

## Safety Data Sheet

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### Section 1. Identification of the substance/mixture and of the company/undertaking

**Product identifier:**

Product name: Calcium, granular

Reference number(SDS): 24275jis\_E-1

**Product type:**

Reagent

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses of the product: Research and Development

Uses advised against: Do not use for other purposes.

**Details of the supplier of the safety data sheet**

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-cho, Koshigaya-shi, Saitama 343-0844, Japan

Division: Quality Assurance Department

Telephone number: +81-48-986-6161

FAX: +81-48-989-2787

e-mail address: shiyaku-t@junsei.co.jp

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### Section 2. Hazards identification

**GHS classification and label elements of the product****Classification of the substance or mixture****PHYSICAL AND CHEMICAL HAZARDS**

Pyrophoric solids: Category 1

Substances and mixtures which, in contact with water, emit flammable gases: Category 2

**HEALTH HAZARDS**

Skin corrosion/irritation: Category 1

Serious eye damage/eye irritation: Category 1

(Note) GHS classification without description: Not classified/Classification not possible

**Label elements**

Signal word: Danger

**HAZARD STATEMENT**

H250-Catches fire spontaneously if exposed to air

H261-In contact with water releases flammable gas

H314-Causes severe skin burns and eye damage

H318-Causes serious eye damage

**PRECAUTIONARY STATEMENT****Prevention**

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

Do not allow contact with air.

Do not allow contact with water.

Handle and store contents under inert gas/appropriate liquid or gas. Protect from moisture.

Keep container tightly closed.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash contaminated parts thoroughly after handling.

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

**Response**

In case of fire: Use dry sand, powder (e.g. Sodium chloride powder etc.) to extinguish.

Immediately call a POISON CENTER/doctor/physician.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN: Brush off loose particles from skin. Immerse in cool water or wrap in wet bandages.

IF ON SKIN: Brush off loose particles from skin. Immerse in cool water.

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

Wash contaminated clothing before reuse.

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

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**Storage**

Store locked up.

Store in a dry place. Store in a closed container.

**Disposal**

Dispose of contents/container in accordance with local/national regulation.

**Specific Physical and Chemical hazards**

May catch fire spontaneously.

May catch fire or form flammable gas in contact with water.

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**Section 3. Composition/information on ingredients****Mixture/Substance selection:****Substance**

Ingredient name: Calcium

Content (%): 99.5 <

Chemical formula: Ca

CAS No.: 7440-70-2

AW: 40.078

EC No.: 231-179-5

Note : The figures shown above are not the specifications of the product.

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**Section 4. First-aid measures****Descriptions of first-aid measures****General measures**

Immediately call a POISON CENTER/doctor/physician.

Keep victim warm and quiet.

Call emergency medical service.

**IF INHALED**

Remove person to fresh air and keep comfortable for breathing.

Give artificial respiration if victim is not breathing.

Administer oxygen if breathing is difficult.

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

**IF ON SKIN (or hair)**

Take off immediately all contaminated clothing. Rinse skin with water or shower.

IF ON SKIN: Brush off loose particles from skin. Immerse in cool water or wrap in wet bandages.

If skin irritation or rash occurs: Get medical advice/attention.

Remove and isolate contaminated clothing and shoes.

**IF IN EYES**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

**IF SWALLOWED**

Rinse mouth. Do NOT induce vomiting.

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

**Most important symptoms and effects, both acute and delayed**

(Symptoms when inhalation or ingestion)

Sore throat. Cough. Burning sensation. Shortness of breath. Abdominal pain. Abdominal cramps. Vomiting.

(Symptoms when skin and/or eye contact)

Conjunctival redness of the eyes. Redness of the skin. Pain. Burns.

**Indication of any immediate medical attention and special treatment needed**

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

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**Section 5. Fire-fighting measures****Extinguishing media****Suitable extinguishing media**

In case of fire, use dry sand, powder (e.g. Sodium chloride powder etc.) to extinguish.

**Unsuitable extinguishing media**

**DO NOT USE WATER OR FOAM.**

**Specific hazards arising from the substance or mixture**

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Runoff from fire control or dilution water may cause pollution.

May re-ignite after fire is extinguished.

**Advice for firefighters****Specific fire-fighting measures**

Evacuate non-essential personnel to safe area.

Keep drums, etc., cool by spraying with water. NO direct contact with water.

**Special protective equipment and precautions for fire-fighters**

Wear fire resistant or flame retardant clothing.

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

Firefighters should wear self-contained breathing apparatus with a full facepiece operated in the positive pressure mode.

