



Safety Data Sheet

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

Product identifier:

Product name: Calcium

SDS No. : 1336E-1

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN

Division: Safety Management Dept. of Chemicals

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

e-mail address: kagakuhinanzenkanri@kishida.co.jp

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

Catches fire spontaneously if exposed to air

In contact with water releases flammable gases

Causes severe skin burns and eye damage

Causes serious eye damage

PRECAUTIONARY STATEMENT

Prevention

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Do not allow contact with air.

Do not allow contact with water.

Handle 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 appropriate media other than water for extinction.

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/wrap in wet bandages.

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



water/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 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.

3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Calcium

Content (%):99(min)

Chemical formula:Ca

CAS No.:7440-70-2

MW:40.078

ECNO:231-179-5

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

4. First-aid measures

Descriptions of first-aid measures

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

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

IF ON SKIN (or hair)

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

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

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

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 or doctor/physician if you feel unwell.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use dry powder, dry sand to extinguish.

Unsuitable extinguishing media

Indoor firefighting equipment or outdoor firefighting equipment

Sprinkler equipment

Moisture firefighting equipment or water spray firefighting equipment

Foam firefighting equipment

Inactive gas firefighting equipment



Halogenated firefighting system
Dry-powder firefighting equipment – phosphate etc.
Straight stream water extinguisher
Water mist extinguisher
Reinforcing liquid jet extinguisher
Misty reinforcing liquid extinguisher
Foam extinguisher
Carbon dioxide extinguisher
Halogenated extinguisher
Dry-powder extinguisher – phosphate etc.
Bucket of water or tank of water

Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.

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

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

Avoid raising dust.

Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

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/sparks/open flames/hot surfaces. – 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.

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

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

**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 dry place. Store in a closed container.

Store in a cool, dry place. Do not store in direct sunlight.

Container and packaging materials for safe handling

Glass

8. Exposure controls/personal protection**Control parameters****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**

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

9. Physical and Chemical Properties**Information on basic physical and chemical properties**

Physical state: Powder or granularity

Color: Silver-white to gray

Odor: Odourless

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.

pH data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Reaction

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

Vapor pressure: Negligible

Density and/or relative density: 1.55 g/cm³(20°C)

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

No Particle characteristics data is not available.



10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Ignites in air when finely divided. (ICSC 1192)

Possibility of hazardous reactions

The substance is a strong reducing agent. Reacts with moisture, water, alcohols, halogens and many other substances. This produces flammable/explosive gas (hydrogen). (ICSC 1192)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Water, Alcohols, Halogens

Hazardous decomposition products

Hydrogen

11. Toxicological Information

Information on toxicological effects

Acute toxicity data is not available.

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

(Calcium)

corrosive (NFPA 13th, 2006)

Serious eye damage/irritation

[GHS Cat. Japan, base data]

(Calcium)

corrosive (NFPA 13th, 2006)

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Reproductive toxicity data is not available.

STOT

STOT-single exposure data is not available.

STOT-repeated exposure data is not available.

Aspiration hazard data is not available.

Additional data

May cause lung disorders by massive inhalation of powdered substance.

-e.g. fibrosis of lung tissue, cough, sputum, breath shortness, dyspnea, decline of lung function, interstitial lung disease, pneumothorax

12. Ecological Information

Ecotoxicity

Ecotoxicity data is not available.

Water solubility

(Calcium)

reaction (ICSC, 2012)

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.

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.

14. Transport Information

UN No.: 1855

Proper Shipping Name :

CALCIUM, PYROPHORIC or CALCIUM ALLOYS, PYROPHORIC

Class or division : 4.2

Packing group : I

ERG GUIDE No.: 135

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 1855

Proper Shipping Name :

CALCIUM, PYROPHORIC or CALCIUM ALLOYS, PYROPHORIC

Class or division : 4.2

Packing group : I

IATA Dangerous Goods Regulations

UN No.: 1855

Proper Shipping Name :

CALCIUM, PYROPHORIC or CALCIUM ALLOYS, PYROPHORIC

Class or division : 4.2

Packing group : I

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

US Federal Regulations

Chemicals listed in TSCA Inventory

Calcium

Other regulatory information

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

16. Other information**GHS classification and labelling**

Pyr. Sol. 1: H250 Catches fire spontaneously if exposed to air

Water-react. 2: H261 In contact with water releases flammable gases

Skin Corr. 1: H314 Causes severe skin burns and eye damage

Eye Dam. 1: H318 Causes serious eye damage

Reference Book



Globally Harmonized System of classification and labelling of chemicals, (6th ed., 2015), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN IMDG Code, 2018 Edition (Incorporating Amendment 39-18)

IATA Dangerous Goods Regulations (61th Edition) 2020

Classification, labelling and packaging of substances and mixtures (Table 3 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2020 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

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, 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 2018).