

# SAFETY DATA SHEET

## 1. PRODUCT

### 1.1 Product identifiers

Name: Ergocalciferol

CAS-No.: 50-14-6

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

Identified uses : Laboratory chemicals, Manufacture of substances

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 3), H301


Acute toxicity, Inhalation (Category 2), H330

Acute toxicity, Dermal (Category 3), H311

Specific target organ toxicity - repeated exposure, Oral (Category 1), H372

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 GHS Label elements, including precautionary statements

|                            |   |
|----------------------------|---|
| Pictogram                  |    |
| Signal word                | Danger  |
| Hazard statement(s)        | H301 + H311 Toxic if swallowed or in contact with skin<br>H330 Fatal if inhaled.<br>H372 Causes damage to organs through prolonged or repeated exposure if swallowed.   |
| Precautionary statement(s) | P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.<br>P264 Wash skin thoroughly after handling.<br>P270 Do not eat, drink or smoke when using this product.<br>P271 Use only outdoors or in a well-ventilated area.<br>P280 Wear protective gloves/ protective clothing.<br>P284 Wear respiratory protection.<br>P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.<br>P302 + P352 + P312 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell.<br>P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.<br>P314 Get medical advice/ attention if you feel unwell.<br>P361 Remove/ Take off immediately all contaminated clothing.<br>P363 Wash contaminated clothing before reuse.<br>P403 + P233 Store in a well-ventilated place. Keep container tightly closed.<br>P405 Store locked up.<br>P501 Dispose of contents/ container to an approved waste disposal plant. |

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Synonyms: Irradiated ergosterol  
Ergosterol irradiated  
Ercalcio  
Calciferol  
Vitamin D2

Formula:  $C_{28}H_{44}O$

Molecular weight: 396.65 g/mol

CAS-No.: 50-14-6

EC-No.: 200-014-9

#### Hazardous components

| Component  | Classification   | Concentration |
|------------|--|---------------|
| Vitamin D2 | Acute Tox. 3; Acute Tox. 2; Acute Tox. 3; STOT RE 1; H301 + H311, H330, H372 | 90 -100 %     |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

|   |
|---|
| <b>General advice</b>   |
| Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.       |
| <b>If inhaled</b>   |
| If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. |
| <b>In case of skin contact</b>  |
| Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.               |
| <b>In case of eye contact</b>   |
| Flush eyes with water as a precaution.  |
| <b>If swallowed</b>   |
| 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

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

No data available

## 5. FIREFIGHTING 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

No data available

## 6. ACCIDENTAL RELEASE MEASURES

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

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

Evacuate personnel to safe areas. Avoid breathing dust.

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

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

## 6.4 Reference to other sections

For disposal see section 13.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature 2 - 8 °C

Air and moisture sensitive. Light sensitive. Store under inert gas. Keep in a dry place.

Storage class (TRGS 510): Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

### 7.3 Specific end use(s)

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

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### 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                   | <p>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.</p> <p>Full contact<br/>Material: Nitrile rubber<br/>Minimum layer thickness: 0.11 mm<br/>Break through time: 480 min<br/>Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)</p> <p>Splash contact<br/>Material: Nitrile rubber<br/>Minimum layer thickness: 0.11 mm<br/>Break through time: 480 min<br/>Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)<br/>data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374</p> <p>If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.</p> |
| Body Protection                   | Complete suit protecting against chemicals, 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 particle respirator type N100 (US) or type P3 (EN 143) 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

|  |   |
|--|---|
| Appearance                                   | Form: powder<br>Colour: white                           |
| Odour  | No data available                                       |
| Odour Threshold                              | No data available                                       |
| pH   | No data available                                       |
| Melting point/freezing point                 | Melting point/range: 114 - 118 °C (237 - 244 °F) - lit. |
| Initial boiling point and boiling range      | No data available                                       |
| Flash point                                  | No data available                                       |
| Evaporation rate                             | No data available                                       |
| Flammability (solid, gas)                    | No data available                                       |
| Upper/lower flammability or explosive limits | No data available                                       |
| Vapour pressure                              | No data available                                       |
| Vapour density                               | No data available                                       |
| Relative density                             | No data available                                       |
| Water solubility                             | No data available                                       |
| Partition coefficient: n-octanol/water       | No data available                                       |
| Auto-ignition temperature                    | No data available                                       |
| Decomposition temperature                    | No data available                                       |
| Viscosity                                    | No data available                                       |
| Explosive properties                         | No data available                                       |
| 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

