

SAFETY DATA SHEET

Preparation Date: 2/6/2019

Revision date 2/6/2019

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: S1337
Product Name: SODIUM META-SILICATE, NONAHYDRATE, CRYSTAL, REAGENT

Other means of identification

Synonyms: Silicic acid, disodium salt, nonahydrate
 Disodium metasilicate nonahydrate
 Sodium silicate nonahydrate
 Sodium metasilicate nonahydrate
 Disodium trioxosilicate, nonahydrate

CAS #: 13517-24-3
RTECS # Not available
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: Cement producing, Petroleum production and refining, pulp and paper processing. Paints. water treatment. In textiles. Adhesives. Food preservative. Detergent.

Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300

Contact Person: Tom Tyner (USA - West Coast)

Contact Person: Ibad Tirmiz (USA - East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

Label elements

Danger

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Hazard statements

Harmful if swallowed
Causes severe skin burns and eye damage
May cause respiratory irritation

**Hazards not otherwise classified (HNOC)**

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Call a POISON CENTER or doctor/physician if you feel unwell.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight-%
Sodium meta-Silicate, Nonahydrate	13517-24-3	100

4. FIRST AID MEASURES

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First aid measures

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
- Skin Contact:** Wash off immediately with soap and plenty of water. Remove all contaminated clothes and shoes. Continue flushing with plenty of water for at least 15 minutes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.
- Eye Contact:** Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.
- Inhalation:** WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Move to fresh air. If breathing is difficult, give oxygen. Immediate medical attention is required.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

- Symptoms**
- Severe skin and eye irritation or burns
 - May cause corneal injury
 - Irritating to respiratory system
 - May cause chemical burns to the respiratory tract
 - Burning pain in the mouth, throat, esophagus, stomach. Ulceration/burning of the mouth, throat, esophagus, stomach
 - May cause bleeding or ulceration from the stomach
 - May cause nausea and vomiting
 - It may affect the kidneys

Indication of any immediate medical attention and special treatment needed

- Notes to Physician:** Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

- Suitable Extinguishing Media:** The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire. Dry chemical. Carbon dioxide (CO₂). Water spray, mist, or foam.

- Unsuitable Extinguishing Media:** No information available.

Specific hazards arising from the chemical

- Hazardous combustion products** No information available.

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Specific hazards

Sodium metasilicate ignites in fluorine. Fire may produce irritating, corrosive and/or toxic gases.

Special Protective Actions for Firefighters**Specific Methods:**

No information available

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal Precautions:**

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent from entering into soil, ditches, sewers, waterways, and/or ground water.

Methods and material for containment and cleaning up**Methods for containment**

Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up

Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE**Precautions for safe handling****Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Use only in well-ventilated areas. Do not ingest. Do not breathe dust. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities**Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Store in a segregated and approved area.

Incompatible Materials:

Strong oxidizing agents
Strong acids
Lead
Zinc
Aluminum

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters**

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National occupational exposure limits

United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Sodium meta-Silicate, Nonahydrate	13517-24-3	None	None	None	None

Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Sodium meta-Silicate, Nonahydrate	13517-24-3	None	None	None	None

Australia and Mexico

Component	CAS No	Australia	Mexico
Sodium meta-Silicate, Nonahydrate	13517-24-3	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation, especially in confined areas. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

- Eye protection:** Goggles
- Skin and body protection:** Gloves
Long sleeved clothing
Chemical resistant apron
- Respiratory protection:** Effective dust mask. or. Wear respirator with dust filter.
- Hygiene measures:** Avoid contact with skin, eyes and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:
Solid

Appearance:
Crystalline solid.

Color:
White.

Odor:
Odorless.

Taste
No information available.

Formula
Na₂SiO₃·9H₂O

Molecular/Formula weight (g/mole): 284.20 g/mol

Flammability (solid, gas)
no data available

Flashpoint (°C/°F):
No information available

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Flash Point Tested according to: Not available	Autoignition Temperature (°C/°F): No information available	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Melting point/range(°C/°F): 1088°C/1990°F (anhydrous) 48°C/118°F (in water of crystalization) 72°C/167°F	Decomposition temperature(°C/°F): No information available
Boiling point/range(°C/°F): No information available	Bulk density: No information available	Density (g/cm3): 2.614 (anhydrous)
Specific gravity: No information available	pH 12-13 (1%)	Vapor pressure @ 20°C (kPa): No information available
Evaporation rate: No information available	Vapor density: No information available	VOC content (g/L): No information available
Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): No information available	Viscosity: No information available
Miscibility: No information available	Solubility: Very soluble in water Soluble in dilute Sodium hydroxide solution Insoluble in acids Insoluble in Alcohol	

10. STABILITY AND REACTIVITY

Reactivity

Solutions of sodium metasilicate, when heated and acidified, are hydrolyzed to free sodium and silic acid

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Excess Heat. Incompatible materials.

Incompatible Materials: Strong oxidizing agents
Strong acids
Lead
Zinc
Aluminum

Hazardous decomposition products: No information available.

Other Information

Corrosivity: May be corrosive to metals

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

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Information on likely routes of exposure

Principal Routes of Exposure:

Ingestion. Inhalation. Eyes. Skin.

