S CIENTIFIC

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

### 1.1. Product identifier

| Product Description: | Oxalyl chloride, 2.0M solution in dichloromethane |
| :--- | :--- |
| Cat No.: | $369180000 ; 369181000 ; 369188000$ |
| Synonyms | Ethanedioyl dichloride |
| Molecular Formula | C 2 Cl 2 O 2 |

### 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

E-mail address
UK entity/business name
Fisher Scientific UK
Bishop Meadow Road,
Loughborough, Leicestershire LE11 5RG, United Kingdom
EU entity/business name
Thermo Fisher Scientific Janssen Pharmaceuticalaan 3a, 2440 Geel, Belgium
1.4. Emergency telephone number

For information US call: 001-800-227-6701 / Europe call: +32 14575211
Emergency Number US:001-201-796-7100 / Europe: +32 14575299
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
Substances/mixtures which, in contact with water, emit flammable gases
    Category 1 (H260)
Health hazards
Acute oral toxicity
    Category 4 (H302)
```

| Acute Inhalation Toxicity - Vapors | Category 4 (H332) |
| :--- | :--- |
| Skin Corrosion/lrritation | Category 1 B (H314) |
| Serious Eye Damage/Eye Irritation | Category 1 (H318) |
| Carcinogenicity | Category 2 (H351) |
| Specific target organ toxicity - (single exposure) | Category 3 (H336) |
| 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

H260 - In contact with water releases flammable gases which may ignite spontaneously
H314 - Causes severe skin burns and eye damage
H336 - May cause drowsiness or dizziness
H351 - Suspected of causing cancer
H302 + H332 - Harmful if swallowed or if inhaled
EUH014 - Reacts violently with water
EUH029 - Contact with water liberates toxic gas
EUH071 - Corrosive to the respiratory tract

## Precautionary Statements

P231 + P232 - Handle and store contents under inert gas. Protect from moisture
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P304 + P340-IF INHALED: Remove person to fresh air and keep comfortable for breathing
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

### 2.3. Other hazards

Water reactive
Lachrymator (substance which increases the flow of tears)
Toxic to terrestrial vertebrates
Contains a known or suspected endocrine disruptor
Contains a substance on the National Authorities Endocrine Disruptor Lists

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

| Component | CAS No | EC No | Weight \% | CLP Classification - According to <br> GB-CLP Regulations UK SI 2019/720 and <br> UK SI 2020/1567 |
| :---: | :---: | :---: | :---: | :---: |


| Ethanedioyl dichloride | 79-37-8 | EEC No. 201-200-2 | 25 | Acute Tox. 3 (H301) <br> Skin Corr. 1B (H314) <br> Eye Dam. 1 (H318) <br> Acute Tox. 3 (H331) <br> Water-react. 1 (H260) <br> (EUH014) <br> (EUH029) <br> (EUH071) |
| :---: | :---: | :---: | :---: | :---: |
| Methylene chloride | 75-09-2 | EEC No. 200-838-9 | 75 | Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H336) |

Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

## General Advice

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. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately.

Ingestion

Inhalation
Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately.

If not breathing, give artificial respiration. Remove from exposure, lie down. 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. Call a physician immediately.

## 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

$\mathrm{CO}_{2}$, dry chemical, dry sand, alcohol-resistant foam.

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

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Contact with water liberates toxic gas. Reacts violently with water.

## Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide ( $\mathrm{CO}_{2}$ ), Phosgene, Hydrogen chloride gas.

### 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

Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### 6.2. Environmental precautions

Should not be released into the environment.

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

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Do not expose spill to water.

### 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. Do not allow contact with water. Handle under an inert atmosphere.

## 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

Protect from direct sunlight. Keep refrigerated. Keep away from oxidizing agents. Corrosives area. Keep away from water or moist air. Store under an inert atmosphere. Protect from moisture. Keep containers tightly closed in a dry, cool and well-ventilated place.

