

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

Creation Date 26-Jun-2009

Revision Date 04-Jul-2024

Revision Number 4

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

1.1. Product identifier

| Product Description: | Silver nitrate, ACS |
|---------------------------|---------------------------|
| Cat No. : | 11414 |
| Synonyms | Nitric acid, silver salt. |
| CAS No | 7761-88-8 |
| EC No | 231-853-9 |
| Molecular Formula | Ag N O3 |
| REACH registration number | - |

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

| Recommended Use Sector of use | Laboratory chemicals. SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites |
|----------------------------------|---|
| Product category | PC21 - Laboratory chemicals |
| Process categories | PROC15 - Use as a laboratory reagent |
| Environmental release category | ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates) |
| 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

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

Physical hazards

Silver nitrate, ACS

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| Oxidizing solids | Category 2 (H272) |
|--|---------------------|
| Substances/mixtures corrosive to metal | Category 1 (H290) |
| Health hazards | |
| Skin Corrosion/Irritation | Category 1 (H314) B |
| Serious Eye Damage/Eye Irritation | Category 1 (H318) |
| Reproductive Toxicity | Category 1B (H360D) |
| Environmental hazards | |
| Acute aquatic toxicity | Category 1 (H400) |
| Chronic aquatic toxicity | Category 1 (H410) |

Full text of Hazard Statements: see section 16



Signal Word

Danger

Hazard Statements

H272 - May intensify fire; oxidizer

H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage

H360D - May damage the unborn child

H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements

P220 - Keep away from clothing and other combustible materials

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

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor/physician

Additional EU labelling

Restricted to professional users

2.3. Other hazards

In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment

Toxicity to Soil Dwelling Organisms Toxic to terrestrial vertebrates This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

-

3.1. Substances

| Component | CAS No | EC No | Weight % | GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567 |
|----------------|-----------|-------------------|----------|---|
| Silver nitrate | 7761-88-8 | EEC No. 231-853-9 | <=100 | Ox. Sol. 2 (H272) Met. Corr. 1 (H290) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Repr. 1B (H360D) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) |

| Component | Specific concentration limits (SCL's) | M-Factor | Component notes |
|----------------|--|-----------------------------------|-----------------|
| Silver nitrate | - | Acute = 1000 Chronic = 100 | - |

REACH registration number

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

| General Advice | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. |
|------------------------------------|--|
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing. |
| Skin Contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately. |
| Ingestion | Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. |
| Inhalation | Remove to fresh air. If not breathing, give artificial respiration. Call a physician or poison control center immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |
| 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 |
| | Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation |

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

Substance is nonflammable; use agent most appropriate to extinguish surrounding fire. CO₂, dry chemical, dry sand, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

No information available.

5.2. Special hazards arising from the substance or mixture

The product causes burns of eyes, skin and mucous membranes. Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.). Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous Combustion Products

Nitrogen oxides (NOx), Silver 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. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Should not be released into the environment.

6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable 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. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from clothing and other combustible materials.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

Silver nitrate, ACS

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Corrosives area.

Technical Rules for Hazardous Substances (TRGS) 510 Class 5.1B 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.

| Component | The United Kingdom | European Union | Ireland |
|----------------|------------------------------|-----------------------------------|---------|
| Silver nitrate | TWA: 0.01 mg/m ³ | TWA: 0.01 mg/m ³ (8hr) | |
| | STEL: 0.03 mg/m ³ | | |

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

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

See table for values

| | Component | Acute effects local (Inhalation) | Acute effects systemic (Inhalation) | Chronic effects local (Inhalation) | Chronic effects systemic (Inhalation) |
|---|------------------|-------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|
| ſ | Silver nitrate | | | | DNEL = 0.016mg/m ³ |
| | 7761-88-8(<=100) | | | | |

Predicted No Effect Concentration (PNEC)

See values below.

| Component | Fresh water | Fresh water | Water Intermittent | Microorganisms in | Soil (Agriculture) |
|---------------------|-----------------------|-------------|--------------------|-------------------|--------------------|
| | | sediment | | sewage treatment | |
| Silver nitrate | $PNEC = 0.04 \mu g/L$ | PNEC = | | PNEC = 0.025mg/L | PNEC = 1.41mg/kg |
| 7761-88-8 (<=100) | | 438.13mg/kg | | - | soil dw |
| | | sediment dw | | | |

| Component | Marine water | Marine water sediment | Marine water intermittent | Food chain | Air |
|---------------------|-----------------|--------------------------|------------------------------|------------|-----|
| Silver nitrate | PNEC = 0.86µg/L | PNEC = | | | |
| 7761-88-8 (<=100) | | 438.13mg/kg | | | |
| | | sediment dw | | | |

