

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

Creation Date 21-May-2009 Revision Date 07-Feb-2025 Revision Number 11

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

#### 1.1. Product identifier

Product Description: <u>Ethanol 96%, technical, duty free</u>

Cat No. : 444190000; 444190050

Synonyms Ethyl alcohol
CAS No 64-17-5
Molecular Formula C2 H6 O
REACH registration number

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

**Recommended Use** Laboratory chemicals.

Sector of use 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

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

**E-mail address** begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11 Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99 **CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## **SECTION 2: HAZARDS IDENTIFICATION**

#### 2.1. Classification of the substance or mixture

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

**Physical hazards** 

Flammable liquids Category 2 (H225)

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#### **Health hazards**

Serious Eye Damage/Eye Irritation

Category 2 (H319)

#### **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**

H225 - Highly flammable liquid and vapor

H319 - Causes serious eye irritation

#### **Precautionary Statements**

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

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear eye protection/ face protection

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

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

P370 + P378 - In case of fire: Use CO2, dry chemical, or foam to extinguish

#### 2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB) This product does not contain any known or suspected endocrine disruptors

## **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.2. Mixtures

| Component     | CAS No  | EC No     | Weight % | GHS Classification - According to<br>GB-CLP Regulations UK SI 2019/720 and<br>UK SI 2020/1567 |
|---------------|---------|-----------|----------|---|
| Ethyl alcohol | 64-17-5 | 200-578-6 | 95-96    | Flam. Liq. 2 (H225)<br>Eye Irrit. 2 (H319)  |

| Component     | Specific concentration limits (SCL's) | M-Factor | Component notes |
|---------------|---------------------------------------|----------|-----------------|
| Ethyl alcohol | Eye Irrit. 2 :: C>=50%                | -        | -               |

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| REACH registration number |                  |                   | - |
|---------------------------|------------------|-------------------|---|
| Components                | Reach Re         | gistration Number |   |
| Ethanol                   | 01-2119457610-43 |                   |   |

Full text of Hazard Statements: see section 16

## **SECTION 4: FIRST AID MEASURES**

#### 4.1. Description of first aid measures

If symptoms persist, call a physician. **General Advice** 

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get **Eve Contact** 

medical attention.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists,

call a physician.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if

symptoms occur.

Self-Protection of the First Aider Remove all sources of ignition.

4.2. Most important symptoms and effects, both acute and delayed

Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like

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.

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

No information available.

## 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 (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.

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## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

#### 6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. 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.

#### 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. Ensure adequate ventilation. Avoid ingestion and inhalation. Do not get in eyes, on skin, or on clothing. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

#### **Hygiene Measures**

When using do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

## 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               |
|---------------|-------------------------|----------------|-----------------------|
| Ethyl alcohol | TWA: 1000 ppm TWA; 1920 |                | STEL: 1000 ppm 15 min |

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| mg/m³ TWA                         |  |
|-----------------------------------|--|
| WEL - STEL: 3000 ppm              |  |
| STEL; 5760 mg/m <sup>3</sup> STEL |  |

## **Biological limit values**

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

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

See table for values

| Component                          | Acute effects local (Oral) | Acute effects systemic (Oral) | Chronic effects local (Oral) | Chronic effects systemic (Oral) |
|------------------------------------|----------------------------|-------------------------------|------------------------------|---------------------------------|
| Ethyl alcohol<br>64-17-5 ( 95-96 ) |                            | DNEL = 87 mg/kg bw/d          |                              |                                 |

| Componen                       | effects local<br>Dermal) | Acute effects systemic (Dermal) | Chronic effects local (Dermal) | Chronic effects systemic (Dermal) |
|--------------------------------|--------------------------|---------------------------------|--------------------------------|-----------------------------------|
| Ethyl alcoho<br>64-17-5 ( 95-9 |                          |                                 |                                | DNEL = 343mg/kg<br>bw/day         |

|   | Component                          | Acute effects local (Inhalation) | Acute effects systemic (Inhalation) | Chronic effects local (Inhalation) | Chronic effects systemic (Inhalation) |
|---|------------------------------------|----------------------------------|-------------------------------------|------------------------------------|---------------------------------------|
| 6 | Ethyl alcohol<br>64-17-5 ( 95-96 ) | DNEL = 1900mg/m <sup>3</sup>     |                                     |                                    | DNEL = 950mg/m <sup>3</sup>           |

## **Predicted No Effect Concentration (PNEC)**

See values below.

#### 8.2. Exposure controls

## **Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment. 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** Goggles (European standard - EN 166)

Hand Protection Protective gloves

| ſ   | Glove material | Breakthrough time | Glove thickness   | EU standard | Glove comments                           |
|-----|----------------|-------------------|-------------------|-------------|--|
| - [ | Butyl rubber   | > 480 minutes     | 0.38 mm - 0.56 mm | EN 374      | As tested under EN374-3 Determination of |
|     | Neoprene       | > 480 minutes     | 0.45 mm           | Level 6     | Resistance to Permeation by Chemicals    |
|     | Viton (R)      | > 480 minutes     | 0.30 mm           |             |  |
| 1   | Nitrile rubber | < 60 minutes      | 0.18 mm           |             |  |

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.

