## Heegermaterials

### SAFETY DATA SHEET

Revision Date 20-Feb-2024 **Revision Number 4** 

#### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE **COMPANY/UNDERTAKING**

1.1. Product identifier

**Product Description:** Stainless Steel powder Type 316-L

Molecular Formula Fe:Cr:Ni:Mo; 67.5:17:13:2.5 wt%

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Laboratory chemicals. No Information available Uses advised against

1.3. Details of the supplier of the safety data sheet

Heeger Materials Inc. Company

230 Steele St Denver CO 80206

**United States** 

Tel: 925-385-8104

terials sales@heegermaterials.com E-mail address

Web www.heegermaterials.com

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11 1.4. Emergency telephone number

Emergency Number US:001-201-796-7100 / Europe: +32 14 57 52 99 CHEMTREC Tel. No. US:001-800-424-9300 / Europe:001-703-527-3887

#### **SECTION 2: HAZARDS IDENTIFICATION**

#### 2.1. Classification of the substance or mixture

#### CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

#### **Physical hazards**

Based on available data, the classification criteria are not met

#### **Health hazards**

Skin Sensitization Category 1 (H317) Carcinogenicity Category 2 (H351) Specific target organ toxicity - (repeated exposure) Category 1 (H372)

#### Stainless Steel powder Type 316-L

Revision Date 20-Feb-2024

#### **Environmental hazards**

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

#### 2.2. Label elements



Signal Word

**Danger** 

#### **Hazard Statements**

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H372 - Causes damage to organs through prolonged or repeated exposure

#### **Precautionary Statements**

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P201 - Obtain special instructions before use

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P308 + P313 - IF exposed or concerned: Get medical advice/attention

#### 2.3. Other hazards

Tals Inc This product does not contain any known or suspected endocrine disruptors

#### **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.2. Mixtures

Component	CAS No	EC No	Weight %	CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
Iron	7439-89-6	EEC No. 231-096-4	67.5	-
Chromium	7440-47-3	EEC No. 231-157-5	17.0	-
Nickel	7440-02-0	EEC No. 231-111-4	13.0	Skin Sens. 1 (H317) Carc. 2 (H351) STOT RE 1 (H372)
Molybdenum	7439-98-7	EEC No. 231-107-2	2.5	Flam. Sol. 2 (H228)

Full text of Hazard Statements: see section 16

#### **SECTION 4: FIRST AID MEASURES**

Stainless Steel powder Type 316-L

#### 4.1. Description of first aid measures

**General Advice** If symptoms persist, call a physician.

**Eye Contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get

medical attention.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists,

call a physician.

**Ingestion** Clean mouth with water and drink afterwards plenty of water. Get medical attention if

symptoms occur.

**Inhalation** Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if

symptoms occur.

Self-Protection of the First Aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination.

#### 4.2. Most important symptoms and effects, both acute and delayed

May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Revision Date 20-Feb-2024

#### 4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

# SECTION 5: FIREFIGHTING MEASURES

#### 5.1. Extinguishing media

#### Suitable Extinguishing Media

approved class D extinguishers. Do not use water or foam.

#### Extinguishing media which must not be used for safety reasons

No information available.

#### 5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

#### **Hazardous Combustion Products**

Nickel oxides, Molybdenum oxides, Iron oxides, Chromium oxide.

#### 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

#### 6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

#### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Should not be released into the environment. Do not allow material to contaminate ground water system.

#### Stainless Steel powder Type 316-L

Revision Date 20-Feb-2024

#### 6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal.

#### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

#### **SECTION 7: HANDLING AND STORAGE**

#### 7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

#### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

#### 7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Technical Rules for Hazardous Substances (TRGS) 510 Storage Class (LGK) (Germany)

Class 6.1D

#### 7.3. Specific end use(s)

Use in laboratories

# Naterials **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### 8.1. Control parameters

#### **Exposure limits**

List source(s): EU - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC UK - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. IRE - 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