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**Section 6. Accidental release measures****Personnel precautions, protective equipment and emergency procedures**

Evacuate area.

In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

Ventilate area until material pick up is complete.

Wear proper protective equipment.

**PUBLIC SAFETY:** Ventilate closed spaces before entering.

**EVACUATION :** Spill: See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

Do not touch or walk through spilled material.

**Environmental precautions**

Avoid release to headsprings, rivers, lakes, ocean and groundwater.

Runoff may create fire or explosion hazard.

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

Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.

Dike for later disposal; do not apply water unless directed to do so.

Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic

sheet to minimize spreading or contact with rain.

DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.

Preventive measures for secondary accident

Collect spillage.

Stop leak if you can do it without risk.

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

DO NOT GET WATER on spilled substance or inside containers.

Keep out of low areas.

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## Section 7. Handling and storage

### Precautions for safe handling

#### Preventive measures

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

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

Do not allow contact with water.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

#### Safety Measures

Do not allow contact with air.

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

Use personal protective equipment as required.

Handle and store contents under inert gas/appropriate liquid or gas. Protect from moisture.

When using do not eat, drink or smoke.

#### Any incompatibilities

Strong oxidizing agents, Water, Alcohols, Halogens should not be mixed with the chemicals.

#### Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Wash contaminated clothing before reuse.

#### Storage

##### Conditions for safe storage

Keep container tightly closed.

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

Keep cool. Protect from sunlight.

Store in accordance with local/national regulation.

Store locked up.

Store in a dry place. Store in a closed container.

##### Container and packaging materials for safe handling

Keep only in original packaging.

#### Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See

Section 8 for exposure controls and personal protection recommendations.

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## Section 8. Exposure controls/personal protection

### Control parameters

Control value and concentration standard value are not available in ISHA.

### Adopted value

Adopted value in JSOH is not available.

Adopted value in ACGIH is not available.

#### Exposure controls

##### Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

##### Individual protection measures

##### Respiratory protection

Select and wear respiratory protection in accordance with approved standards (e.g. JIS T8150).

Recommended respiratory protection: Self-Contained Breathing Apparatus (SCBA)

##### Hand protection

Wear protective gloves.

Inspect before use and replace worn or damaged gloves.

Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions.

Chemical-resistant, impervious gloves complying with an approved standard (e.g. JIS T8116) should be used.

##### Eye protection

Wear safety glasses with side-shields.

Wear eye/face protection in accordance with approved standards (e.g. JIS T8147).

##### Skin and body protection

Wear impervious clothing and boots in case of repeated or prolonged treatment.

Personal protective equipment for the body and skin should be selected based on the task being performed and the risks involved.

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## Section 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

Physical state: Granular

Color: Silvery white~Grey

Odor: Odorless

Odor threshold data is not available.

Melting point/Freezing point: 837~841°C

Boiling point or initial boiling point: 1484°C

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

Self-Accelerating Decomposition Temperature/SADT data is not available.

pH data is not available.

Dynamic viscosity data is not available.

Kinematic viscosity data is not available.

#### Solubility:

Solubility in water: Reaction

Solubility in solvent: Insoluble in benzene.

n-Octanol/water partition coefficient data is not available.

Vapor pressure: 10 mmHg(983°C)

Density and/or relative density: 1.54 g/cm<sup>3</sup> (20°C)

Relative vapor density (Air=1) data is not available.

Relative density of the Vapor/air - mixture at 20°C (Air = 1) data is not available.

Particle characteristics data is not available.

## Other information

Critical temperature data is not available.

Evaporation rate data is not available.

VOC data is not available.

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**Section 10. Stability and Reactivity**

## Reactivity

React with water.

## Chemical stability

Stable under normal storage/handling conditions.

## Possibility of hazardous reactions

May ignites in air when finely divided.

## Conditions to avoid

Contact with incompatible materials.

Open flames. Heating. Sparks. Moisture

## Incompatible materials

Strong oxidizing agents, Water, Alcohols, Halogens

## Hazardous decomposition products

Metal oxides, Hydrogen gas

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**Section 11. Toxicological Information**

## Information on toxicological effects

## Acute toxicity

## Acute toxicity (Oral)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

## Acute toxicity (Dermal)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

## Acute toxicity (Inhalation)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

## Irritant properties

## Skin corrosion/irritation

[Product]

Category 1, Causes severe skin burns and eye damage

[Data for components of the product]

[GHS Cat. Japan, base data]

corrosive (NFPA 13th, 2006)

## Serious eye damage/irritation

[Product]

Category 1, Causes serious eye damage

[Data for components of the product]

[GHS Cat. Japan, base data]

corrosive (NFPA 13th, 2006)

## Sensitization

## Respiratory sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

## Skin sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

## Germ cell mutagenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

## Carcinogenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

## Reproductive toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

## Specific target organ toxicity (STOT)

## STOT-single exposure

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

## STOT-repeated exposure

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

## Aspiration hazard

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

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**Section 12. Ecological Information**

## Ecotoxicity

## Aquatic toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

Toxicity data is not available.

