

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

Creation Date 20-May-2010

Revision Date 01-Feb-2024

Revision Number 3

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

1.1. Product identifier

| Product Description: | Dicyclopentadiene_ |
|---------------------------|---|
| Cat No. : | A13643 |
| Synonyms | 3a,4,7,7a-Tetrahydro-4,7-methanoindene; Cyclopentadiene dimer; DCPD |
| Index No | 601-044-00-9 |
| CAS No | 77-73-6 |
| EC No | 201-052-9 |
| Molecular Formula | C10 H12 |
| 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

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

Physical hazards

Dicyclopentadiene

| Flammable liquids | Category 3 (H226) |
|---|---|
| Health hazards | |
| Acute oral toxicity Acute Inhalation Toxicity - Vapors Skin Corrosion/Irritation Serious Eye Damage/Eye Irritation Specific target organ toxicity - (single exposure) | Category 4 (H302) Category 2 (H330) Category 2 (H315) Category 2 (H319) Category 3 (H335) |
| Environmental hazards | |
| Chronic aquatic toxicity | Category 2 (H411) |

Full text of Hazard Statements: see section 16

2.2. Label elements



Signal Word

Danger

Hazard Statements

- H226 Flammable liquid and vapor
- H335 May cause respiratory irritation
- H319 Causes serious eye irritation
- H315 Causes skin irritation
- H302 Harmful if swallowed
- H330 Fatal if inhaled
- H411 Toxic to aquatic life with long lasting effects

Precautionary Statements

P310 - Immediately call a POISON CENTER or doctor/physician

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

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

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

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P337 + P313 - If eye irritation persists: Get medical advice/attention

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

Toxic to terrestrial vertebrates

This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Dicyclopentadiene

3.1. Substances

| Component | CAS No | EC No | Weight % | CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567 |
|-------------------|---------|-------------------|----------|--|
| Dicyclopentadiene | 77-73-6 | EEC No. 201-052-9 | >95 | Acute Tox. 2 (H330) Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335) Aquatic Chronic 2 (H411) Flam. Liq. 3 (H226) |

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. | | | |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required. | | | |
| Ingestion | Do NOT induce vomiting. Call a physician or poison control center immediately. | | | |
| Inhalation | Remove to fresh air. If breathing is difficult, give oxygen. 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. Immediate medical attention is required. | | | |
| Self-Protection of the First Aider | Use personal protective equipment as required. | | | |
| 4.2. Most important symptoms and | effects, both acute and delayed | | | |
| | Difficulty in breathing Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting | | | |
| 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

Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

Extinguishing media which must not be used for safety reasons No information available.

5.2. Special hazards arising from the substance or mixture

Dicyclopentadiene

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂).

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. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

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 mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Take precautionary measures against static discharges.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area.

Technical Rules for Hazardous Substances (TRGS) 510 Class 3 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): **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 |
|-------------------|-----------------------------------|----------------|-----------------------------------|
| Dicyclopentadiene | STEL: 15 ppm 15 min | | TWA: 5 ppm 8 hr. |
| | STEL: 81 mg/m ³ 15 min | | TWA: 30 mg/m ³ 8 hr. |
| | TWA: 5 ppm 8 hr | | STEL: 15 ppm 15 min |
| | TWA: 27 mg/m ³ 8 hr | | STEL: 90 mg/m ³ 15 min |

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)

Workers; See table for values

| Component | Acute effects local | Acute effects | Chronic effects local | Chronic effects |
|--------------------------------------|---------------------|-----------------|-----------------------|-----------------|
| | (Oral) | systemic (Oral) | (Oral) | systemic (Oral) |
| Dicyclopentadiene 77-73-6 (>95) | | | | 0.34 mg/kg |

| Component | Acute effects local (Dermal) | Acute effects systemic (Dermal) | Chronic effects local (Dermal) | Chronic effects systemic (Dermal) |
|------------------------------------|---------------------------------|------------------------------------|-----------------------------------|-----------------------------------|
| Dicyclopentadiene 77-73-6 (>95) | | | | DNEL = 0.95mg/kg bw/dav |

| Component | Acute effects local (Inhalation) | Acute effects systemic (Inhalation) | Chronic effects local (Inhalation) | Chronic effects systemic (Inhalation) |
|------------------------------------|-------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|
| Dicyclopentadiene 77-73-6 (>95) | DNEL = 160.23mg/m ³ | | DNEL = 2.31mg/m ³ | DNEL = 2.31mg/m ³ |