## Technical Rules for Hazardous Substances (TRGS) 510 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

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

| Component | The United Kingdom | European Union | Ireland |
| :---: | :---: | :---: | :---: |
| Methylene chloride | STEL: 200 ppm 15 min | TWA: $353 \mathrm{mg} / \mathrm{m}^{3}(8 \mathrm{~h})$ | TWA: 100 ppm 8 hr. |
|  | STEL: $706 \mathrm{mg} / \mathrm{m}^{3} 15 \mathrm{~min}$ | TWA: $100 \mathrm{ppm}(8 \mathrm{~h})$ | TWA: $353 \mathrm{mg} / \mathrm{m}^{3} 8 \mathrm{hr}$. |
|  | TWA: $353 \mathrm{mg} / \mathrm{m}^{3} 8 \mathrm{hr}$ | STEL: $706 \mathrm{mg} / \mathrm{m}^{3}(15 \mathrm{~min})$ | STEL: 200 ppm 15 min |
|  | TWA: 100 ppm 8 hr | STEL: $200 \mathrm{ppm}(15 \mathrm{~min})$ | STEL: $706 \mathrm{mg} / \mathrm{m}^{3} 15 \mathrm{~min}$ |
|  | Skin | Skin | Skin |

## Biological limit values

List source(s): UK - Biological Monitoring Guidance Values provided by the UK's Health and Safety Executive (HSE) Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended) and EH40/2005.

| Component | United Kingdom | European Union |
| :---: | :---: | :---: |
| Methylene chloride | Carbon monoxide: 30 ppm end-tidal breath <br> post shift |  |

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

See table for values

| Component | Acute effects local <br> (Dermal) | Acute effects <br> systemic (Dermal) | Chronic effects local <br> (Dermal) | Chronic effects <br> systemic (Dermal) |
| :---: | :---: | :---: | :---: | :---: |
| Methylene chloride |  |  |  | DNEL $=12 \mathrm{mg} / \mathrm{kg}$ <br> bw/day |


| Component | Acute effects local <br> (Inhalation) | Acute effects <br> systemic (Inhalation) | Chronic effects local <br> (Inhalation) | Chronic effects <br> systemic (Inhalation) |
| :---: | :---: | :---: | :---: | :---: |
| Methylene chloride <br> $75-09-2(75)$ |  | $\mathrm{DMEL}=132.14 \mathrm{mg} / \mathrm{m}^{3}$ |  | $\mathrm{DNEL}=176 \mathrm{mg} / \mathrm{m}^{3}$ |

## Predicted No Effect Concentration (PNEC)

See values below.

| Component | Fresh water | Fresh water <br> sediment | Water Intermittent | Microorganisms in <br> sewage treatment | Soil (Agriculture) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Methylene chloride | PNEC $=130 \mu \mathrm{~g} / \mathrm{L}$ <br> $75-09-2(75)$ | PNEC $=163 \mu \mathrm{~g} / \mathrm{kg}$ <br> sediment dw <br> PNEC $=0.31 \mathrm{mg} / \mathrm{L}$ <br> PNEC $=2.57 \mathrm{mg} / \mathrm{kg}$ <br> sediment dw | PNEC $=0.27 \mathrm{mg} / \mathrm{L}$ | PNEC $=26 \mathrm{mg} / \mathrm{L}$ | PNEC $=173 \mu \mathrm{~g} / \mathrm{kg}$ <br> soil dw |


| Component | Marine water | Marine water <br> sediment | Marine water <br> intermittent | Food chain | Air |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Methylene chloride | PNEC $=130 \mu \mathrm{~g} / \mathrm{L}$ <br> $75-09-2(75)$ | PNEC $=163 \mu \mathrm{~g} / \mathrm{kg}$ <br> sNEC $=0.031 \mathrm{mg} / \mathrm{L}$ <br> sediment dw <br> PNEC $=0.26 \mathrm{mg} / \mathrm{kg}$ <br> sediment dw | PNEC $=0.027 \mathrm{mg} / \mathrm{L}$ |  |  |

### 8.2. Exposure controls

## Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

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
Hand Protection

Goggles (European standard - EN 166)
Protective gloves

| Glove material | Breakthrough time | Glove thickness | EU standard | Glove comments |
| :---: | :---: | :---: | :---: | :---: |
| Natural rubber | See manufacturers | - | EN 374 |  |
| Butyl rubber | recommendations |  |  |  |
| Nitrile rubber |  |  |  |  |
| Neoprene |  |  |  |  |
| PVC |  |  |  |  |