No data available

### 10.5 Incompatible materials

Oxidizing agents, Strong acids and strong bases

### 10.6 Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

|   |
|---|
| <b>Acute toxicity</b>   |
| No data available<br>Inhalation: No data available<br>Dermal: No data available<br>No data available  |
| <b>Skin corrosion/irritation</b>  |
| No data available   |
| <b>Serious eye damage/eye irritation</b>  |
| No data available   |
| <b>Respiratory or skin sensitisation</b>  |
| No data available   |
| <b>Germ cell mutagenicity</b>   |
| No data available   |
| <b>Carcinogenicity</b>  |
| 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.<br>ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.<br>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.<br>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.   |
| <b>Reproductive toxicity</b>  |
| No data available<br>Reproductive toxicity - Rat - Oral<br>Maternal Effects: Menstrual cycle changes or disorders. Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated ).<br>Reproductive toxicity - Rat - Subcutaneous<br>Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated ).<br>No data available<br>Developmental Toxicity - Rat - Oral<br>Specific Developmental Abnormalities: Endocrine system. Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system. Effects on Newborn: Viability index (e.g., # alive at day 4 per # born alive).<br>Developmental Toxicity - Mouse - Oral<br>Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Craniofacial (including nose and tongue). Specific Developmental Abnormalities: Musculoskeletal system. |
| <b>Specific target organ toxicity -single exposure</b>  |
| No data available   |
| <b>Specific target organ toxicity -repeated exposure</b>  |
| Ingestion - Causes damage to organs through prolonged or repeated exposure.   |
| <b>Aspiration hazard</b>  |
| No data available   |
| <b>Additional Information</b>   |

RTECS: KE1050000  
hypercalcemia

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

No data available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

| Product  |
|--|
| Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. |
| Contaminated packaging   |
| Dispose of as unused product.  |

## 14. TRANSPORT INFORMATION

### DOT (US)

UN number: 2811 Class: 6.1 Packing group: II

Proper shipping name: Toxic solids, organic, n.o.s. (Vitamin D2)

Reportable Quantity (RQ):

Marine pollutant: No

Poison Inhalation Hazard: No

### IMDG

UN number: 2811 Class: 6.1 Packing group: II EMS-No: F-A, S-A

Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Vitamin D2)

Marine pollutant: No

### IATA

UN number: 2811 Class: 6.1 Packing group: II

Proper shipping name: Toxic solid, organic, n.o.s. (Vitamin D2)

## 15. REGULATORY INFORMATION

### SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

| Component  | CAS-No. | Revision Date |
|------------|---------|---------------|
| Vitamin D2 | 50-14-6 | 1993-04-24    |

### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### Massachusetts Right To Know Components

| Component  | CAS-No. | Revision Date |
|------------|---------|---------------|
| Vitamin D2 | 50-14-6 | 1993-04-24    |

### Pennsylvania Right To Know Components

| Component  | CAS-No. | Revision Date |
|------------|---------|---------------|
| Vitamin D2 | 50-14-6 | 1993-04-24    |

### New Jersey Right To Know Components

| Component  | CAS-No. | Revision Date |
|------------|---------|---------------|
| Vitamin D2 | 50-14-6 | 1993-04-24    |

### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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## 16. OTHER INFORMATION

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

Acute Tox. Acute toxicity

H301 Toxic if swallowed.

H301 + H311 Toxic if swallowed or in contact with skin

H311 Toxic in contact with skin.

H330 Fatal if inhaled.

H372 Causes damage to organs through prolonged or repeated exposure if swallowed.

STOT RE Specific target organ toxicity - repeated exposure

### HMIS Rating

Health hazard: 4

Chronic Health Hazard:

Flammability: 0

Physical Hazard 0

### NFPA Rating

Health hazard: 4

Fire Hazard: 0

Reactivity Hazard: 0

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