Acute Toxicity

Component Information

Sodium meta-Silicate, Nonahydrate	
CAS No	13517-24-3

LD50/oral/rat = No information available
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
Value - Acute Tox = No information available

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
Value - Acute Tox = No information available

LD50/dermal/rat
VALUE - Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Causes severe irritation and burns.

Eye Contact: Causes severe irritation and burns. May cause corneal damage.

Inhalation Irritating to respiratory system. May cause chemical burns to the respiratory tract.

Ingestion Harmful if swallowed. May cause gastrointestinal tract irritation with nausea, vomiting. May cause ulceration or bleeding from the stomach. May cause ulceration or bleeding from the duodenum. May affect kidneys (renal failure, acute tubular necrosis, hematuria). May affect respiration.

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Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Repeated or prolonged skin contact can cause ulcerative allergic contact dermatitis.

Sensitization: No information available.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Sodium meta-Silicate, Nonahydrate	13517-24-3	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure Eyes. Skin. respiratory system.

STOT - repeated exposure No information available.

Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Sodium meta-Silicate, Nonahydrate - 13517-24-3

Fish 210 mg/L LC50 Brachydanio rerio 96h (anhydrous CAS# 6834-92-0)

2320 mg/L LC50 Gambusia affinis 96h (anhydrous CAS# 6834-92-0)

Crustacea 216 mg/L EC50 Daphnia magna 96h (anhydrous CAS# 6834-92-0)

160 mg/L EC50 Amphipoda 96h (anhydrous CAS# 6834-92-0)

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

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Mobility in soil No information available
Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal. Do not re-use empty containers
Dispose of as unused product.

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Sodium meta-Silicate, Nonahydrate	13517-24-3	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN3253
Proper Shipping Name: Disodium trioxosilicate
Hazard Class 8
Subsidiary Class No information available
Packing group: III
Emergency Response Guide Number 154
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions IB8, IP3, T1, TP33
Symbol(s): No information available
Description: UN3253, Disodium trioxosilicate, 8, III

TDG (Canada)

UN-No: UN3253
Proper Shipping Name: Disodium trioxosilicate
Hazard Class 8
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant No Information available
Description: UN3253, Disodium trioxosilicate, 8, III

ADR

UN Number UN3253
Proper Shipping Name: Disodium trioxosilicate
Transport hazard class(es) 8
Packing group III
Subsidiary Risk: No information available
Description: UN3253, Disodium trioxosilicate, 8, III

IMDG

UN-No: UN3253
Proper Shipping Name: Disodium trioxosilicate

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Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant: No information available
EMS: F-A
Description: UN3253, Disodium trioxosilicate, 8, III

RID

UN Number: UN3253
Proper Shipping Name: Disodium trioxosilicate
Transport hazard class(es): 8
Subsidiary Risk: No information available
Packing group: III
Description: UN3253, Disodium trioxosilicate, 8, III

ICAO (air)

UN-No: UN3253
Proper Shipping Name: Disodium trioxosilicate
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Description: UN3253, Disodium trioxosilicate, 8, III

IATA

UN Number: UN3253
Proper Shipping Name: Disodium trioxosilicate
Transport hazard class(es): 8
Subsidiary Risk: No information available
Packing group: III
Precautionary Statements - Response: 8L
Special Provisions: No information available
Description: UN3253, Disodium trioxosilicate, 8, III

15. REGULATORY INFORMATION

International Inventories

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia AICS	EINECS-No.
<i>Sodium meta-Silicate, Nonahydrate</i>	13517-24-3	Exempt from listing on the TSCA 8(b) Inventory since it is a hydrate. However, the anhydrous form (CAS no. 6834-92-0) is listed as ACTIVE on the TSCA 8(b)Inventory	Not present	Present	Not present	Present	Not listed	Not present

U.S. Regulations

Sodium meta-Silicate, Nonahydrate
FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1769(a)

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California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Sodium meta-Silicate, Nonahydrate	13517-24-3	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Sodium meta-Silicate, Nonahydrate	13517-24-3	None	None	None	None	None

U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Sodium meta-Silicate, Nonahydrate	13517-24-3	Not Applicable	Not Applicable

Canada**WHMIS 2015 - GHS Classifications**

WHMIS 2015 Hazard Classification Information:

The WHMIS 2015 classification of this product has not been validated or reviewed yet.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
Sodium meta-Silicate, Nonahydrate	13517-24-3	Not Listed	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Sodium meta-Silicate, Nonahydrate	13517-24-3	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Sodium meta-Silicate, Nonahydrate	13517-24-3	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

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Component	CAS No	EU GHS - SV - CLP (1272/2008)
Sodium meta-Silicate, Nonahydrate	13517-24-3	No information

EU - CLP (1272/2008)

R-phrase(s)

R34 - Causes burns

R37 - Irritating to respiratory system

S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S37 - Wear suitable gloves

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
Sodium meta-Silicate, Nonahydrate	13517-24-3		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

C - Corrosive

Xi - Irritant



16. OTHER INFORMATION

Preparation Date: 2/6/2019
Revision date: 2/6/2019
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet

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