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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

Method - No information available

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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
Odor Threshold
Melting Point/Range
Softening Point
Boiling Point/Range
Flammability (liquid)

Clear, Colorless
sweet, Characteristic
No data available
-114 °C / -173.2 °F
No data available
78 °C / 172.4 °F
Highly (lammable

Flammability (liquid) Highly flammable On basis of test data

Flammability (solid,gas) Not applicable Liquid

Explosion Limits Lower 3.3 vol % Upper 19 vol %

**Flash Point** 13 - 17 °C / 55.4 - 62.6 °F

Autoignition Temperature
Decomposition Temperature
pH
Viscosity

363 °C / 685.4 °F
No data available
No information available
No data available

Water Solubility Soluble

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Componentlog PowEthyl alcohol-0.32

Vapor Pressure No data available

Density / Specific Gravity 0.80

Bulk DensityNot applicableLiquidVapor DensityNo data available(Air = 1.0)

Particle characteristics Not applicable (liquid)

#### 9.2. Other information

Molecular Formula C2 H6 O Molecular Weight 46.07

**Explosive Properties** Vapors may form explosive mixtures with air

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## **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

Keep away from open flames, hot surfaces and sources of ignition. Incompatible products.

10.5. Incompatible materials

Strong oxidizing agents. Strong acids. Acid anhydrides. Acid chlorides.

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 Based on available data, the classification criteria are not met **Dermal** Based on available data, the classification criteria are not met Inhalation Based on available data, the classification criteria are not met

| Component     | LD50 Oral            | LD50 Dermal | LC50 Inhalation          |
|---------------|----------------------|-------------|--------------------------|
| Ethyl alcohol | LD50 = 10470 mg/kg   | -           | LC50 = 117-125 mg/l (4h) |
|               | OECD 401 (Rat)       |             | OECD 403 (rat)           |
|               | 3450 mg/kg ( Mouse ) |             | 20000 ppm/10H (rat)      |

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

(c) serious eye damage/irritation; Category 2

(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

| Component         | Test method                                       | Test species | Study result   |
|-------------------|---|--------------|--|
| Ethyl alcohol     | Mouse Ear Swelling Test (MEST)                    | mouse        | non-sensitising  |
| 64-17-5 ( 95-96 ) |   | mouse        | non-sensitising  |
|                   | OECD Test Guideline 429<br>Local Lymph Node Assay |              | , and the second |

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

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| Component         | Test method             | Test species | Study result |
|-------------------|-------------------------|--------------|--------------|
| Ethyl alcohol     | AMES test               | in vitro     | negative     |
| 64-17-5 ( 95-96 ) | OECD Test Guideline 471 | Bacteria     |              |
|                   |                         |              |              |
|                   | Gene cell mutation      |              |              |
|                   | OECD Test Guideline 476 | in vitro     | negative     |
|                   |                         | Mammalian    |              |

(f) carcinogenicity; Based on available data, the classification criteria are not met

Ethanol has been shown to be carcinogenic in long-term studies only when consumed and

abused as an alcoholic beverage.

(g) reproductive toxicity; Based on available data, the classification criteria are not met

| Component         | Test method             | Test species / Duration | Study result          |
|-------------------|-------------------------|-------------------------|-----------------------|
| Ethyl alcohol     | OECD Test Guideline 416 | Oral / mouse            | NOAEL = 13.8 g/kg/day |
| 64-17-5 ( 95-96 ) | OFCD Took Cuidolino 414 | 2 Generation            |                       |
|                   | OECD Test Guideline 414 | Inhalation / Rat        | NOAEC =               |
|                   |                         |                         | 16000 ppm             |

(h) STOT-single exposure; Based on available data, the classification criteria are not met

Based on available data, the classification criteria are not met (i) STOT-repeated exposure;

**Target Organs** None known.

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

**Other Adverse Effects** The hazards associated with ethanol may be seen in this product.

delayed

Symptoms / effects.both acute and Inhalation of high vapor concentrations may cause symptoms like 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** Contains no substances known to be hazardous to the environment or that are not

degradable in waste water treatment plants.

| Component     | Freshwater Fish  | Water Flea                                    | Freshwater Algae                           |
|---------------|--|---|--|
| Ethyl alcohol | Fathead minnow (Pimephales<br>promelas) LC50 = 14200<br>mg/l/96h | EC50 = 9268 mg/L/48h<br>EC50 = 10800 mg/L/24h | EC50 (72h) = 275 mg/l (Chlorella vulgaris) |

| Component     | Microtox  | M-Factor |
|---------------|---|----------|
| Ethyl alcohol | Photobacterium phosphoreum:EC50 = 34634<br>mg/L/30 min<br>Photobacterium phosphoreum:EC50 = 35470<br>mg/L/5 min |          |

