



Safety Data Sheet

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

Product identifier:

Product name: Calcium ion standard solution (1,000mg/l)

Product code (SDS NO): M8924E-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: kagakuhinanzekenri@kishida.co.jp

2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

(Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

3. Composition/information on ingredients

Mixture/Substance selection:

Mixture

Ingredient name: Calcium chloride, 4-hydrate

Content (%): 0.46

Chemical formula: $\text{CaCl}_2 \cdot 4\text{H}_2\text{O}$

Chemicals No, Japan: 1-176

CAS No.: 25094-02-4

Ingredient name: Water

Content (%): 99

Chemical formula: H_2O

CAS No.: 7732-18-5

MW: 18.02

ECNO: 231-791-2

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 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.

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

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

Use appropriate extinguishing media suitable for surrounding facilities.

Specific hazards arising from the substance or mixture

Containers may explode when heated.

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

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.

Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Preventive measures for secondary accident

Collect spillage.

7. Handling and storage**Precautions for safe handling****Preventive measures**

(Protective measures against fire and explosion)

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

Exhaust/ventilator

Exhaust/ventilator should be available.

Safety treatments

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures/Incompatibility

Wear protective gloves, protective clothing or face protection.

When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities**Recommendation for storage**

Keep container tightly closed.

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

**8. Exposure controls/personal protection**

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 properties

Appearance: Liquid

Color: Colorless, clear

Odor data N.A.

pH data N.A.

Phase change temperature

Initial Boiling Point/Boiling point data N.A.

Boiling range data N.A.

Melting point/Freezing point data N.A.

Decomposition temperature data N.A.

Flash point data N.A.

Auto-ignition temperature data N.A.

Explosive properties data N.A.

Vapor pressure data N.A.

Specific gravity/Density: 1.0g/cm³

Solubility

Solubility in water data N.A.

n-Octanol/water partition coefficient data N.A.

10. Stability and Reactivity

Reactivity

N.A.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

(As calcium chloride, anhydrous)

Decomposes on heating. This produces toxic and corrosive fumes of chlorine. The solution in water is a weak base. Attacks zinc in the presence of water. This produces flammable/explosive gas (hydrogen). Dissolves violently in water with liberation of much heat. (ICSC 1184)

Conditions to avoid

Contact with fire source.

Incompatible materials

N.A.

Hazardous decomposition products



Chlorine, Hydrogen

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Company proprietary data]

(Calcium chloride, 4-hydrate)

(As Calcium chloride)

rat LD50=1940 mg/kg

No Irritant properties data available

No Allergenic and sensitizing effects data available

No Mutagenic effects data available

No Carcinogenic effects data available

No reproductive toxicity data available

No STOT-single/repeated exposure data available

No Aspiration hazard data available

12. Ecological Information

Ecotoxicity

No Aquatic toxicity data available

No Persistence and degradability data available

No Bioaccumulative potential data available

No Mobility in soil data available

Ozone depleting chemical data not available

13. Disposal considerations

Waste treatment methods

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

14. Transport Information

Not applicable to UN No.

IMDG Code (International Maritime Dangerous Goods Regulations)

Not applicable to IMDG Code

IATA Dangerous Goods Regulations

Not applicable to IATA Dangerous Goods Regulations

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Non Noxious Liquid ; Cat. OS

Water

15. Regulatory Information

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

US major regulations

TSCA

Water; Calcium chloride, 4-hydrate

Other regulatory information



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

16. Other information

The product is not applicable to GHS classifications.

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN

IMDG Code, 2018 Edition (Incorporating Amendment 39-18)

IATA Dangerous Goods Regulations (60th Edition) 2019

Classification, labelling and packaging of substances and mixtures (table 3-1 ECNO 6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2018 TLVs and BEIs. (ACGIH)

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

Supplier's data/information

General Disclaimer

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It is advised to make their own tests to determine the safety and suitability of each such product or combination for their own purposes.

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 2017).