

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
Printdate 20 Jun 2024

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product name:

Cholecalciferol

### 1.1. Catalog No.:

692260

### 1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical  
uses: R&D

### 1.3. Uses advised against:

HPC Standards GmbH  
Am Wieseneck 7

04451 Cunnersdorf  
Deutschland

Tel. +49 34291 3372-36  
Fax. +49 34291 3372-39  
contact@hpc-standards.com

### 1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36  
This number is only available during office hours.

## 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture  
Classification according to Regulation (EC) No 1272/2008  
Flammable liquids (Category 2), H225  
Eye irritation (Category 2), H319

### 2.2. Label elements

#### 2.2.1. Pictogram



#### 2.2.2.

2.2 Label elements  
Labelling according Regulation (EC) No 1272/2008  
Pictogram Signal word Danger  
Hazard statement(s)  
H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P280 Wear eye protection/ face protection.

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

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

P403 + P235 Store in a well-ventilated place. Keep cool.

Supplemental Hazard  
Statements

none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Synonyms : Ethyl alcohol

Formula : C<sub>2</sub>H<sub>6</sub>O

Molecular weight : 46,07 g/mol

CAS-No. : 64-17-5

EC-No. : 200-578-6

Index-No. : 603-002-00-5

Registration number : 01-2119457610-43-XXXX

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component Classification Concentration

Ethanol

CAS-No.

EC-No.

Index-No.

64-17-5

200-578-6

603-002-00-5

Flam. Liq. 2; Eye Irrit. 2; H225,

H319

Concentration limits:

>= 50 %: Eye Irrit. 2A, H319;

<= 100 %

#### 3.1.1. Formula

C<sub>2</sub>H<sub>4</sub>O

#### 3.1.2. Molecular Weight (g/mol)

384.64

### 3.1.3. CAS-No.

67-97-0

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Carbon oxides

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers

## 6. ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

### 6.4 Reference to other sections

For disposal see section 13.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Hygroscopic.

Storage class (TRGS 510): Flammable liquids

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Components with workplace control parameters

Derived No Effect Level (DNEL)

Application Area Exposure

routes

Health effect Value

Workers Inhalation Long-term systemic effects 950 mg/m<sup>3</sup>

Workers Skin contact Long-term systemic effects 343mg/kg BW/d

Workers Ingestion Long-term systemic effects 343mg/kg BW/d

Workers Inhalation Acute local effects 1900 mg/m<sup>3</sup> Predicted No Effect Concentration (PNEC)

Compartment Value

Soil 0,63 mg/kg

Marine water 0,79 mg/l

Fresh water 0,96 mg/l

Fresh water sediment 3,6 mg/l

Sewage treatment plant 580 mg/l

### 8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands. Body Protection

impervious clothing, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- a) Appearance Form: liquid, clear  
Colour: colourless
- b) Odour No data available
- c) Odour Threshold No data available
- d) pH No data available
- e) Melting point/freezing point  
-143,99 °C
- f) Initial boiling point and boiling range  
78,0 - 80,0 °C
- g) Flash point 14,0 °C - closed cup
- h) Evaporation rate No data available
- i) Flammability (solid, gas) No data available
- j) Upper/lower flammability or explosive limits  
Upper explosion limit: 19 %(V)  
Lower explosion limit: 3,3 %(V)
- k) Vapour pressure 59,5 hPa at 20,0 °C
- l) Vapour density No data available
- m) Relative density 0,7974 g/cm<sup>3</sup>
- n) Water solubility completely soluble
- o) Partition coefficient: noctanol/water
- log Pow: -0,349 at 24 °C
- p) Auto-ignition temperature  
363,0 °C
- q) Decomposition temperature  
No data available
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available 9.2 Other safety information  
No data available

## 10. STABILITY AND REACTIVITY

- 10.1 Reactivity  
No data available
- 10.2 Chemical stability  
Stable under recommended storage conditions.
- 10.3 Possibility of hazardous reactions  
No data available
- 10.4 Conditions to avoid  
Heat, flames and sparks.
- 10.5 Incompatible materials  
Alkali metals, Oxidizing agents, Peroxides
- 10.6 Hazardous decomposition products  
Other decomposition products - No data available  
In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

- 11.1 Information on toxicological effects  
Acute toxicity  
LD50 Oral - Rat - 10.470 mg/kg  
LC50 Inhalation - Rat - 4 h - 30.000 mg/l  
LD50 Dermal - Rabbit - 15.800 mg/kg  
Skin corrosion/irritation

Skin - Rabbit  
Result: No skin irritation - 24 h  
(OECD Test Guideline 404)  
Serious eye damage/eye irritation  
Eyes - Rabbit  
Result: Moderate eye irritation  
(OECD Test Guideline 405)  
Respiratory or skin sensitisation  
No data available  
Germ cell mutagenicity  
No data available  
Carcinogenicity  
Carcinogenicity - Mouse - Oral  
Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Liver: Tumors. Blood: Lymphomas including Hodgkin's disease.  
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
Reproductive toxicity  
Reproductive toxicity - Human - female - Oral  
Effects on Newborn: Apgar score (human only). Effects on Newborn: Other neonatal measures or effects.  
Effects on Newborn: Drug dependence.  
Specific target organ toxicity - single exposure  
No data available Specific target organ toxicity - repeated exposure  
No data available  
Aspiration hazard  
No data available  
Additional Information  
RTECS: KQ6300000  
Central nervous system depression, narcosis, Damage to the heart., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

## 12. ECOLOGICAL INFORMATION

12.1 Toxicity  
Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 14.200 mg/l - 96 h  
Toxicity to daphnia and other aquatic  
LC50 - Ceriodaphnia dubia (water flea) - 5.012 mg/l - 48 h invertebrates  
NOEC - Daphnia magna (Water flea) - 9,6 mg/l - 9 d  
Toxicity to algae EC50 - Chlorella vulgaris (Fresh water algae) - 275 mg/l - 72 h  
(OECD Test Guideline 201)  
12.2 Persistence and degradability  
Biodegradability Result: 95 % - Readily biodegradable  
12.3 Bioaccumulative potential  
Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.  
12.4 Mobility in soil  
No data available  
12.5 Results of PBT and vPvB assessment  
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.  
12.6 Other adverse effects  
No data available

## 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods  
Product  
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging  
Dispose of as unused product

#### 14. TRANSPORT INFORMATION

14.1 UN number  
ADR/RID: 1170 IMDG: 1170 IATA: 1170  
14.2 UN proper shipping name  
ADR/RID: ETHANOL  
IMDG: ETHANOL  
IATA: Ethanol  
14.3 Transport hazard class(es)  
ADR/RID: 3 IMDG: 3 IATA: 3  
14.4 Packaging group  
ADR/RID: II IMDG: II IATA: II  
14.5 Environmental hazards  
ADR/RID: no IMDG Marine pollutant: no IATA: no  
14.6 Special precautions for user  
No data available

#### 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.  
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
15.2 Chemical Safety Assessment  
A Chemical Safety Assessment has been carried out for this substance

#### 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide.  
The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!