

Creation Date 22-Oct-2009

Revision Date 11-Oct-2023

Revision Number 14

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

### 1.1. Product identifier

|                                  |                                                     |
|----------------------------------|-----------------------------------------------------|
| <b>Product Description:</b>      | <b>2-Methoxyethanol</b>                             |
| <b>Cat No. :</b>                 | <b>428780000; 428780010; 428780025</b>              |
| <b>Synonyms</b>                  | Ethylene glycol monomethyl ether; Methyl cellosolve |
| <b>Index No</b>                  | 603-011-00-4                                        |
| <b>CAS No</b>                    | 109-86-4                                            |
| <b>EC No</b>                     | 203-713-7                                           |
| <b>Molecular Formula</b>         | C3 H8 O2                                            |
| <b>REACH registration number</b> | -                                                   |

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

|                                       |                                                                                             |
|---------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Recommended Use</b>                | Laboratory chemicals.                                                                       |
| <b>Sector of use</b>                  | SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites    |
| <b>Product category</b>               | PC21 - Laboratory chemicals                                                                 |
| <b>Process categories</b>             | PROC15 - Use as a laboratory reagent                                                        |
| <b>Environmental release category</b> | ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates) |
| <b>Uses advised against</b>           | No Information available                                                                    |

### 1.3. Details of the supplier of the safety data sheet

#### Company

**UK entity/business name**  
Fisher Scientific UK  
Bishop Meadow Road,  
Loughborough, Leicestershire LE11 5RG, United Kingdom

**EU entity/business name**  
Thermo Fisher Scientific  
Janssen Pharmaceuticaaan 3a, 2440 Geel, Belgium

**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

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Flammable liquids

Category 3 (H226)

## Health hazards

Acute oral toxicity

Category 4 (H302)

Acute dermal toxicity

Category 4 (H312)

Acute Inhalation Toxicity - Vapors

Category 4 (H332)

Reproductive Toxicity

Category 1B (H360FD)

Specific target organ toxicity - (single exposure)

Category 1 (H370)

Specific target organ toxicity - (repeated exposure)

Category 2 (H373)

## 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

H226 - Flammable liquid and vapor

H370 - Causes damage to organs

H360FD - May damage fertility. May damage the unborn child

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

H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled

## Precautionary Statements

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

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

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P312 - Call a POISON CENTER or doctor if you feel unwell

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

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

## Additional EU labelling

Restricted to professional users

## 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

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## 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                                                             |
|------------------|----------|-------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 2-Methoxyethanol | 109-86-4 | EEC No. 203-713-7 | <=100    | Flam. Liq. 3 (H226)<br>Acute Tox. 4 (H302)<br>Acute Tox. 4 (H312)<br>Acute Tox. 4 (H332)<br>Repr. 1B (H360FD)<br>STOT SE1 (H370)<br>STOT RE2 (H373) |

|                           |   |
|---------------------------|---|
| 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                        | In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.                                                                                                                                                                                                                              |
| 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 not breathing, give artificial respiration. 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 | 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

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. Symptoms may be delayed. |
|--------------------|-------------------------------------------------|

## 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.

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

Do not use a solid water stream as it may scatter and spread fire.

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

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition. Vapors may form explosive mixtures with air.

## Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), peroxides, Methanol.

## 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

Should not be released into the environment. See Section 12 for additional Ecological Information.

### 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. 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

Flammables area. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. May form explosive peroxides on prolonged storage. Keep under nitrogen.

Technical Rules for Hazardous Substances (TRGS) 510

Class 3

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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                                        |
|------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------------------------|
| 2-Methoxyethanol | STEL: 3 ppm 15 min<br>STEL: 9 mg/m <sup>3</sup> 15 min<br>TWA: 1 ppm 8 hr<br>TWA: 3 mg/m <sup>3</sup> 8 hr<br>Skin | TWA: 1 ppm (8h)<br>Skin | TWA: 1 ppm 8 hr.<br>STEL: 3 ppm 15 min<br>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 (Oral) | Acute effects systemic (Oral) | Chronic effects local (Oral) | Chronic effects systemic (Oral) |
|---------------------------------------|----------------------------|-------------------------------|------------------------------|---------------------------------|
| 2-Methoxyethanol<br>109-86-4 ( ≤100 ) |                            |                               |                              | 11 mg/kg bw/d                   |

| Component                             | Acute effects local (Dermal) | Acute effects systemic (Dermal) | Chronic effects local (Dermal) | Chronic effects systemic (Dermal) |
|---------------------------------------|------------------------------|---------------------------------|--------------------------------|-----------------------------------|
| 2-Methoxyethanol<br>109-86-4 ( ≤100 ) |                              |                                 |                                | DNEL = 0.22mg/kg bw/day           |

| Component                             | Acute effects local (Inhalation) | Acute effects systemic (Inhalation) | Chronic effects local (Inhalation) | Chronic effects systemic (Inhalation) |
|---------------------------------------|----------------------------------|-------------------------------------|------------------------------------|---------------------------------------|
| 2-Methoxyethanol<br>109-86-4 ( ≤100 ) |                                  |                                     |                                    | DNEL = 0.31mg/m <sup>3</sup>          |

