

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

Revision Date 24-Mar-2024

Revision Number 5

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

1.1. Product identifier

| Product Description: | Stainless steel rod, type 303 |
|----------------------|-------------------------------|
| Cat No. : | 13473 |

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

| Recommended Use | Laboratory chemicals. |
|----------------------|--------------------------|
| Uses advised against | No Information available |

1.3. Details of the supplier of the safety data sheet

Company

Avocado Research Chemicals Ltd. (Part of Thermo Fisher Scientific) Shore Road, Heysham Lancashire, LA3 2XY, United Kingdom Office Tel: +44 (0) 1524 850506 Office Fax: +44 (0) 1524 850608

E-mail address

begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11 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 Carcinogenicity Specific target organ toxicity - (repeated exposure)

Environmental hazards

Category 1 (H317) Category 2 (H351) Category 2 (H373) Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

2.2. Label elements



Signal Word

Warning

Hazard Statements

- H317 May cause an allergic skin reaction
- H351 Suspected of causing cancer
- H373 May cause damage to organs through prolonged or repeated exposure

Precautionary Statements

- P302 + P352 IF ON SKIN: Wash with plenty of soap and water
- P362 + P364 Take off contaminated clothing and wash it before reuse
- 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

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 | 73 | - |
| Chromium | 7440-47-3 | EEC No. 231-157-5 | 18 | - |
| Nickel | 7440-02-0 | EEC No. 231-111-4 | 9 | Skin Sens. 1 (H317) Carc. 2 (H351) STOT RE 1 (H372) |

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

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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 |
| | None reasonably foreseeable 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 |

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.

Extinguishing media which must not be used for safety reasons Water may be ineffective.

5.2. Special hazards arising from the substance or mixture

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

Hazardous Combustion Products

Iron oxides, Chromium oxide, Nickel oxides.

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. No special precautions required.

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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.

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. Pick up and transfer to properly labelled containers.

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 in a dry place. Keep away from acids.

Technical Rules for Hazardous Substances (TRGS) 510 Class 13 Storage Class (LGK) (Germany)

7.3. Specific end use(s)

Use in laboratories

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 ³ 15 min | TWA: 2 mg/m ³ (8hr) | TWA: 2 mg/m ³ 8 hr. |
| | TWA: 0.5 mg/m ³ 8 hr | | STEL: 6 mg/m ³ 15 min |
| Nickel | STEL: 1.5 mg/m ³ 15 min | | TWA: 0.5 mg/m ³ 8 hr. |
| | TWA: 0.5 mg/m ³ 8 hr | | STEL: 1.5 mg/m ³ 15 min |
| | Skin | | _ |

Biological limit values

List source(s):

Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL) See table for values

| Component | Acute effects local (Dermal) | Acute effects systemic (Dermal) | Chronic effects local (Dermal) | Chronic effects systemic (Dermal) |
|------------------------|---------------------------------|------------------------------------|-----------------------------------|-----------------------------------|
| Nickel 7440-02-0(9) | | | 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 (73) | | | DNEL = 3mg/m ³ | |
| Chromium 7440-47-3(18) | | | DNEL = 0.5mg/m ³ | |
| Nickel 7440-02-0(9) | DNEL = 11.9mg/m ³ | | DNEL = 0.05mg/m ³ | DNEL = 0.05mg/m ³ |

Predicted No Effect Concentration (PNEC)

See values below.

| Component | Fresh water | Fresh water | Water Intermittent | Microorganisms in | Soil (Agriculture) |
|-----------------|----------------|-----------------|--------------------|-------------------|--------------------|
| | | sediment | | sewage treatment | |
| Chromium | PNEC = 6.5µg/L | PNEC = | | | PNEC = 21.1mg/kg |
| 7440-47-3 (18) | | 205.7mg/kg | | | soil dw |
| | | sediment dw | | | |
| Nickel | PNEC = 7.1µg/L | PNEC = 109mg/kg | | PNEC = 0.33mg/L | PNEC = 29.9mg/kg |
| 7440-02-0 (9) | | sediment dw | | _ | soil dw |

| Component | Marine water | Marine water sediment | Marine water intermittent | Food chain | Air |
|---------------|----------------|--------------------------|------------------------------|------------------|-----|
| Nickel | PNEC = 8.6µg/L | PNEC = 109mg/kg | | PNEC = 0.12mg/kg | |
| 7440-02-0 (9) | | sediment dw | | food | |

8.2. Exposure controls

Engineering Measures

None under normal use conditions.

