Issue date: 11/27/2003
Revision date: 3/18/2024

Safety Data Sheet

1. Chemical product and company identification

Product name	:	Calcium hydroxide

Company information

Name of manufacturer	:	KANTO CHEMICAL CO., INC.
Address	:	2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, JP
Name of section	:	Business Administration Department, Reagent Division
Telephone number	:	+81-3-6214-1090
Facsimile number	:	+81-3-3241-1047
Mail address	:	BC32@kanto.co.jp
Reference No	:	07069
Product numbers applied by the SDS	:	07069、07241
Recommended use	:	For research use only
Restrictions on use	:	Seek expert judgment when using the product for applications other than those recommended.

2. Hazards identification

GHS classification

Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity (single exposure)	Category 1 (respiratory organs)

Hazard pictograms

Signal word	:	Danger
Hazard statements	:	Causes skin irritation Causes serious eye damage Causes damage to organs (respiratory organs)

Precautionary statements

Prevention	:	Do not breathe dust. Wash hands, forearms and face thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.
Response	:	IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Call a POISON CENTER or doctor. Immediately call a POISON CENTER or doctor. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Storage : Store locked up.

Disposal : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

3. Composition/information on ingredients

Distinction of substance or mixture : Substance

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
Calcium hydroxide	≥ 95	Ca(OH)2	Listed	215-137-3	1305-62-0

4. First aid measures

First aid measures

First-aid measures after inhalation : Remove the victim to fresh air, and make him blow his nose and gargle.

First-aid measures after skin contact : Wash the affected areas under running water.

First-aid measures after eye contact : Wash the affected areas under running water for at least 15 minutes. Get medical treatment.

First-aid measures after ingestion : Rinse mouth with water. Give the victim one or two glasses of water or milk. Do not induce vomiting. Get medical treatment as soon as possible.

Personal Protection in First Aid and Measures : Rescuers should wear proper protective equipment like rubber gloves, goggles.

Most Important Symptoms/Effects

Symptoms/effects : If inhaled, may cause throat ache, cough, and burning sensation. If contacted with eyes, may cause redness, ache, severe burning.

5. Fire fighting measures

Suitable extinguishing media : This product is noncombustible.

Unsuitable extinguishing media : None

Firefighting instructions : Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.

Personal protection (Emergency response) : Wear breathing apparatus.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

General measures : Wear proper protective equipment and avoid contact with skin and inhalation of dust. Conduct operations from upwind and evacuate people downwind.

Environmental precautions

Environmental precautions : Attention should be given to avoid damage to the environment by flowing of spillage to rivers.

Methods and Equipment for Containment and Cleaning up

For containment	:	Sweep up in a chemical waste container. Flush contaminated area with copious amounts of water.

7. Handling and storage

Handling

Technical measures	:	If necessary, wear proper protective equipment to avoid contact with skin or inhalation of dust.
Precautions for safe handling	:	Avoid formation of dust and aerosols.

Storage

Storage conditions	:	Store in a dark, cool place and tightly closed.
Material used in packaging/containers	:	Polyethylene, polypropylene, fluorocarbon polymers.

8. Exposure controls / Personal protection equipment

ACGIH TWA	5 mg/m³

Appropriate engineering controls	:	Install a local ventilation system in case of dusty condition.

Protective equipment

Respiratory protection	:	If necessary, wear dust mask
Hand protection	:	Impervious protective gloves
Eye protection	:	Safety goggles
Skin and body protection	:	Protective clothing, protective boots

9. Physical and chemical properties

Physical state	:	Solid
Color	:	White
Odor	:	Odorless
pH	:	12.6 (saturated water solution, 20℃)
Melting point	:	580 ° C (Decomposition)
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability	:	Not flammable.
Vapor pressure	:	No data available
Relative density	:	No data available
Density	:	2.24 g/cm³ (20℃)
Relative gas density	:	No data available
Solubility	:	Water: 0.17%(20℃). Organic solvents: Soluble in glycerol, insoluble in ethanol.
Partition coefficient n-octanol/water (log Pow)	:	No data available
Explosive limits (vol %)	:	No data available

Viscosity, kinematic	:	No data available
Particle characteristics	:	No data available

10. Stability and reactivity

Reactivity	:	May react with acids.
Chemical stability	:	Stable under normal conditions. It absorbs carbon dioxide in the air to produce calcium hydrogen carbonate.
Possibility of hazardous reactions	:	Since it is strongly alkaline, it generates heat when it reacts with acid.
Conditions to avoid	:	Light, heat.
Incompatible materials	:	Acids, strong oxidizing substances.
Hazardous decomposition products	:	Calcium oxide.

