

## **1. Identification of the substance/preparation and of the company/undertaking**

### *Identification of the product*

Calcium nitrate tetrahydrate

### *Manufacturer/supplier identification*

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## **2. Hazards identification**

### **Classification of the substance or mixture**

#### **Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Oxidizing solids (Category 3)

Acute toxicity - Oral (Category 5)

Skin irritation (Category 3)

Eye irritation (Category 2B)

### **Label elements**

Pictogram



Signal word Warning

### Hazard statement(s)

H272 May intensify fire: oxidant.

H303 May be harmful if swallowed.

H316 Causes mild skin irritation.

H320 Causes eye irritation.

### Precautionary statement(s)

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

P220 Keep/Store away from clothing/ combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P264 Wash thoroughly after handling.

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

P302 + P352 IF ON SKIN: Wash with plenty of water.

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

P312 Call a POISON CENTER/doctor if you feel unwell.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

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

P362 Take off contaminated clothing.

Supplemental Hazard Statements

none

### **3. Composition/information on ingredients**

#### *Synonyms*

Calcium nitrate tetrahydrate

CAS-No.: 13477-34-4

*M*: 236.10 g/mol

Molecular formula:  $\text{Ca}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$

### **4. First aid measures**

#### **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**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### **5. Fire-fighting measures**

#### **Suitable extinguishing media**

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

#### **Advice for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

### **6. Accidental release measures**

#### **Personal precautions**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

#### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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

Sweep up and shovel. 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. Keep in suitable, closed containers for disposal.

### **7. Handling and storage**

#### **Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition.

#### **Conditions for safe storage**

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

### **8. Exposure controls/personal protection**

#### **Appropriate engineering controls**

General industrial hygiene practice.

#### **Personal protective equipment**

**Eye/face protection**

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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Body Protection**

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

**9. Physical and chemical properties**

**Form:** crystals

**Colour:** colorless

**Odour:** not available

**pH value:** 4~6 at 50g/L, 25 °C

**Melting point:** 42 °C

**Boiling point:** not available

**Ignition temperature:** not available

**Flash point:** not available

**Autoignition temperature:** not available

**Explosion limits**

**lower:** not available

**upper:** not available

**Density :** 1.82 g/cm<sup>3</sup>

**Bulk density:** not available

**Solubility in**

**water (20 °C) :** soluble in water

**diluted acids (20 °C) :** not available

**Thermal decomposition:** not available

**10. Stability and reactivity****Chemical stability**

no data available

**Conditions to avoid**

Moisture

**Materials to avoid**

Strong reducing agents

**Hazardous decomposition products**

Other decomposition products - no data available

**11. Toxicological information**

**Acute toxicity**

no data available

**Skin corrosion/irritation**

no data available

**Serious eye damage/eye irritation**

no data available

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

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.

**Specific target organ toxicity - single exposure**

no data available

**Specific target organ toxicity - repeated exposure**

no data available

**Aspiration hazard**

no data available

**12. Ecological information**

**Toxicity**

no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

no data available

**13. Disposal considerations**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

**14. Transport information**

**ADR/RID**

UN-Number: 1454    Class: 5.1    Packing group:III

# **GHTECH** Material Safety Data Sheet

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Proper shipping name: Calcium nitrate

## **IMDG**

UN-Number: 1454    Class: 5.1    Packing group:III

Proper shipping name: Calcium nitrate

Marine pollutant: no

## **IATA**

UN-Number: 1454    Class: 5.1    Packing group:III

Proper shipping name: Calcium nitrate

## **15. Regulatory information**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

## **16. Other information**

General update.

*Regional representation:*

This information is given on the authorised Safety Data Sheet for your country.