Personal protective equipment

Eye Protection

Hand Protection

No special protective equipment required

| Glove material Disposable gloves | Breakthrough time See manufacturers recommendations | Glove thickness - | EU standard EN 374 | Glove comments (minimum requirement) |
|-------------------------------------|-----------------------------------------------------------|----------------------|-----------------------|-----------------------------------------|
| Skin and body prote | ection Long sle | eved clothing. | | |

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

Skin and body protection Long sleeved clothing.

| Respiratory Protection | No special protective equipment required. |
|---------------------------|--------------------------------------------------------------------------|
| Large scale/emergency use | In case of insufficient ventilation, wear suitable respiratory equipment |

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Small scale/Laboratory useNo personal respiratory protective equipment normally required
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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| Physical State | Solid | |
|---------------------------------------|--------------------------|-----------------------------------|
| Appearance | | |
| Odor | No information available | |
| Odor Threshold | No data available | |
| Melting Point/Range | No data available | |
| Softening Point | No data available | |
| Boiling Point/Range | No information available | |
| Flammability (liquid) | No data available | |
| Flammability (solid,gas) | No information available | |
| Explosion Limits | No data available | |
| Flash Point | No information available | Method - No information available |
| Autoignition Temperature | No data available | |
| Decomposition Temperature | No data available | |
| pH | Not applicable | |
| Viscosity | Not applicable | Solid |
| Water Solubility | No information available | |
| Solubility in other solvents | No information available | |
| Partition Coefficient (n-octanol/wate | er) | |
| Vapor Pressure | No data available | |
| Density / Specific Gravity | No data available | |
| Bulk Density | No data available | |
| Vapor Density | Not applicable | Solid |
| Particle characteristics | No data available | |
| 9.2. Other information | | |

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 | | |
| Hazardous Polymerization Hazardous Reactions | No information available. None under normal processing. | |
| 10.4. Conditions to avoid | Incompatible products. Excess heat. | |

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10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Iron oxides. Chromium oxide. Nickel oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

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

Product Information

| (a) acute toxicity; | |
|---------------------|------------------------------------------------------------------|
| Oral | Based on available data, the classification criteria are not met |
| Dermal | No data available |
| Inhalation | No data available |
| | |

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 |

| (b) skin corrosion/irritation; No | data available |
|-----------------------------------|----------------|
|-----------------------------------|----------------|

(c) serious eye damage/irritation; No data available

| (d) respiratory or skin sensitization Respiratory Skin | ; No data available Category 1 | |
|--------------------------------------------------------------|-----------------------------------------|--|
| | May cause sensitization by skin contact | |
| (e) germ cell mutagenicity; | No data available | |

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 |
| | | | | |
| (g) reproductive toxicity; | No data available | 1 | | |
| | | | | |
| (h) STOT-single exposure; | No data available | 1 | | |
| | | | | |
| (i) STOT-repeated exposure; | Category 2 | | | |
| Target Organs | No information av | vailable. | | |
| | | | | |
| (j) aspiration hazard; | Not applicable | | | |
| | Solid | | | |

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Symptoms / effects,both acute and
delayedSymptoms 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 (Brachydanio rerio) LC50: = 1.3 mg/L, 96h semi-static (Cyprinus carpio) LC50: = 10.4 mg/L, 96h static (Cyprinus carpio) | EC50 = 510 μg/L 96h | EC50 = 0.1 mg/L 72h EC50 = 0.18 mg/L 72h |

| 12.2. Persistence and degradability | Product contains heavy metals. Discharge into the environment must be avoided. Special |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| | pre-treatment is necessary |
| Persistence | May persist. |
| Degradability | Not relevant for inorganic substances. |
| Degradation in sewage treatment plant | Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants. |

