



SECTION 1: Identification of the substance/mixture

1.1. Product identifier

Product form	: Substance
Substance name	: Sodium Silicate
Formula	: Na_2SiO_3
Molecular weight	: 122.06 g/mol
CAS No.	: 6834-92-0
Product code	: LW-NA2SIO3
Synonyms	: Calcium(II) chloride, Calcium dichloride

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Laboratory chemicals, Synthesis of substances

1.3. Emergency telephone number

Emergency number : 1.800.424.9300 (USA)
+1.703.527.3887 (INT)

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. GHS Label elements, including precautionary statements

Pictogram



Signal word

: Warning

Hazard statement(s)

H319

: Causes serious eye irritation.

Precautionary statement(s)

P264

: Wash skin thoroughly after handling.

P280

: Wear protective gloves/ eye protection/ face protection.

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

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

2.3. Hazards not otherwise classified (HNOC) or not covered by GHS

none

SECTION 3: Composition/information on ingredients

3.1. Substances

Hazardous components

Component	Classification	Concentration
Sodium Silicate	Met. Corr. 1; Skin Corr. 1B; Eye Dam. 1; STOT SE 3; H290, H314, H335	90 - 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: Description of first aid measures

4.1. Description of first aid measures

General advice : Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

First-aid measures after inhalation : If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

First-aid measures after skin contact : Wash off with soap and plenty of water. Consult a physician.

First-aid measures after eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

First-aid measures after ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed

No data available

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SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

Sodium oxides, silicon oxides

5.3. Advice for firefighters

Wear self-contained breathing apparatus for fire-fighting if necessary.

5.4. More Information

no data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

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

7.3. Specific end use(s)

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Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with workplace control parameters : Contains no substances with occupational exposure limit values.

8.2. Exposure controls

Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.3. Personal protective equipment

Eye protection : Face shield and safety glasses 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.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method:

EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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Body protection	: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Environmental exposure controls	: Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	: Form: prills Color: white
Odor	: No data available
Odor Threshold	: No data available
pH	: 12.5 at 10 g/l at 20 °C (68 °F)
Melting point/freezing point	: Melting point/range: 1,090 °C (1,994 °F)
Initial boiling point and boiling range	: No data available
Flash point	: No data available
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper/lower flammability or explosive limits	: No data available
Vapor pressure	: 0.0103 hPa (0.0077 mmHg) at 1,175 °C (2,147 °F)
Vapor density	: No data available
Relative density	: 2.61 g/cm ³ at 20 °C (68 °F)
Water solubility	: 350 g/l at 20 °C (68 °F)
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Explosive properties	: No data available

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Oxidizing properties : No data available

9.2. Other safety information

Bulk density : 950 kg/m³ at 20 °C (68 °F)

Solubility in other solvents : Alcohol - insoluble

Dissociation constant : 9.9 - 12 at 30 °C (86 °F)

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Exposure to moisture may affect product quality.

10.5. Incompatible materials

Strong acids, Lead, Tin/tin oxides, Zinc, Aluminium

10.6. Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : LD50 Oral - rat - male and female - 1,152 - 1,349 mg/kg
Remarks: Gastrointestinal: Ulceration or bleeding from stomach.
Inhalation: no data available
Dermal: no data available
no data available

Skin corrosion/irritation : Skin - rabbit
Result: Corrosive - 4 h
(OECD Test Guideline 404)

Serious eye damage/irritation : no data available

Respiratory or skin sensitization : in vivo assay - mouse

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	Result: Does not cause skin sensitization. (OECD Test Guideline 429)
Germ cell mutagenicity	: Ames test S. typhimurium Result: negative mouse - male Result: negative
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.
ACGIH	: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity	: Reproductive toxicity - rat - Oral Effects on Newborn: Stillbirth. Effects on Newborn: Live birth index (# fetuses per litter; measured after birth). Effects on Newborn: Weaning or lactation index (e.g., # alive at weaning per # alive at day 4).
Specific target organ toxicity (single exposure)	: Inhalation - May cause respiratory irritation. - Respiratory system
Specific target organ toxicity (repeated exposure)	: no data available
Aspiration hazard	: no data available
Additional Information	: Repeated dose toxicity - rat - male and female - No observed adverse effect level - 227 - 237 mg/kg RTECS: VV9275000 burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

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SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish : semi-static test LC50 - Danio rerio (zebra fish) - 210 mg/l - 96 h (ISO 7346/1)

Toxicity to bacteria : No data available

12.2. Persistence and degradability : No data available

12.3. Bioaccumulative potential : No data available

12.4. Mobility in soil : No data available

12.5. Results of PBT and vPvB assessment : PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6. Other adverse effects : no data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated Packaging : Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number : 3253

Class : 8

Packing group : III

Proper shipping name : Disodium trioxosilicate

Reportable Quantity (RQ) :

Poison Inhalation Hazard : No

IMDG

UN number : 3253

Class : 8

Packing group : III

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EMS-No : F-A, S-B
Proper shipping name : Disodium trioxosilicate
Reportable Quantity (RQ) :
Poison Inhalation Hazard : No

IATA

UN number : 3253
Class : 8
Packing group : III
Proper shipping name : Disodium trioxosilicate

SECTION 15: Regulatory information

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Disodium metasilicate	CAS-No.	Revision Date
	6834-92-0	

New Jersey Right To Know Components

Disodium metasilicate	CAS-No.	Revision Date
	6834-92-0	

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

Eye Dam. : Serious eye damage
H290 : May be corrosive to metals.

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H314	:	Causes severe skin burns and eye damage.
H318	:	Causes serious eye damage.
H335	:	May cause respiratory irritation.
Met. Corr.	:	Corrosive to metals
Skin Corr.	:	Skin corrosion

HMIS Rating

Health Hazard	:	3
Chronic Health Hazard	:	
Flammability	:	0
Physical Hazard	:	0

NFPA Rating

Health hazard	:	3
Fire Hazard	:	0
Reactivity Hazard	:	0

Further Information

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