Predicted No Effect Concentration (PNEC)

See values below.

| Component | Fresh water | Fresh water | Water Intermittent | Microorganisms in | Soil (Agriculture) |
|-------------------|-------------|------------------|--------------------|-------------------|--------------------|
| | | sediment | | sewage treatment | |
| Dicyclopentadiene | PNEC = | PNEC = 8.89mg/kg | PNEC = | PNEC = 2.2mg/L | PNEC = 2.5mg/kg |
| 77-73-6 (>95) | 0.0574mg/L | sediment dw | 0.00823mg/L | - | soil dw |

| Component | Marine water | Marine water sediment | Marine water intermittent | Food chain | Air |
|-------------------|--------------|--------------------------|------------------------------|------------|-----|
| Dicyclopentadiene | PNEC = | PNEC = | | | |
| 77-73-6 (>95) | 0.0057mg/L | 0.889mg/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. Use explosion-proof electrical/ventilating/lighting equipment. 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) |
| | |

Protective gloves

Hand Protection

| 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 | ection 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: Organic gases and vapours filter Type A Brown conforming to EN14387 |
| 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:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141 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. |

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| Physical State | Liquid | |
|---------------------------------------|---|-----------------------------------|
| Appearance Odor | Colorless | |
| Odor Threshold | Strong No data available | |
| Melting Point/Range | 11 - 13 °C / 51.8 - 55.4 °F | |
| Softening Point | No data available | |
| Boiling Point/Range | 170 °C / 338 °F | @ 760 mmHg |
| Flammability (liquid) | Flammable | On basis of test data |
| Flammability (solid,gas) | Not applicable | Liquid |
| Explosion Limits | No data available Lower 0.8 vol% | |
| | Upper 6.3 vol% | |
| Flash Point | 32 °C / 89.6 °F | Method - No information available |
| Autoignition Temperature | 503 - °C / 937.4 - °F | |
| Decomposition Temperature | No data available | |
| pH | No information available | |
| Viscosity | No data available | |
| Water Solubility | Immiscible | |
| Solubility in other solvents | No information available | |
| Partition Coefficient (n-octanol/wate | er) | |
| Component | log Pow | |
| Dicyclopentadiene | 2.78 | |
| Vapor Pressure | 1.8 hPa @ 20 °C | |
| Density / Specific Gravity | 0.982 | |
| Bulk Density | Not applicable | Liquid |

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Dicyclopentadiene

Vapor Density Particle characteristics 4.6 (Air = 1.0) Not applicable (liquid) (Air = 1.0)

Incompatible products. Excess heat. Keep away from open flames, hot surfaces and

9.2. Other information

Molecular Formula Molecular Weight Explosive Properties C10 H12 132.2 explosive air/vapour mixtures possible

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 polymerization does not occur.

 Hazardous Reactions
 None under normal processing.
- 10.4. Conditions to avoid
- 10.5. Incompatible materials

Strong oxidizing agents.

sources of ignition.