## 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.

| Respiratory Protection | When workers are facing concentrations above the exposure limit they must use <br> appropriate certified respirators. <br> To protect the wearer, respiratory protective equipment must be the correct fit and be used <br> and maintained properly |
| :---: | :--- |
| Large scale/emergency use | Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits <br> are exceeded or if irritation or other symptoms are experienced <br> Recommended Filter type: Particulates filter conforming to EN 143 or Acid gases filter <br> Type E Yellow conforming to EN14387 |
| Small scale/Laboratory use | Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure <br> limits are exceeded or if irritation or other symptoms are experienced. <br> Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN <br> 141 |
| When RPE is used a face piece Fit Test should be conducted |  |

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

| Physical State | Liquid |  |
| :--- | :--- | :--- |
| Appearance | Clear |  |
| Odor | pungent |  |
| 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) | Not applicable | Liquid |
| 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 | No information available |  |
| Viscosity | No data available |  |


| Water Solubility | Reacts with water |  |
| :--- | :--- | :--- |
| Solubility in other solvents | No information available |  |
| Partition Coefficient (n-octanol/water) |  |  |
| Component | log Pow |  |
| Methylene chloride | 1.25 |  |
| Vapor Pressure | No data available |  |
| Density / Specific Gravity | 1.335 | Liquid |
| Bulk Density | Not applicable | (Air = 1.0) |
| Vapor Density | No data available |  |
| Particle characteristics | Not applicable (liquid) |  |

### 9.2. Other information

| Molecular Formula | C 2 Cl 2 O 2 |
| :--- | :--- |
| Molecular Weight | 126.93 |
| Substances/mixtures which, in | Emitted gas ignites spontaneously |
| contact with water, emit flammable |  |
| gases |  |

## SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Yes
10.2. Chemical stability

Moisture sensitive. Water reactive.

### 10.3. Possibility of hazardous reactions

| Hazardous Polymerization | No information available. |
| :--- | :--- |
| Hazardous Reactions | Reacts violently with water. |

### 10.4. Conditions to avoid

10.5. Incompatible materials

Keep away from open flames, hot surfaces and sources of ignition. Excess heat. Exposure to light. Incompatible products. Exposure to moist air or water.

Bases. Alcohols. Water. Amines. Metals.

### 10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide ( $\mathrm{CO}_{2}$ ). Phosgene. Hydrogen chloride gas.

## SECTION 11: TOXICOLOGICAL INFORMATION

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

## Product Information

(a) acute toxicity;

| Oral | Category 4 |
| :--- | :--- |
| Dermal | Based on available data, the classification criteria are not met |
| Inhalation | Category 4 |
|  |  |
| xicology data for the components |  |

Toxicology data for the components

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
| :---: | :---: | :---: | :---: |
| Ethanedioyl dichloride | - | - | LC50 $=1850 \mathrm{ppm}(\mathrm{Rat}) 1 \mathrm{~h}$ |
| Methylene chloride | $>2000 \mathrm{mg} / \mathrm{kg}$ ( Rat ) | $>2000 \mathrm{mg} / \mathrm{kg}$ ( Rat ) | $53 \mathrm{mg} / \mathrm{L} \mathrm{( } \mathrm{Rat} \mathrm{)} 6 \mathrm{~h}$ |
|  |  | $76000 \mathrm{mg} / \mathrm{m}^{3}(\mathrm{Rat}) 4 \mathrm{~h}$ |  |


| (b) skin corrosion/irritation; | Category 1 B |
| :--- | :--- |
|  |  |
| (c) serious eye damage/irritation; | Category 1 |
|  |  |
| (d) respiratory or skin sensitization;  <br> Respiratory <br> Skin No data available <br> (e) germ cell mutagenicity; No data available <br> (f) carcinogenicity; No data available <br>  Category 2 |  |
|  | The table below indicates whether each agency has listed any ingredient as a carcinogen |


| Component | EU | UK | Germany | IARC |
| :---: | :---: | :---: | :---: | :---: |
| Methylene chloride |  |  |  | Group 2A |


| (g) reproductive toxicity; <br> (h) STOT-single exposure; <br> Results / Target organs | No data available |
| :--- | :--- |
| (i) STOT-repeated exposure; | Central nervous system (CNS). |
| Target Organs | No data available |
| (j) aspiration hazard; | None known. |
| Other Adverse Effects | No data available |
| Symptoms / effects,both acute and <br> delayed | Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. <br> Possible perforation of stomach or esophagus should be investigated. Ingestion causes <br> severe swelling, severe damage to the delicate tissue and danger of perforation. |

### 11.2. Information on other hazards

Endocrine Disrupting Properties
Assess endocrine disrupting properties for human health

Contains a substance on the National Authorities Endocrine Disruptor Lists

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity Ecotoxicity effects

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Do not empty into drains. Reacts with water so no ecotoxicity data for the substance is available.