#### Predicted No Effect Concentration (PNEC)

See values below.

| Component                             | Fresh water   | Fresh water sediment         | Water Intermittent | Microorganisms in sewage treatment | Soil (Agriculture)       |
|---------------------------------------|---------------|------------------------------|--------------------|------------------------------------|--------------------------|
| 2-Methoxyethanol<br>109-86-4 ( ≤100 ) | PNEC = 10mg/L | PNEC = 36.8mg/kg sediment dw | PNEC = 94mg/L      | PNEC = 1000mg/L                    | PNEC = 1.87mg/kg soil dw |

| Component | Marine water | Marine water sediment | Marine water intermittent | Food chain | Air |
|-----------|--------------|-----------------------|---------------------------|------------|-----|
|-----------|--------------|-----------------------|---------------------------|------------|-----|

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|                                       |              |                                 |  |                         |  |
|---------------------------------------|--------------|---------------------------------|--|-------------------------|--|
| 2-Methoxyethanol<br>109-86-4 ( ≤100 ) | PNEC = 1mg/L | PNEC = 3.68mg/kg<br>sediment dw |  | PNEC = 7.3mg/kg<br>food |  |
|---------------------------------------|--------------|---------------------------------|--|-------------------------|--|

## 8.2. Exposure controls

### Engineering Measures

Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting equipment. 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

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

#### Hand Protection

Protective gloves

| Glove material | Breakthrough time | Glove thickness | EU standard | Glove comments                           |
|----------------|-------------------|-----------------|-------------|------------------------------------------|
| Butyl rubber   | > 480 minutes     | 0.35 mm         | Level 6     | As tested under EN374-3 Determination of |
| Viton (R)      | > 480 minutes     | 0.3 mm          | EN 374      | Resistance to Permeation by Chemicals    |

#### 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 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

No information available.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

|                     |                              |
|---------------------|------------------------------|
| Physical State      | Liquid                       |
| Appearance          | Colorless                    |
| Odor                | Faint ethereal               |
| Odor Threshold      | No data available            |
| Melting Point/Range | -85 °C / -121 °F             |
| Softening Point     | No data available            |
| Boiling Point/Range | 124 °C / 255.2 °F @ 760 mmHg |

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|                                         |                                               |                                          |
|-----------------------------------------|-----------------------------------------------|------------------------------------------|
| Flammability (liquid)                   | Flammable                                     | On basis of test data                    |
| Flammability (solid,gas)                | Not applicable                                | Liquid                                   |
| Explosion Limits                        | <b>Lower</b> 1.8 Vol%<br><b>Upper</b> 20 Vol% |                                          |
| Flash Point                             | 38 °C / 100.4 °F                              | <b>Method</b> - No information available |
| Autoignition Temperature                | 285 °C / 545 °F                               |                                          |
| Decomposition Temperature               | No data available                             |                                          |
| pH                                      | 4-7 @ 20°C                                    | 200 g/l aq.sol                           |
| Viscosity                               | 1.98 cP @ 20°C                                |                                          |
| Water Solubility                        | Soluble                                       |                                          |
| Solubility in other solvents            | No information available                      |                                          |
| Partition Coefficient (n-octanol/water) |                                               |                                          |
| Component                               | <b>log Pow</b>                                |                                          |
| 2-Methoxyethanol                        | -0.77                                         |                                          |
| Vapor Pressure                          | 9.5 mmHg @ 25°C                               |                                          |
| Density / Specific Gravity              | 0.960                                         |                                          |
| Bulk Density                            | Not applicable                                | Liquid                                   |
| Vapor Density                           | 2.6                                           | (Air = 1.0)                              |
| Particle characteristics                | Not applicable (liquid)                       |                                          |

## 9.2. Other information

|                      |                                        |
|----------------------|----------------------------------------|
| Molecular Formula    | C3 H8 O2                               |
| Molecular Weight     | 76.09                                  |
| Explosive Properties | explosive air/vapour mixtures possible |
| Evaporation Rate     | 0.5 - (Butyl Acetate = 1.0)            |

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

None known, based on information available

### 10.2. Chemical stability

Reacts with air to form peroxides.

### 10.3. Possibility of hazardous reactions

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

### 10.4. Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition. Incompatible products. Excess heat. Exposure to light. Exposure to air over prolonged period.

### 10.5. Incompatible materials

Strong oxidizing agents. Acids. Bases. Copper alloys. copper.

### 10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). peroxides. Methanol.

## SECTION 11: TOXICOLOGICAL INFORMATION

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

#### Product Information

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**(a) acute toxicity;**

Oral Category 4  
Dermal Category 4  
Inhalation Category 4

| Component        | LD50 Oral                 | LD50 Dermal                  | LC50 Inhalation             |
|------------------|---------------------------|------------------------------|-----------------------------|
| 2-Methoxyethanol | LD50 = 2370 mg/kg ( Rat ) | LD50 = 1280 mg/kg ( Rabbit ) | LC50 = 1478 ppm ( Rat ) 7 h |

**(b) skin corrosion/irritation;** Based on available data, the classification criteria are not met

**(c) serious eye damage/irritation;** Based on available data, the classification criteria are not met

**(d) respiratory or skin sensitization;**

Respiratory Based on available data, the classification criteria are not met  
Skin 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;**

Reproductive Effects No data available  
Teratogenicity Category 1B.  
Teratogenic effects have occurred in experimental animals.