Component	The United Kingdom	European Union	Ireland
Chromium	STEL: 1.5 mg/m <sup>3</sup> 15 min	TWA: 2 mg/m <sup>3</sup> (8hr)	TWA: 2 mg/m <sup>3</sup> 8 hr.
	TWA: 0.5 mg/m <sup>3</sup> 8 hr		STEL: 6 mg/m <sup>3</sup> 15 min
Nickel	STEL: 1.5 mg/m <sup>3</sup> 15 min		TWA: 0.5 mg/m <sup>3</sup> 8 hr.
	TWA: 0.5 mg/m <sup>3</sup> 8 hr		STEL: 1.5 mg/m <sup>3</sup> 15 min
	Skin		
Molybdenum	STEL: 20 mg/m <sup>3</sup> 15 min		
·	TWA: 10 mg/m <sup>3</sup> 8 hr		

#### **Biological limit values**

List source(s):

Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

#### Stainless Steel powder Type 316-L

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Nickel 7440-02-0 ( 13.0 )			DNEL = 0.035mg/cm2	

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Iron 7439-89-6 ( 67.5 )			DNEL = 3mg/m <sup>3</sup>	
Chromium 7440-47-3 ( 17.0 )			DNEL = 0.5mg/m <sup>3</sup>	
Nickel 7440-02-0 ( 13.0 )	DNEL = 11.9mg/m <sup>3</sup>		DNEL = 0.05mg/m <sup>3</sup>	DNEL = 0.05mg/m <sup>3</sup>
Molybdenum 7439-98-7 ( 2.5 )				DNEL = 11.7mg/m <sup>3</sup>

#### **Predicted No Effect Concentration (PNEC)**

See values below.

Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	
Chromium	PNEC = $6.5\mu g/L$	PNEC =			PNEC = 21.1mg/kg
7440-47-3 (17.0)		205.7mg/kg			soil dw
	7	sediment dw			
Nickel	PNEC = $7.1 \mu g/L$	PNEC = 109mg/kg		PNEC = 0.33mg/L	PNEC = 29.9mg/kg
7440-02-0 ( 13.0 )	ヘアカ	sediment dw			soil dw
Molybdenum	PNEC = 12.7mg/L	PNEC =		PNEC = 21.7mg/L	PNEC = 9.9mg/kg
7439-98-7 ( 2.5 )		22600mg/kg			soil dw
		sediment dw			

$4/\rho_{r}$ .							
Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air		
Nickel 7440-02-0 ( 13.0 )	PNEC = 8.6μg/L	PNEC = 109mg/kg sediment dw	4/	PNEC = 0.12mg/kg food			
Molybdenum 7439-98-7 ( 2.5 )	PNEC = 2.28mg/L	PNEC = 2368mg/kg sediment dw		100			

#### 8.2. Exposure controls

#### **Engineering Measures**

Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

#### Personal protective equipment

**Eye Protection** Wear safety glasses with side shields (or goggles) (European standard - EN 166)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Nitrile rubber	480 minutes	0.11mm	EN 374	(minimum requirement)

Skin and body protection Long sleeved clothing.

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Revision Date 20-Feb-2024

Stainless Steel powder Type 316-L

Revision Date 20-Feb-2024

**Respiratory Protection**When workers are facing concentrations above the exposure limit they must use

appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used

and maintained properly

Large scale/emergency use In case of insufficient ventilation, wear suitable respiratory equipment

**Recommended Filter type:** Particulates filter conforming to EN 143

Small scale/Laboratory use Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure

limits are exceeded or if irritation or other symptoms are experienced.

When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls** Prevent product from entering drains. Do not allow material to contaminate ground water

system. Local authorities should be advised if significant spillages cannot be contained.

Solid

Solid

Method - No information available

als Inc

#### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

#### 9.1. Information on basic physical and chemical properties

Physical State Solid

Appearance

Odor
Odor No information available
No data available
No information available

Flammability (liquid) Not applicable

Flammability (solid,gas)
Explosion Limits

No information available
No data available

Flash Point No information available

Autoignition Temperature
Decomposition Temperature
pH

No data available
No data available
No information available

Viscosity
Water Solubility
Solubility in other solvents
Not applicable
Insoluble in water
No information available

Partition Coefficient (n-octanol/water)

Vapor Pressure23 hPa @ 20 °CDensity / Specific GravityNo data availableBulk DensityNo data availableVapor DensityNot applicable

Particle characteristics No data available

9.2. Other information

Molecular Formula Fe:Cr:Ni:Mo; 67.5:17:13:2.5 wt%

Evaporation Rate Not applicable - Solid

#### **SECTION 10: STABILITY AND REACTIVITY**

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Stainless Steel powder Type 316-L

Revision Date 20-Feb-2024

**Hazardous Polymerization Hazardous Reactions** 

No information available.