| Component | Freshwater Fish | Water Flea | Freshwater Algae |
| :---: | :---: | :---: | :---: |
| Methylene chloride | Pimephales promelas: LC50:193 <br> $\mathrm{mg} / \mathrm{L} / 96 \mathrm{~h}$ | EC50: $140 \mathrm{mg} / \mathrm{L} / 48 \mathrm{~h}$ | EC50:>660 mg/L/96h |


| Component | Microtox | M-Factor |
| :---: | :---: | :---: |
| Methylene chloride | EC50:1 $\mathrm{mg} / \mathrm{L} / 24 \mathrm{~h}$ |  |


| 12.2. Persistence and degradability | Readily biodegradable <br> Persistence is unlikely, based on information available. <br> Persistence |
| :--- | :--- |
| Degradability Reacts with water. <br> Degradation in sewage Water reactive. <br> treatment plant  |  |

12.3. Bioaccumulative potential Bioaccumulation is unlikely; Product does not bioaccumulate due to reaction with water

| Component | $\boldsymbol{\operatorname { l o g } \text { Pow }}$ | Bioconcentration factor (BCF) |
| :---: | :---: | :---: |
| Methylene chloride | 1.25 | $6.4-40$ dimensionless |

### 12.4. Mobility in soil

 Reacts with water . Is not likely mobile in the environment.12.5. Results of PBT and vPvB Water reactive. 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

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

| Waste from Residues/Unused | Waste is classified as hazardous. Dispose of in accordance with the European Directives <br> on waste and hazardous waste. Dispose of in accordance with local regulations. <br> Products |
| :--- | :--- |
| Contaminated Packaging | Dispose of this container to hazardous or special waste collection point. Empty containers <br> retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and <br> 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 <br> application specific. |
| Other Information | Waste codes should be assigned by the user based on the application for which the product <br> was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with <br> local regulations. Do not empty into drains. Large amounts will affect pH and harm aquatic <br> organisms. |

## SECTION 14: TRANSPORT INFORMATION

## IMDG/IMO

14.1. UN number
14.2. UN proper shipping name Technical Shipping Name

### 14.3. Transport hazard class(es)

 Subsidiary Hazard Class14.4. Packing group

UN3129
WATER-REACTIVE LIQUID, CORROSIVE, N.O.S.
(OXALYL CHLORIDE, DICHLOROMETHANE)
4.3

8
I

## ADR

14.1. UN number
14.2. UN proper shipping name Technical Shipping Name
14.3. Transport hazard class(es) Subsidiary Hazard Class
14.4. Packing group

UN3129
WATER-REACTIVE LIQUID, CORROSIVE, N.O.S.
(OXALYL CHLORIDE, DICHLOROMETHANE)
4.3

8
I

IATA
14.1. UN number
14.2. UN proper shipping name Technical Shipping Name
14.3. Transport hazard class(es) Subsidiary Hazard Class
14.4. Packing group

## UN3129

WATER-REACTIVE LIQUID, CORROSIVE, N.O.S.
