

MATERIAL SAFETY DATA SHEET

Sodium metasilicate pentahydrate

1. IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF SUPPLIER

Product Identifier: High Purity Chemicals
Synonyms: Disodiumtrioxosilicate, pentahydrate Disodium metasilicate pentahydrate; Disodium trioxosilicate pentahydrate
Other means of identification: CAS No. 10213-79-3
EINECS No. 229-912-9

Recommended use of the chemical and restrictions on use:
General reagent use.

Supplier Details:

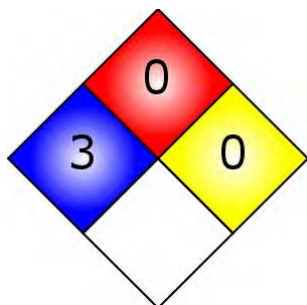
Global Chemical Resources.
1925 Nebraska Avenue
Toledo, OH 43607
419-242-1004

Emergency Contact: CHEMTREC: 1.800.424.9300 (USA)

2. HAZARDS IDENTIFICATION

OSHA Hazards:
Corrosive, Harmful by ingestion

NFPA



GHS label elements, including precautionary statements



Signal Word:

DANGER!

Hazard statement(s)

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.

Precautionary statement(s)

P261	Avoid breathing dust/fumes/gas/mist/vapors.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.
P310	Immediately call a POISON CENTER or doctor/ physician.
P280	Wear protective gloves and eye and face protection.

GHS Classification(s)

Acute toxicity, Oral (Category 4)
 Eye damage (Category 1)
 Skin corrosion (Category 1B)
 Specific target organ toxicity - single exposure (Category 3)

Other hazards which do not result in classification:

Potential Health Effects:

Organ	Description
Eyes	Product can cause eye burns.
Ingestion	Product can be harmful if ingested.
Inhalation	Product can be harmful if inhaled. Can cause damage to the tissue of the mucous membranes and upper respiratory tract.
Skin	Product can cause skin irritation if absorbed. Can cause skin burns.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical identity:	Sodium metasilicate pentahydrate
Common name / Synonym:	Disodiumtrioxosilicate, pentahydrate Disodium metasilicate



pentahydrate; Disodium trioxosilicate pentahydrate
CAS number: 10231-79-3
EINECS number: 229-912-9
RTECS #: VV9287500
EC #: 014-010-00-8

% Weight	Material	CAS
100	Sodium metasilicate penthydrate	10213-79-3

4. FIRST AID MEASURES

General advice

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Skin

Wash skin immediately with plenty of soap and water. Remove contaminated clothing and shoes. Call a physician

Inhalation

Remove person to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.

Eyes

Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention.

Ingestion

DO NOT induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with water. Seek medical attention. Never give anything by mouth to an unconscious individual.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):

Sodium oxides and silicon oxides are expected to be the primary hazardous decomposition products.

Special protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Keep unopened containers cool by spraying with water.



6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Wear respiratory protection. Do not inhale vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions:

Stop leak. Contain spill if possible and safe to do so. Prevent product from entering drains.

Methods and materials for containment and cleaning up:

Sweep up and place material in a convenient waste disposal container. Keep container closed.

7. HANDLING AND STORAGE

Precautions for safe handling:

Do not get on skin or in eyes. Avoid formation of dust and aerosols. Provide proper exhaust ventilation system in areas where dust forms.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a dry and well-ventilated place. Product must not come in contact with water in storage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters, e.g., occupational exposure limit values or biological limit values:

Occupational Exposure Limits

Component	Source	Type	Value	Note
Sodium metasilicate penthydrate	/		No exposure limit.	

Appropriate engineering controls:

General room or local exhaust ventilation is usually required to meet exposure limit(s). Electrical equipment should be grounded and conform to applicable electrical code.

Individual protection measures, such as personal protective equipment:

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).

Hand 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.

Eye protection:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Hygiene measures:

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	white granules, hygroscopic
Odor	odorless
Odor threshold	Specific data not available
pH	Specific data not available
Freezing point	Melting Point: 72 °C (162 °F)
Initial boiling point and boiling range	Specific data not available
Flash point	Specific data not available
Evaporation rate	Specific data not available
Flammability (solid, gas)	Not flammable or combustible
Upper / Lower flammability or explosive limits	Specific data not available
Vapor pressure	Specific data not available
Vapor Density	Specific data not available
Relative Density	Specific data not available
Solubility(ies)	Soluble
Partition coefficient n-octanol/water(ies)	Specific data not available
Auto-ignition temperature	Specific data not available
Decomposition temperature	Specific data not available
Formula (Sodium metasilicate pentahydrate)	Na ₂ O ₃ Si * 5H ₂ O
Molecular Weight (Sodium metasilicate pentahydrate)	212.14 g/mol

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No data available
Conditions to avoid (e.g., static discharge, shock or vibration)	No data available
Incompatible materials	Strong oxidizing agents



Hazardous decomposition products	Sodium oxides and silicon oxides are expected to be, under fire conditions, the primary hazardous decomposition products.
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11. TOXICOLOGICAL INFORMATION

· Sodium metasilicate pentahydrate 10213-79-3

Product Summary:

No data available for the teratogenicity, mutagenicity, or reproductive toxicity of this product. No data available to designate the product as causing specific target organ toxicity through repeated exposure. No data available to designate product as an aspiration hazard.

Acute Toxicity:

LD50 (Oral)	Rat	847 mg/kg	
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Irritation:

Eyes

No data available.

Respiratory or Skin Sensitization

No data available

Skin

No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

Inhalation - Can cause respiratory irritation.

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable 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.

Other Hazards

Organ	Description
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Eyes	Product can cause eye burns.
Ingestion	Product can be harmful if ingested.
Inhalation	Product can be harmful if inhaled. Can cause damage to the tissue of the mucous membranes and upper respiratory tract.
Skin	Product can cause skin irritation if absorbed. Can cause skin burns.

12. ECOLOGICAL INFORMATION

· Sodium metasilicate 6834-92-0

Ecotoxicity (aquatic and terrestrial, where available):

Ecotoxicity

No data available

Persistence and degradability:

No data available

Bioaccumulative potential:

No data available

Other adverse effects:

No data 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:

Offer unused and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of the product.

14. TRANSPORT INFORMATION

Description of waste residues and information on their safe handling and methods of disposal:

UN number	3253
UN proper shipping name	Disodium trioxosilicate
Transport hazard class(es)	8
Packing group (if applicable)	III

IMDG

Revision Date: 5-1-2015

Revision Number: 1.0



UN-Number: 3253 Class: 8 Packing Group: III
EMS-No: F-A, S-B
Proper shipping name: DISODIUM TRIOXOSILICATE
Marine pollutant: No

IATA

UN-Number: 3253 Class: 8 Packing Group: III
Proper shipping name: Disodium trioxosilicate

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question:

OSHA Hazards

Corrosive, Harmful by ingestion

All ingredients are on the following inventories or are exempted from listing

Country	Notification
Australia	AICS
Canada	DSL
China	IECS
European Union	EINECS
Japan	ENCS/ISHL
Korea	ECL
New Zealand	NZIoC
Philippines	PICCS
United States of America	TSCA

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

CERCLA

No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA

Massachusetts Right To Know Components

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



Pennsylvania Right To Know Components

Disodium metasilicate pentahydrate CAS-No. 10213-79-3

New Jersey Right To Know Components

Disodium metasilicate pentahydrate CAS-No. 10213-79-3

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.

16. OTHER INFORMATION: INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

Disclaimer

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Revision Date: 5-1-2015

Revision Number: 1.0