**(h) STOT-single exposure;**

Results / Target organs Category 1  
Immune system.

**(i) STOT-repeated exposure;**

Target Organs Category 2  
Thymus.

**(j) aspiration hazard;** Based on available data, the classification criteria are not met

**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**

Do not empty into drains. .

| Component        | Freshwater Fish                                        | Water Flea | Freshwater Algae |
|------------------|--------------------------------------------------------|------------|------------------|
| 2-Methoxyethanol | LC50: = 9650 mg/L, 96h static<br>(Lepomis macrochirus) |            |                  |

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|  |                                                                                                                    |  |  |
|--|--------------------------------------------------------------------------------------------------------------------|--|--|
|  | LC50: = 16000 mg/L, 96h static<br>(Oncorhynchus mykiss)<br>LC50: = 10000 mg/L, 96h static<br>(Lepomis macrochirus) |  |  |
|--|--------------------------------------------------------------------------------------------------------------------|--|--|

**12.2. Persistence and degradability**  
**Persistence** Readily biodegradable  
Persistence is unlikely.

**12.3. Bioaccumulative potential** Bioaccumulation is unlikely

| Component        | log Pow | Bioconcentration factor (BCF) |
|------------------|---------|-------------------------------|
| 2-Methoxyethanol | -0.77   | No data available             |

**12.4. Mobility in soil** 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.

**12.5. Results of PBT and vPvB assessment** Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

**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 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** Waste codes should be assigned by the user based on the application for which the product was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with local regulations.

## SECTION 14: TRANSPORT INFORMATION

### IMDG/IMO

**14.1. UN number** UN1188

ACR42878

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**14.2. UN proper shipping name** ETHYLENE GLYCOL MONOMETHYL ETHER  
**14.3. Transport hazard class(es)** 3  
**14.4. Packing group** III

## ADR

**14.1. UN number** UN1188  
**14.2. UN proper shipping name** ETHYLENE GLYCOL MONOMETHYL ETHER  
**14.3. Transport hazard class(es)** 3  
**14.4. Packing group** III

## IATA

**14.1. UN number** UN1188  
**14.2. UN proper shipping name** ETHYLENE GLYCOL MONOMETHYL ETHER  
**14.3. Transport hazard class(es)** 3  
**14.4. Packing group** III

**14.5. Environmental hazards** No hazards identified

**14.6. Special precautions for user** No special precautions required.

**14.7. Maritime transport in bulk according to IMO instruments** Not applicable, packaged goods

## SECTION 15: REGULATORY INFORMATION

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

#### International Inventories

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

| Component        | CAS No   | EINECS    | ELINCS | NLP | IECSC | TCSI | KECL     | ENCS | ISHL |
|------------------|----------|-----------|--------|-----|-------|------|----------|------|------|
| 2-Methoxyethanol | 109-86-4 | 203-713-7 | -      | -   | X     | X    | KE-23272 | X    | X    |

| Component        | CAS No   | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|------------------|----------|------|-----------------------------------------------|-----|------|------|-------|-------|
| 2-Methoxyethanol | 109-86-4 | 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) - 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) |
|------------------|----------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| 2-Methoxyethanol | 109-86-4 | -                                                                   | Use restricted. See item 30.<br>(see link for restriction details)<br>Use restricted. See item 75.<br>(see link for restriction details) | SVHC Candidate list - 203-713-7 - Toxic for reproduction, Article 57c                                 |

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After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

## REACH links

<https://echa.europa.eu/authorisation-list>

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

<https://echa.europa.eu/candidate-list-table>

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

| Component        | CAS No   | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements |
|------------------|----------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 2-Methoxyethanol | 109-86-4 | 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 |
|------------------|---------------------------------------|-------------------------|
| 2-Methoxyethanol | WGK 2                                 |                         |

| Component        | France - INRS (Tables of occupational diseases)      |
|------------------|------------------------------------------------------|
| 2-Methoxyethanol | Tableaux des maladies professionnelles (TMP) - RG 84 |

| 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 |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| 2-Methoxyethanol<br>109-86-4 ( <=100 ) |                                                                                                                | Group I                                                                         |                                                                                             |

## 15.2. Chemical safety assessment

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

## SECTION 16: OTHER INFORMATION

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

H302 - Harmful if swallowed  
H312 - Harmful in contact with skin  
H332 - Harmful if inhaled  
H370 - Causes damage to organs  
H360FD - May damage fertility. May damage the unborn child  
H373 - May cause damage to organs through prolonged or repeated exposure  
H226 - Flammable liquid and vapor

## 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

**DSL/NDL** - 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

**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, RTECS

**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 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.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

Chemical incident response training.

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**Revision Summary** Not applicable.

**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**

2-Methoxyethanol

Revision Date 11-Oct-2023

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**End of Safety Data Sheet**