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12.2. Persistence and degradability

**Persistence** Persistence is unlikely, based on information available.

| Component         | Degradability   |
|-------------------|-----------------|
| Ethyl alcohol     | OECD 301E = 94% |
| 64-17-5 ( 95-96 ) |                 |

#### 12.3. Bioaccumulative potential Bioaccumulation is unlikely

|   | Component     | log Pow | Bioconcentration factor (BCF) |
|---|---------------|---------|-------------------------------|
| Ī | Ethyl alcohol | -0.32   | No data available             |

12.4. Mobility in soil

The product contains volatile organic compounds (VOC) which will evaporate easily from all

surfaces Will likely be mobile in the environment due to its volatility. Disperses rapidly in

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air

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 Ozone Depletion Potential This product does not contain any known or suspected substance This product does not contain any known or suspected substance

## **SECTION 13: DISPOSAL CONSIDERATIONS**

## 13.1. Waste treatment methods

Waste from Residues/Unused

**Contaminated Packaging** 

**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.

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.

## **SECTION 14: TRANSPORT INFORMATION**

#### IMDG/IMO

14.1. UN numberUN117014.2. UN proper shipping nameETHANOL

14.3. Transport hazard class(es) 3 14.4. Packing group II

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ADR

UN1170 14.1. UN number 14.2. UN proper shipping name **ETHANOL** 

14.3. Transport hazard class(es) 14.4. Packing group II

**IATA** 

14.1. UN number UN1170 14.2. UN proper shipping name **ETHANOL** 

14.3. Transport hazard class(es) 14.4. Packing group II

No hazards identified 14.5. Environmental hazards

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  |
|---------------|---------|-----------|--------|------|-------|------|----------|-------|-------|
| Ethyl alcohol | 64-17-5 | 200-578-6 | -      | -    | X     | Χ    | KE-13217 | Х     | Х     |
|               |         |           |        |      |       |      |          |       |       |
| Component     | CACNO   | TCCA      | TCCA I | ···· | DCI   | NDCI | AICC     | NZIAC | DICCC |

| Component     | CAS No  | TSCA | TSCA Inventory<br>notification -<br>Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|---------------|---------|------|---|-----|------|------|-------|-------|
| Ethyl alcohol | 64-17-5 | X    | ACTIVE  | Χ   | •    | Χ    | 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) -      | REACH (1907/2006) -       | REACH Regulation (EC    |
|---------------|---------|--------------------------|---------------------------|-------------------------|
|               |         | Annex XIV - Substances   | Annex XVII - Restrictions | 1907/2006) article 59 - |
|               |         | Subject to Authorization | on Certain Dangerous      | Candidate List of       |
|               |         |                          | Substances                | Substances of Very High |
|               |         |                          |                           | Concern (SVHC)          |
| Ethyl alcohol | 64-17-5 | -                        | -                         | -                       |

Not applicable

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

| Component     | CAS No  | Seveso III Directive (2012/18/EC) -<br>Qualifying Quantities for Major Accident | Seveso III Directive (2012/18/EC) -<br>Qualifying Quantities for Safety Report |
|---------------|---------|---|--|
|               |         | Notification  | Requirements   |
| Ethyl alcohol | 64-17-5 | 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

#### Ethanol 96%, technical, duty free

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 |
|---------------|---------------------------------------|-------------------------|
| Ethyl alcohol | WGK1                                  |                         |

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

| 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>Rotterdam Convention on the<br>Prior Informed Consent<br>Procedure |
|------------------------------------|--|---|--|
| Ethyl alcohol<br>64-17-5 ( 95-96 ) |  | Group I   |  |

#### 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has been conducted by the manufacturer/importer

## **SECTION 16: OTHER INFORMATION**

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

H225 - Highly flammable liquid and vapor

H319 - Causes serious eye irritation

## 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

Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japanese Existing and New Chemical Substances AICS - Australian Inventory of Chemical Substances NZIoC - New Zealand Inventory of Chemicals

IECSC - Chinese Inventory of Existing Chemical Substances **KECL** - Korean Existing and Evaluated Chemical Substances

WEL - Workplace Exposure Limit

TWA - Time Weighted Average

ACGIH - American Conference of Governmental Industrial Hygienists

IARC - International Agency for Research on Cancer Predicted No Effect Concentration (PNEC)

**DNEL** - Derived No Effect Level

LD50 - Lethal Dose 50%

RPE - Respiratory Protective Equipment

EC50 - Effective Concentration 50%

LC50 - Lethal Concentration 50%

**ACR44419** 

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**NOEC** - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

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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

**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)

## Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

#### **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.

Creation Date21-May-2009Revision Date07-Feb-2025

**Revision Summary** SDS sections updated, 2, 3, 4, 11, 12.

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

#### **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

## **End of Safety Data Sheet**