## Persistence and degradability

Persistence and degradability data is not available.

**Bioaccumulative potential**

Bioaccumulative potential data is not available.

**Mobility in soil**

Mobility in soil data is not available.

**Other adverse effects**

Ozone depleting chemical data is not available.

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**Section 13. Disposal considerations**

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

**Waste treatment methods**

Dispose of contents/container in accordance with local/national regulation.

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**Section 14. Transport Information****UN No., UN CLASS**

UN Number or ID Number : 1401

UN Proper Shipping Name : CALCIUM

Class or division (Transport hazard class) : 4.3

Packing group : II

ERG GUIDE No.: 138

**IMDG Code (International Maritime Dangerous Goods Regulations)**

UN Number or ID Number : 1401

UN Proper Shipping Name : CALCIUM

Class or division (Transport hazard class) : 4.3

Packing group : II

**IATA (Dangerous Goods Regulations)**

UN Number or ID Number : 1401

UN Proper Shipping Name : CALCIUM

Class or division (Transport hazard class) : 4.3

Hazard labels : Dang. when wet

Packing group : II

**Environmental hazards**

Marine pollutants (yes/no) : no

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable to Transport in bulk according to Annex II of MARPOL and the IBC Code

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**Section 15. Regulatory Information****Safety, health and environmental regulations/legislation specific for the substance or mixture****U.S. Toxic Substances Control Act (TSCA) Inventory**

Chemicals listed in TSCA Inventory

7440-70-2

All components are listed or exempted.

**Other regulatory information**

We are not able to check up the regulatory information with regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

Regulatory information in this section are limited to intentional ingredient(s), but does

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not contain information on non-intentional ingredients or impurities which are not informed by supplier(s).

Chemical safety assessment

Advice on safe handling for this product can be found in sections 7 and 8 of this SDS.

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## Section 16. Other information

### GHS classification and labelling

H250–Pyrophoric Solids, Category 1: H250 Catches fire spontaneously if exposed to air

H261–Substances and Mixtures which, in contact with water, emit flammable gases,

Category 2: H261 In contact with water releases flammable gases

H314–Skin corrosion/irritation, Category 1: H314 Causes severe skin burns and eye damage

H318–Serious eye damage/eye irritation, Category 1: H318 Causes serious eye damage

### References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 22nd edit., 2021 UN

IMDG Code, 2022 Edition (Incorporating Amendment 41–22)

IATA Dangerous Goods Regulations (65th Edition) 2024

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2024 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2019

JIS Z 7253 : 2019

2023 Recommendation on TLVs (JSOH)

Notification No. 0111–1 (January 11, 2022), Chemical Hazards Control Division, Industrial

Safety and Health Department, Labour Standards Bureau, MHLW in Japan

Supplier's data/information

Chemicals safety data management system "GHS Assistant" Version 4.30 (<https://www.asahi-ghs.com/>)

NITE Chemical Risk Information Platform "NITE-CHRIP"

([https://www.chem-info.nite.go.jp/chem/chrip/chrip\\_search/systemTop](https://www.chem-info.nite.go.jp/chem/chrip/chrip_search/systemTop))

GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.1) (May. 2024, METI)

### Abbreviations and acronyms

SDS (Safety Data Sheet)

LD50 (Lethal Dose, 50%)

LC50 (Lethal Concentration, 50%)

IARC (International Agency for Research on Cancer)

ACGIH (American Conference of Governmental Industrial Hygienists)

EPA (US Environmental Protection Agency)

NTP (US National Toxicology Program)

METI (Ministry of Economy, Trade and Industry in Japan)

MHLW (Ministry of Health, Labour and Welfare in Japan)

MOE (Ministry of the Environment in Japan)

JSOH (Japan Society for Occupational Health)

ISHA (Industrial Safety and Health Act in Japan)

CSCL (Chemical Substances Control Law in Japan)

EU (European Union)

EC50 (Effective Concentration, 50%)

NOEC (No Observed Effect Concentration)

BOD (Biochemical Oxygen Demand)

COD (Chemical Oxygen Demand)

BCF (Bioconcentration Factor)

anh (anhydride)

### General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling,



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and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2022).