None under normal processing.

10.4. Conditions to avoid

Incompatible products. Excess heat.

10.5. Incompatible materials

Acids. Strong bases.

#### 10.6. Hazardous decomposition products

Nickel oxides. Molybdenum oxides. Iron oxides. Chromium oxide.

#### **SECTION 11: TOXICOLOGICAL INFORMATION**

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### **Product Information**

(a) acute toxicity;

Based on available data, the classification criteria are not met Oral

**Dermal** No data available No data available Inhalation

#### Toxicology data for the components

Component LD50 Oral		LD50 Dermal	LC50 Inhalation
Iron	7500 mg/kg (Rat)	-	-
Nickel	LD50 > 9000 mg/kg (Rat)	-	LC50 > 10.2 mg/L (Rat) 1 h
Molybdenum	- al	LD50 > 2000 mg/kg (Rat)	LC50 > 5.84 mg/L (Rat) 4 h
(b) skin corrosion/irritation;	No data available	Tals I.	
(c) serious eye damage/irritation;	No data available	41	2C
(d) respiratory or skin sensitization			•

Respiratory No data available Skin Category 1

May cause sensitization by skin contact

No data available (e) germ cell mutagenicity;

Category 2 (f) carcinogenicity;

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	EU	UK	Germany	IARC
Nickel			Cat. 1	Group 2B

No data available (g) reproductive toxicity;

No data available (h) STOT-single exposure;

Category 1 (i) STOT-repeated exposure;

Inhalation Route of exposure

Stainless Steel powder Type 316-L

Revision Date 20-Feb-2024

**Target Organs** Lungs.

Not applicable (j) aspiration hazard;

Solid

delayed

Symptoms / effects, both acute and Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

11.2. Information on other hazards

**Endocrine Disrupting Properties** Assess endocrine disrupting properties for human health. This product does not contain any

known or suspected endocrine disruptors.

#### **SECTION 12: ECOLOGICAL INFORMATION**

12.1. Toxicity **Ecotoxicity effects** 

The product contains following substances which are hazardous for the environment. Contains a substance which is:. Very toxic to aquatic organisms. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Nickel	LC50: > 100 mg/L, 96h	EC50 = 510 μg/L 96h	EC50 = 0.1 mg/L 72h
	(Brachydanio rerio)		EC50 = 0.18 mg/L 72h
	LC50: = 1.3 mg/L, 96h		
	semi-static (Cyprinus carpio)		
	LC50: = 10.4 mg/L, 96h static		
	(Cyprinus carpio)		
	401		

12.2. Persistence and degradability Product contains heavy metals. Discharge into the environment must be avoided. Special

pre-treatment is necessary

Insoluble in water, May persist. **Persistence** Degradation in sewage

Contains substances known to be hazardous to the environment or not degradable in waste treatment plant

water treatment plants.

12.3. Bioaccumulative potential May have some potential to bioaccumulate; Product has a high potential to bioconcentrate

Component	log Pow	Bioconcentration factor (BCF)
Chromium		1.03 - 1.22

Spillage unlikely to penetrate soil Is not likely mobile in the environment due its low water 12.4. Mobility in soil

solubility.

12.5. Results of PBT and vPvB

assessment

No data available for assessment.

12.6. Endocrine disrupting

properties

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects **Persistent Organic Pollutant** 

This product does not contain any known or suspected substance **Ozone Depletion Potential** This product does not contain any known or suspected substance

Revision Date 20-Feb-2024

#### **SECTION 13: DISPOSAL CONSIDERATIONS**

13.1. Waste treatment methods

Waste from Residues/Unused

**Products** 

Waste is classified as hazardous. Dispose of in accordance with the European Directives

on waste and hazardous waste. Dispose of in accordance with local regulations.

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point.

**European Waste Catalogue (EWC)** According to the European Waste Catalog, Waste Codes are not product specific, but

application specific.

Other Information Do not flush to sewer. Waste codes should be assigned by the user based on the

application for which the product was used. Do not empty into drains.