8.2. Exposure controls

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. 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 | Goggles (European standard - EN 166) | | | |
|---|---|-----------------|-----------------------|---|
| Hand Protection | Protectiv | ve gloves | | |
| Glove material Natural rubber Nitrile rubber Neoprene PVC | Breakthrough time See manufacturers recommendations | Glove thickness | EU standard EN 374 | Glove comments (minimum requirement) |
| Skin and body prot | tection Long sle | eved 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.

| 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 | Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced 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. Recommended half mask:- Particle filtering: EN149:2001 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 Odor Threshold Melting Point/Range Softening Point Boiling Point/Range Flammability (liquid) Flammability (solid,gas) Explosion Limits | White Odorless No data available 212 °C / 413.6 °F No data available 444 °C / 831.2 °F Not applicable No information available No data available | @ 760 mmHg Solid |

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| Flash Point | No information available | Method - No information available |
|------------------------------------|--------------------------|-----------------------------------|
| Autoignition Temperature | No data available | |
| Decomposition Temperature | > 444°C | |
| pH | 5.4-6.4 | 10% ag solution |
| Viscosity | Not applicable | Solid |
| Water Solubility | 219 g/100ml (20°C) | |
| Solubility in other solvents | No information available | |
| Partition Coefficient (n-octanol/w | ater) | |
| Component | log Pow | |
| Silver nitrate | 0.19 | |
| 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 | | |
| Molecular Formula | Ag N O3 | |
| Molecular Weight | 169.87 | |
| Oxidizing Properties | Oxidizer | |
| Evaporation Rate | Not applicable - Solid | |
| | | |
| | | |
| | | |
| | SECTION 10: STABILITY | AND REACTIVITY |
| | | |
| 10.1. Reactivity | | |
| <u>·····</u> | Yes | |
| | | |

10.2. Chemical stability

Silver nitrate, ACS

Oxidizer: Contact with combustible/organic material may cause fire. Light sensitive.

10.3. Possibility of hazardous reactions

Hazardous Polymerization Hazardous polymerization does not occur. None under normal processing. **Hazardous Reactions**

10.4. Conditions to avoid

Avoid dust formation. Incompatible products. Excess heat. Combustible material. Exposure to light.

10.5. Incompatible materials

Strong reducing agents. Combustible material. Metals. Amines.

10.6. Hazardous decomposition products

Nitrogen oxides (NOx). Silver 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 | Based on available data, the classification criteria are not met |
| Inhalation | Based on available data, the classification criteria are not met |

SAFETY DATA SHEET

| Silver nitrate | > 2000 mg/kg (Rat) | LD50 > 2000 mg/kg (Rat) | LC50 > 750 µg/m³(Rat)4 h |
|---|---|---|--------------------------------|
| b) skin corrosion/irritation; | Category 1 B | | |
| c) serious eye damage/irritation; | Category 1 | | |
| d) respiratory or skin sensitization Respiratory Skin | Based on available data, the o | classification criteria are not me | |
| e) germ cell mutagenicity; | Based on available data, the o | classification criteria are not me | et |
| f) carcinogenicity; | Based on available data, the o | classification criteria are not me | ət |
| | There are no known carcinoge | enic chemicals in this product | |
| g) reproductive toxicity; | Category 1B | | |
| h) STOT-single exposure; | Based on available data, the o | classification criteria are not me | et |
| i) STOT-repeated exposure; | Based on available data, the o | classification criteria are not me | ət |
| Target Organs | None known. | | |
| j) aspiration hazard; | Not applicable Solid | | |
| Symptoms / effects,both acute an lelayed | Possible perforation of stomad | Use of gastric lavage or emotion or esophagus should be invige ge to the delicate tissue and data | estigated. Ingestion causes |
| 1.2. Information on other hazards | _ | | |
| Endocrine Disrupting Properties | Assess endocrine disrupting p known or suspected endocrine | | is product does not contain an |
| S | ECTION 12: ECOLOGIO | CAL INFORMATION | |

12.1. Toxicity Ecotoxicity effects

The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. 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 |
|----------------|---|-----------------------|------------------|
| Silver nitrate | Leuciscus idus: LC50: 0.029 mg/L/96h | EC50: 0.0006 mg/L/48h | |