10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11: TOXICOLOGICAL INFORMATION

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

Product Information

(a) acute toxicity; Oral

Inhalation

Dermal

Category 4 Based on available data, the classification criteria are not met Category 2

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|-------------------|----------------|-------------------|---------------------|
| Dicyclopentadiene | 353 mg/kg(Rat) | 5.08 g/kg(Rabbit) | 0.6 mg/L 4h (Rat) |

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;
Respiratory
SkinBased on available data, the classification criteria are not met
Based on available data, the classification criteria are not met

(e) germ cell mutagenicity; Based on available data, the classification criteria are not met

| (f) carcinogenicity; | Based on available data, the classification criteria are not met |
|--|--|
| | There are no known carcinogenic chemicals in this product |
| (g) reproductive toxicity; | Based on available data, the classification criteria are not met |
| (h) STOT-single exposure; | Category 3 |
| Results / Target organs | Respiratory system. |
| (i) STOT-repeated exposure; | Based on available data, the classification criteria are not met |
| Target Organs | None known. |
| (j) aspiration hazard; | Based on available data, the classification criteria are not met |
| Other Adverse Effects | See actual entry in RTECS for complete information |
| Symptoms / effects,both acute and delayed | Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. |

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

Dicyclopentadiene

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

| Component | Freshwater Fish | Water Flea | Freshwater Algae |
|-------------------|---|--------------------------------|------------------|
| Dicyclopentadiene | LC50: 10 - 14.2 mg/L, 96h static (Pimephales promelas) LC50: 13 - 19.5 mg/L, 96h static (Oncorhynchus mykiss) LC50: = 23 mg/L, 96h (Lepomis macrochirus) | EC50: = 11 mg/L, 48h magna) | |
| | LC50: 11.5 - 17.6 mg/L, 96h static (Lepomis macrochirus) | | |

12.2. Persistence and degradability

PersistenceMay persist, based on information available.Degradation in sewage
treatment plantContains substances known to be hazardous to the environment or not degradable in waste
water treatment plants.

12.3. Bioaccumulative potential

May have some potential to bioaccumulate

| Component | log Pow | Bioconcentration factor (BCF) |
|-------------------|---------|-------------------------------|
| Dicyclopentadiene | 2.78 | 53 dimensionless |

12.4. Mobility in soil

Spillage unlikely to penetrate soil The product is insoluble and floats on water The product evaporates slowly . Is not likely mobile in the environment due its low water solubility.

| | Spillage unlikely to penetrate soil |
|---|---|
| 12.5. Results of PBT and vPvB assessment | Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB). |
| <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 suspected substance This product does not contain any known or suspected substance |
| SE | CTION 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. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition. |
| 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. Can be landfilled or incinerated, when in compliance with local regulations. Do not let this chemical enter the environment. Do not empty into drains. |

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

Dicyclopentadiene

| <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 | UN2048 Dicyclopentadiene 3 III |
|---|---|
| ADR <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> | UN2048 Dicyclopentadiene 3 III |
| IATA <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> | UN2048 Dicyclopentadiene 3 III |

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 Not applicable, packaged goods

according to IMO instruments

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 |
|-------------------|---------|-----------|---------|-------------------------------|-------|------|----------|-------|-------|
| Dicyclopentadiene | 77-73-6 | 201-052-9 | - | - | Х | Х | KE-34129 | Х | Х |
| | | | | | | | | | |
| Component | CAS No | TSCA | notific | ventory ation - nactive | DSL | NDSL | AICS | NZIoC | PICCS |
| Dicyclopentadiene | 77-73-6 | 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 Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|-------------------|---------|---|--|---|
| Dicyclopentadiene | 77-73-6 | - | 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) - Qualifying Quantities for Major Accident | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report |
|-------------------|---------|---|--|
| | | Notification | Requirements |
| Dicyclopentadiene | 77-73-6 | 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 .

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 |
|-------------------|---------------------------------------|-------------------------|
| Dicyclopentadiene | 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

- H226 Flammable liquid and vapor
- H302 Harmful if swallowed
- H330 Fatal if inhaled
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H335 May cause respiratory irritation
- H411 Toxic to aquatic life with long lasting effects

Legend

| CAS - Chemical Abstracts Service | TSCA - United States Toxic Substances Control Act Section 8(b) Inventory |
|---|--|
| 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 | |
| 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 BCF - Bioconcentration factor Key literature references and sources for data https://echa.europa.eu/information-on-chemicals Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, R | 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 Creation Date Revision Date

Revision Summary

Health, Safety and Environmental Department 20-May-2010 01-Feb-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