12.3. Bioaccumulative potential

Product has a high potential to bioconcentrate

| Component | log Pow | Bioconcentration factor (BCF) |
|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------|
| Chromium | | 1.03 - 1.22 |
| 12.4. Mobility in soil | No information available | |
| <u>12.5. Results of PBT and vPvB</u> assessment | No data available for assessment. | |
| <u>12.6. Endocrine disrupting</u> properties Endocrine Disruptor Information | This product does not contain any known or | suspected endocrine disruptors |
| <u>12.7. Other adverse effects</u> Persistent Organic Pollutant Ozone Depletion Potential | This product does not contain any known or This product does not contain any known or | • |

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 |
|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| <u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> <u>14.4. Packing group</u> | |
| ADR | Not regulated |
| <u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> <u>14.4. Packing group</u> | |
| ΙΑΤΑ | Not regulated |
| <u>14.1. UN number</u> 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

China, X = listed, Australia, U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (KECL), China (IECSC), Japan (ENCS), 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 | - | - | Х | Х | KE-21059 | Х | - |
| Chromium | 7440-47-3 | 231-157-5 | - | - | Х | Х | KE-05970 | Х | - |

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| Nickel | 7440-02-0 | 231-111-4 | - | - | Х | Х | KE-25818 | Х | - |
|-----------|-----------|-----------|---------|---------------------------------|-----|------|----------|-------|-------|
| | | | | | | | | | |
| Component | CAS No | TSCA | notific | iventory ation - Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
| Iron | 7439-89-6 | Х | ACT | IVE | Х | - | Х | Х | Х |
| Chromium | 7440-47-3 | Х | ACT | IVE | Х | - | Х | Х | Х |
| Nickel | 7440-02-0 | Х | ACT | IVE | 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 | - | Use restricted. See item 27. (see link for restriction details) Use restricted. See item 75. (see link for restriction details) | - |

REACH links

https://echa.europa.eu/substances-restricted-under-reach

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 Notification | Qualifying Quantities for Safety Report 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 |

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 work .

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

WGK Classification

Water endangering class = 2 (self classification)

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| Component | Germany - Water Classification (AwSV) | Germany - TA-Luft Class |
|-----------|---------------------------------------|-----------------------------------------------------------|
| Iron | nwg | |
| Chromium | nwg | Class III : 1 mg/m ³ (Massenkonzentration) |
| Nickel | WGK 2 | Class II : 0.5 mg/m ³ (Massenkonzentration) |
| | | Krebserzeugende Stoffe - Class II : 0.5 mg/m ³ |
| | | (Massenkonzentration) |

| 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(18) | Prohibited and Restricted Substances | | |
| | | | |
| Nickel | Prohibited and Restricted | | |
| 7440-02-0 (9) | 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

H373 - May cause damage to organs through prolonged or repeated exposure

H372 - Causes damage to organs through prolonged or repeated exposure

Legend

| CAS - Chemical Abstracts Service EINECS/ELINCS - European Inventory of Existing Commercial Chemical 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 | TSCA - United States Toxic Substances Control Act Section 8(b) Inventory IDSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List ENCS - Japanese Existing and New Chemical Substances AICS - Australian Inventory of Chemical Substances NZIOC - New Zealand Inventory of Chemicals |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 | 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 |
| 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 | ICAO/IATA - International Civil Aviation Organization/International Air Transport Association MARPOL - International Convention for the Prevention of Pollution from Ships ATE - Acute Toxicity Estimate |

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 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 hazardsOn basis of test dataHealth HazardsCalculation methodEnvironmental hazardsCalculation method

Training Advice

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

Prepared By Revision Date Revision Summary Health, Safety and Environmental Department 24-Mar-2024 New emergency telephone response service provider.

This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.

Disclaimer

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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

End of Safety Data Sheet