11. Toxicological information

Acute toxicity (oral)	:	No classification rat LD50=7340mg/kg
Acute toxicity (dermal)	:	Classification not possible
Acute toxicity (inhalation)	:	No classification (gas) No classification (vapor) Classification not possible (dust, mist)
Skin corrosion/irritation	:	Causes skin irritation There are descriptions that the aqueous solution of this substance is a strong base (pH 12.6), and that it is moderately caustic or irritating to the body surface. In addition, there are descriptions that this substance is moderately irritating to the skin of humans, and that it is corrosive. From the above information, although this substance is a strong base, based on the descriptions that effects on the skin were "moderate," it was classified into category 2.
Serious eye damage/irritation	:	Causes serious eye damage There are descriptions that this substance is a strong base (pH 12.6), and that it is moderately caustic or irritating to the body surface. In addition, there is a report that this substance is corrosive to the eyes, and there is a description that it causes irreversible injury. From the above results, it was classified into category 1.
Respiratory sensitization	:	Classification not possible
Skin sensitization	:	Classification not possible
Germ cell mutagenicity	:	Classification not possible There were no in vivo data. As for in vitro, it was negative in comet assays with cultured mammalian and human cells.
Carcinogenicity	:	Classification not possible
Reproductive toxicity	:	Classification not possible
STOT-single exposure	:	Causes damage to organs (respiratory organs) There are reports that this substance irritates the respiratory tract and is corrosive to the mucosa in humans although data are limited, and that it may cause coughing, chemical burns of mucous membranes, pulmonary edema, vomiting and stomach cramps. There were no data on experimental animals. From the above, there is a description that it is irritating to the respiratory tract of humans and causes pulmonary edema, therefore, it was classified into category 1 (respiratory organs).

STOT-repeated exposure	:	Classification not possible There are descriptions that chronic ingestion of this substance can result in inflammatory and ulcerous changes in the mouth and digestive tract by irritation, and that atrophic changes in the liver, kidney and stomach and inflammation in the small intestine were observed in a test in which rats were administered by drinking water for 3 months, however, details including the dose were unknown, therefore, it was not possible to adopt the above for classification. Therefore, classification was not possible due to lack of data.
Aspiration hazard	:	Classification not possible

12. Ecological information

Ecotoxicity

Aquatic acute	:	Classification not possible
Aquatic chronic	:	Classification not possible

Persistence and degradability

No additional information available

Bioaccumulative potential

No additional information available

Mobility in soil

No additional information available

Hazardous to the ozone layer

Ozone	:	Classification not possible

13. Disposal considerations

Ecological waste information	:	Neutralization method : Add the chemical gradually in diluted acid solution to neutralize. Or entrust approved waste disposal companies with the disposal.
Contaminated container and packaging	:	In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

International Regulations

Transport by sea(IMDG)

UN-No. (IMDG)	:	Not applicable
Proper Shipping Name (IMDG)	:	Not applicable
Packing group (IMDG)	:	Not applicable
Transport hazard class(es) (IMDG)	:	Not applicable

Air transport(IATA)

UN-No. (IATA)	:	Not applicable
Proper Shipping Name (IATA)	:	Not applicable
Packing group (IATA)	:	Not applicable
Transport hazard class(es) (IATA)	:	Not applicable

Marine pollutant : Not applicable

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

Pollutant category : Z

15. Regulatory information

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

16. Other information

Data sources : Encyclopaedia Chimica, Kyoritsu Shuppan Co, Ltd. (1963) .
Handbook of 17322 Chemical Products, The Chemical Daily Co. (2022) .
NITE Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation.

The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully.The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements.The information herein is only provision of information, and it does not represent a guarantee the properties of the product.The Safety Data Sheet(SDS) is prepared based on JIS Z7253.