supplier documentation.				

PAINT TOP COAT

%: 0.0000 - 4.5100

PRODUCT THRESHOLD: 1000 ppm	RESIDUALS AND IMPURITIES CONSIDERED: Yes	MATERIAL TYPE: Other: Paint
RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were not considered as not all substances in this material are screened down to 1,000 ppm.		

OTHER MATERIAL NOTES: The raw material range is based on content percent from a range of products and product lines that are supported by this HPD

TITANIUM DIOXIDE

ID: 13463-67-7

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:25			
%: 29.9500 - 30.1500		GS: LT-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Brightener
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS		
CAN	US CDC - Occupational Carcinogens		Occupational Carcinogen		
CAN	CA EPA - Prop 65		Carcinogen - specific to chemical form or exposure route		
CAN	IARC		Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources		
CAN	MAK		Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value		
END	TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor		
CAN	MAK		Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels		
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1		H351 - Suspected of causing cancer [Carcinogenicity - Category 2]		
SUBSTANCE NOTES: Substance ranges based on supplier documentation.					

UNDISCLOSED

ID: Undisclosed

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:25		
%: 25.3200 - 25.5200	GS: BM-3	RC: None	NANO: No	SUBSTANCE ROLE: Filler
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found			No warnings found on HPD Priority Hazard Lists	
SUBSTANCE NOTES: This material is screened but not disclosed as it is deemed proprietary by the supplier.				

CYCLOHEXANONE

ID: 108-94-1

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:27		
%: 19.5100 - 19.7100	GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Catalyst
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
CAN	MAK		Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification	
END	TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor	
SUBSTANCE NOTES: Substance ranges based on alloy composition.				

BUTYL ACETATE

ID: 123-86-4

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:28		
%: 11.4600 - 11.7600	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Binder

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists
SUBSTANCE NOTES: Substance ranges based on supplier documentation.		

METHYL ETHYL KETONE

ID: 78-93-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:31		
%: 6.0300 - 6.1300	GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Catalyst
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
END	TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor	
EYE	EU - GHS (H-Statements) Annex 6 Table 3-1		H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]	
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1		H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]	
SUBSTANCE NOTES: Substance ranges based on supplier documentation.				

TOLUENE

ID: 108-88-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:32		
%: 4.4500 - 4.5500	GS: BM-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Catalyst
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
END	TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor	
DEV	G&L - Neurotoxic Chemicals		Developmental Neurotoxicant	
DEV	CA EPA - Prop 65		Developmental toxicity	
MUL	German FEA - Substances Hazardous to Waters		Class 2 - Hazard to Waters	
REP	CA EPA - Prop 65		Reproductive Toxicity - Female	
REP	GHS - Japan		H360 - May damage fertility or the unborn child [Toxic to reproduction - Category 1A]	
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1		H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]	
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1		H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]	
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1		H304 - May be fatal if swallowed and enters airways [Aspiration hazard - Category 1]	
DEV	EU - GHS (H-Statements) Annex 6 Table 3-1		H361d - Suspected of damaging the unborn child [Reproductive toxicity - Category 2]	
SUBSTANCE NOTES: Substance ranges based on supplier documentation.				

XYLENES

ID: 1330-20-7

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:33		
%: 2.7900 - 2.9900	GS: BM-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Binder

HAZARD TYPE	AGENCY AND LIST TITLES	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]
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
SUBSTANCE NOTES: Substance ranges based on supplier documentation.		

ETHYLBENZENE

ID: 100-41-4

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-04-08 10:32:37			
%: 0.4900 - 0.5900		GS: BM-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Binder
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS		
END	TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor		
SKI	MAK		Sensitizing Substance Sh - Danger of skin sensitization		
CAN	CA EPA - Prop 65		Carcinogen		
CAN	MAK		Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels		
CAN	IARC		Group 2b - Possibly carcinogenic to humans		
REP	GHS - Japan		H360 - May damage fertility or the unborn child [Toxic to reproduction - Category 1B]		
REP	GHS - Japan		H360 - May damage fertility or the unborn child [Toxic to reproduction - Category 1A]		
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1		H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]		
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1		H304 - May be fatal if swallowed and enters airways [Aspiration hazard - Category 1]		
SUBSTANCE NOTES: Substance ranges based on supplier documentation.					

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: Self-declared	ISSUE DATE: 2022-03-	EXPIRY DATE: 2024-	CERTIFIER OR LAB: None.
APPLICABLE FACILITIES: All Facilities	22	03-22	
CERTIFICATE URL:			
CERTIFICATION AND COMPLIANCE NOTES: VOC testing is not applicable to this product			
OTHER	UL Certificate of Compliance Fire Resistance		
CERTIFYING PARTY: Third Party	ISSUE DATE: 2015-	EXPIRY DATE: 2022-	CERTIFIER OR LAB: UL
APPLICABLE FACILITIES: All Facilities	11-03	11-02	
CERTIFICATE URL:			
https://vetrotech.showpad.com/share/3im6d2KdVO2susrS7EqGD			
CERTIFICATION AND COMPLIANCE NOTES: UL Certificate of Compliance Fire Resistance			
https://vetrotech.showpad.com/share/3im6d2KdVO2susrS7EqGD			

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

Vetrotech takes our environmental responsibilities very seriously. We can offer our customers complete assurance that our glass solutions meet internationally recognized environmental standards at every stage of their life cycles. In terms of building sustainability, our solutions come with REACH certification and contribute to the building occupants' comfort and safety. We also support you in gaining points for sustainable building labels such as LEED, BREAM, WELL, DGNB, HQE and others by providing you EPDs and HPDs on demand.

For more information, visit www.vetrotech.com. To learn about how Vetrotech can contribute to green building labels, visit greenbuilding.sant-gobain.com.

MANUFACTURER INFORMATION

MANUFACTURER: Saint Gobain
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 Auburn WA 98001, USA
 WEBSITE: <https://www.vetrotech.com/en/usa/downloads>

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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-1 List Translator 1 (Likely Benchmark-1)
BM-3 Benchmark 3 (use but still opportunity for improvement)	LT-UNK List Translator Benchmark Unknown (the chemical is present on at least one GreenScreen Specified List, but the information contained within the list did not result in a clear mapping to a LT-1 or LTP1 score.)
BM-2 Benchmark 2 (use but search for safer substitutes)	
BM-1 Benchmark 1 (avoid - chemical of high concern)	
BM-U Benchmark Unspecified (due to insufficient data)	
LT-P1 List Translator Possible 1 (Possible Benchmark-1)	NoGS No GreenScreen.

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 for compliance with the HPD standard noted.