Silver nitrate, ACS

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| Component | Microtox | M-Factor |
|----------------|--|-------------------------------|
| Silver nitrate | Photobacterium phosphoreum: EC50: 0.038 mg/L/24h Photobacterium phosphoreum: EC50: 0.395 mg/l/15min | Acute = 1000 Chronic = 100 |
| | Photobacterium phosphoreum: EC50: 0.44 mg/L/30 min as Ag++ Photobacterium phosphoreum: EC50: 0.86 mg/L/15 min as Ag++ | |

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

| | pre-treatment is necessary |
|-----------------------|---|
| Persistence | May persist, based on information available. |
| Degradability | Not relevant for inorganic substances. |
| 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

| Component | log Pow | Bioconcentration factor (BCF) |
|----------------|---------|-------------------------------|
| Silver nitrate | 0.19 | No data available |

| <u>12.4. Mobility in soil</u> | The product is water soluble, and may spread in water systems Will likely be mobile in the environment due to its water solubility. Highly mobile in soils |
|--|--|
| <u>12.5. Results of PBT and vPvB</u> assessment | In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment. |
| <u>12.6. Endocrine disrupting</u> 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 |

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

| Waste from Residues/Unused Products | Should not be released into the environment. 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. Large amounts will affect pH and harm aquatic organisms. Do not let this chemical enter the environment. |

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

| <u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> 14.4. Packing group | UN1493 Silver nitrate 5.1 II |
|--|--|
| ADR | |
| <u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> 14.4. Packing group | UN1493 Silver nitrate 5.1 II |
| IATA | |
| <u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> 14.4. Packing group | UN1493 Silver nitrate 5.1 II |
| 14.5. Environmental hazards | Dangerous for the environment Product is a marine pollutant according to the criteria set by IMDG/IMO |
| 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 |
|----------------|-----------|-----------|-------------------------------|---------|-------|------|----------|-------|-------|
| Silver nitrate | 7761-88-8 | 231-853-9 | - | - | Х | Х | KE-31281 | Х | Х |
| | | | | | | | | | |
| Component | CAS No | TSCA | TSCA In notific Active- | ation - | DSL | NDSL | AICS | NZIoC | PICCS |
| Silver nitrate | 7761-88-8 | 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 | · · · · · J · · · | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|----------------|-----------|---|---------------------------|---|
| Silver nitrate | 7761-88-8 | - | Use restricted. See entry | - |

| (see link for restriction details) |
|---------------------------------------|
|---------------------------------------|

REACH links

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

Seveso III Directive (2012/18/EC)

| Co | mponent | 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 |
| Silv | er nitrate | 7761-88-8 | 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

Take note of Directive 94/33/EC on the protection of young people at work

Take note of Dir 92/85/EC on the protection of pregnant and breastfeeding women at work

National Regulations

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

WGK Classification

See table for values

| Component | Germany - Water Classification (AwSV) | Germany - TA-Luft Class |
|----------------|---------------------------------------|-------------------------|
| Silver nitrate | WGK3 | |

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

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

H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H360D - May damage the unborn child

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

H272 - May intensify fire; oxidizer

Legend

| CAS - Chemical Abstracts Service EINECS/ELINCS - European Inventory of E Substances/EU List of Notified Chemical Su PICCS - Philippines Inventory of Chemicals IECSC - Chinese Inventory of Existing Chemicals KECL - Korean Existing and Evaluated Chemicals | ubstances and Chemical Substances mical Substances | TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/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 Governm DNEL - Derived No Effect Level RPE - Respiratory Protective Equipment LC50 - Lethal Concentration 50% NOEC - No Observed Effect Concentration PBT - Persistent, Bioaccumulative, Toxic | ental Industrial Hygienists | 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 Dangerous Goods by Road IMO/IMDG - International Maritime Organiza Dangerous Goods Code OECD - Organisation for Economic Co-oper BCF - Bioconcentration factor Key literature references and source https://echa.europa.eu/information-on-o- Suppliers safety data sheet, Chemadvi | ation/International Maritime ration and Development es for data chemicals | ICAO/IATA - International Civil Aviation Organization/International Air Transport Association MARPOL - International Convention for the Prevention of Pollution from Ships ATE - Acute Toxicity Estimate VOC - (Volatile Organic Compound) |
| Training Advice Chemical incident response training. | | |
| Prepared By | Health, Safety and Enviro | nmental Department |

| Prepared By | Health, Safety and Environmental Department |
|------------------|--|
| Creation Date | 26-Jun-2009 |
| Revision Date | 04-Jul-2024 |
| Revision Summary | 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

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