(OXALYL CHLORIDE, DICHLOROMETHANE)
4.3

8
I
14.5. Environmental hazards No hazards identified
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 (NZloC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

| Component | CAS No | EINECS | ELINCS | NLP | IECSC | TCSI | KECL | ENCS | ISHL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ethanedioyl dichloride | 79-37-8 | 201-200-2 | - | - | X | X | KE-13137 | X | X |
| Methylene chloride | 75-09-2 | 200-838-9 | - | - | X | X | KE-23893 | X | X |


| Component | CAS No | TSCA | TSCA Inventory <br> notification- <br> Active-Inactive | DSL | NDSL | AICS | NZloC | PICCS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ethanedioyl dichloride | $79-37-8$ | X | ACTIVE | X | - | X | X | X |
| Methylene chloride | $75-09-2$ | X | ACTIVE | X | - | X | X | X |

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) - <br> Annex XIV - Substances <br> Subject to Authorization | REACH (1907/2006) - <br> Annex XVII - Restrictions <br> on Certain Dangerous <br> Substances | REACH Regulation (EC <br> 1907/2006) article 59 - <br> Candidate List of <br> Substances of Very High <br> Concern (SVHC) |
| :---: | :---: | :---: | :---: | :---: |
| Ethanedioyl dichloride | $79-37-8$ | - | - |  |
| Methylene chloride | $75-09-2$ | - | - |  |

Seveso III Directive (2012/18/EC)

| Component | CAS No | Seveso III Directive (2012/18/EC) - <br> Qualifying Quantities for Major Accident <br> Notification | Seveso III Directive (2012/18/EC) - <br> Qualifying Quantities for Safety Report <br> Requirements |
| :---: | :---: | :---: | :---: |
| Ethanedioyl dichloride | $79-37-8$ | Not applicable | Not applicable |
| Methylene chloride | $75-09-2$ | 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)

| Component | Germany - Water Classification (AwSV) | Germany - TA-Luft Class |
| :---: | :---: | :---: |
| Ethanedioyl dichloride | WGK1 |  |
| Methylene chloride | WGK2 | Class I :20 mg/m ${ }^{3}$ (Massenkonzentration) |


| Component | France - INRS (Tables of occupational diseases) |
| :---: | :---: |
| Methylene chloride | Tableaux des maladies professionnelles (TMP) - RG 12 |


| Component | Switzerland - Ordinance on the <br> Reduction of Risk from <br> handling of hazardous <br> substances preparation (SR <br> 814.81) | Switzerland - Ordinance on <br> Incentive Taxes on Volatile <br> Organic Compounds (OVOC) | Switzerland - Ordinance of the <br> Rotzerdam Convention on the <br> Prior Informed Consent <br> Procedure |
| :---: | :---: | :---: | :---: |
| Methylene chloride <br> $75-09-2(75)$ | Persistent Organic Pollutants <br> (POPs) <br> Prohibited and Restricted <br> Substances | Group I |  |

### 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
H260 - In contact with water releases flammable gases which may ignite spontaneously
H302 - Harmful if swallowed
H332-Harmful if inhaled
H314-Causes severe skin burns and eye damage
H318-Causes serious eye damage

H336 - May cause drowsiness or dizziness
H351 - Suspected of causing cancer
EUH014 - Reacts violently with water
EUH029 - Contact with water liberates toxic gas
EUH071 - Corrosive to the respiratory tract
H301 - Toxic if swallowed
H315-Causes skin irritation
H319-Causes serious eye irritation
H331-Toxic if inhaled

## 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
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
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
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.
Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.
First aid for chemical exposure, including the use of eye wash and safety showers.

| Creation Date | 12-Nov-2012 |
| :--- | :--- |
| Revision Date | 09-Feb-2024 |
| Revision Summary | SDS sections updated. |

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

## Disclaimer

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## SAFETY DATA SHEET

## End of Safety Data Sheet