#### **SECTION 14: TRANSPORT INFORMATION**

IMDG/IMO

Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

**ADR** 

Not regulated at Crials Inc.

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

IATA

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards No hazards identified

14.6. Special precautions for user No special precautions required.

14.7. Maritime transport in bulk

according to IMO instruments

Not applicable, packaged goods

#### **SECTION 15: REGULATORY INFORMATION**

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### **International Inventories**

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Iron	7439-89-6	231-096-4	-	-	X	X	KE-21059	Χ	-
Chromium	7440-47-3	231-157-5	-	-	Х	Х	KE-05970	Χ	-

Revision Date 20-Feb-2024

#### Stainless Steel powder Type 316-L

	Nickel	7440-02-0	231-111-4	-	-	Х	Х	KE-25818	Х	-
Γ	Molybdenum	7439-98-7	231-107-2	-	-	Х	X	KE-25427	X	-

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Iron	7439-89-6	Х	ACTIVE	Х	-	Х	Х	Х
Chromium	7440-47-3	Х	ACTIVE	Х	-	Х	Х	Х
Nickel	7440-02-0	Х	ACTIVE	Х	-	Х	Х	Х
Molybdenum	7439-98-7	X	ACTIVE	Х	-	Х	Х	Х

Legend: X - Listed '-' - Not Listed KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

#### Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)			
Iron	7439-89-6	-	-	-			
Chromium	7440-47-3	-	Use restricted. See item 75. (see link for restriction details)	-			
Nickel	7440-02-0 SC7	1/21	Use restricted. See item 27. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	-			
Molybdenum	7439-98-7	1970	-	-			
REACH links https://echa.europa.eu/substances-restricted-under-reach  Seveso III Directive (2012/18/EC)							
Component	CAS No	Seveso III Directive (2012/1 Qualifying Quantities for Majo		Directive (2012/18/EC) - antities for Safety Report			

#### **REACH links**

#### Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) -	Seveso III Directive (2012/18/EC) -
		Qualifying Quantities for Major Accident	Qualifying Quantities for Safety Report
		Notification	Requirements
Iron	7439-89-6	Not applicable	Not applicable
Chromium	7440-47-3	Not applicable	Not applicable
Nickel	7440-02-0	Not applicable	Not applicable
Molybdenum	7439-98-7	Not applicable	Not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

#### **National Regulations**

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

#### Stainless Steel powder Type 316-L

**WGK Classification** Water endangering class = 2 (self classification)

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Iron	nwg	
Chromium	nwg	Class III: 1 mg/m³ (Massenkonzentration)
Nickel	WGK 2	Class II: 0.5 mg/m³ (Massenkonzentration) Krebserzeugende Stoffe - Class II: 0.5 mg/m³ (Massenkonzentration)
Molybdenum	nwg	

Component	France - INRS (Tables of occupational diseases)
Iron	Tableaux des maladies professionnelles (TMP) - RG 44,RG 44bis,RG 94
Chromium	Tableaux des maladies professionnelles (TMP) - RG 10

Component	Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81)	Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC)	Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure
Chromium 7440-47-3 ( 17-0 )	Prohibited and Restricted Substances		
Nickel 7440-02-0 ( 13.0 )	Prohibited and Restricted Substances		

#### 15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

#### **SECTION 16: OTHER INFORMATION**

#### Full text of H-Statements referred to under sections 2 and 3

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H372 - Causes damage to organs through prolonged or repeated exposure

H228 - Flammable solid

H400 - Very toxic to aquatic life

#### Legend

CAS - Chemical Abstracts Service

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

WEL - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

Predicted No Effect Concentration (PNEC)

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from

ATE - Acute Toxicity Estimate



Revision Date 20-Feb-2024

Revision Date 20-Feb-2024

#### Stainless Steel powder Type 316-L

**BCF** - Bioconcentration factor VOC - (Volatile Organic Compound)

Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards On basis of test data **Health Hazards** Calculation method **Environmental hazards** Calculation method

**Training Advice** 

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and

hygiene.

**Prepared By** Health, Safety and Environmental Department

**Revision Date** 20-Feb-2024

**Revision Summary** New emergency telephone response service provider.

#### Disclaimer

interpretation of the second s The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text