

## Section 1 Product and Company Identification

### 1.1 Product identifiers

**Product name:** Sodium Metasilicate Solution  
**Product number:** media-add-in-sodium-metasilicate-solution  
**Company:** UTEX Culture Collection of Algae

### 1.2 Relevant identified uses of the substance of mixture and uses advised against

**Recommended use:** Algal Culture Medium Booster

### 1.3 Details of the supplier of the safety data sheet

**Company:** UTEX Culture Collection of Algae  
205 West 24<sup>th</sup> Street, Biological Labs 218  
University of Texas at Austin (A6700)  
Austin, TX 78712 USA  
**Phone:** (512) 471-4019  
**Fax:** (512) 471-0354

## Section 2 Hazards Identification

### 2.1 Classification of the substance or mixture

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

Corrosive to metals (Category 1), H290

Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318

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

### 2.2 GHS Label elements, including precautionary statements

**Hazard statement(s)**

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

**Precautionary statement(s)**

P234 Keep only in original container.

P260 Do not breathe dust or mist.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

P305 + P351 + P338 + P310 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/doctor.

P363 Wash contaminated clothing before reuse.

P390 Absorb spillage to prevent material damage.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P406 Store in corrosive resistant container with a resistant inner liner.

P501 Dispose of contents/ container to an approved waste disposal plant.

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

Lachrymator.

## Section 3 Composition/Information on Ingredients

### 3.1 Mixtures

**Description:** This product contains a mixture of the substances listed along with nonhazardous additions.

**Ingredients:** Na<sub>2</sub>SiO<sub>3</sub>•9H<sub>2</sub>O (Sigma S4392)  
Double distilled water (dd-H<sub>2</sub>O)

## Section 4 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.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

#### If swallowed

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

## Section 5 Firefighting measures

## 5.1 Extinguishing media

Suitable 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 firefighting if necessary.

## 5.4 Further 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 materials 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.

Storage class (TRGS 510): 8A: Combustible, corrosive hazardous materials

### 7.3 Specific end use(s)

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.

#### Personal protective equipment

##### Eye/face 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: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill® (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.

#### **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).

#### **Control of environmental exposure**

Do not let product enter drains.

## Section 9 Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

**Appearance** Form: solid/Color: white

**Odor** odorless

**Odor Threshold** No data available

**pH** 12.4 at 10 g/l

**Melting point/freezing point** Melting point/range: 48 °C (118 °F)

**Initial boiling point and boiling range** No data available

**Flash point** Not applicable

**Evaporation rate** No data available

**Flammability (solid, gas)** No data available

**Upper/lower flammability or explosive limits** No data available

**Vapor pressure** No data available

**Vapor density** No data available

**Relative density** No data available

**Water solubility** 210 g/l at 20 °C (68 °F) soluble

**Partition coefficient: n-octanol/water** log Pow: -5.65 - (anhydrous substance), (Lit.), Bioaccumulation is not expected.

**Auto-ignition temperature** No data available  
**Decomposition temperature** No data available  
**Viscosity** No data available  
**Explosive properties** No data available  
**Oxidizing properties** No data available

## 9.2 Other safety information

No data available

## 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

Avoid moisture.

### 10.5 Incompatible materials

Strong acids, Lead, Tin/tin oxides, Zinc, Aluminum, Strong oxidizing agents

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sodium oxides, silicon oxides

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.

LC50 Inhalation - Rat - male and female - 4 h - > 2.06 mg/l  
(US-EPA)

Inhalation: Irritating to respiratory system.

LD50 Dermal - Rat - male and female - > 5,000 mg/kg  
(US-EPA)

No data available

#### Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive - 4 h

(OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Causes serious eye damage.

#### Respiratory or skin sensitisation

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

#### Germ cell mutagenicity

Ames test

Escherichia coli/Salmonella typhimurium  
Result: negative  
Mutagenicity (mammal cell test): chromosome aberration.  
Chinese hamster lung cells  
Result: negative  
In vitro mammalian cell gene mutation test  
Chinese hamster lung cells  
Result: negative  
OECD Test Guideline 475  
Mouse - male - Bone marrow  
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.  
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 on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

#### **Specific target organ toxicity - single exposure**

Inhalation - May cause respiratory irritation. - Respiratory system  
Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

#### **Specific target organ toxicity - repeated exposure**

No data available

#### **Aspiration hazard**

No data available

#### **Additional Information**

Repeated dose toxicity - Rat - male and female - Oral - 3 Months - No observed adverse effect level - 227 - 237 mg/kg  
RTECS: Not available  
Cough, Shortness of breath, Headache, Nausea, Vomiting  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.  
Other dangerous properties can not be excluded.  
Handle in accordance with good industrial hygiene and safety practice.

## **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)  
Remarks: (anhydrous substance)  
Toxicity to daphnia and other aquatic invertebrates | static test EC50 - Daphnia magna (Water flea) - 1,700 mg/l - 48 h (OECD Test Guideline 202)  
Remarks: (anhydrous substance)  
Toxicity to algae | EC50 - *Desmodesmus subspicatus* (green algae) - 207 mg/l - 72 h (DIN 38412)  
Remarks: (anhydrous substance)  
Toxicity to bacteria | EC50 - activated sludge - > 100 mg/l - 3 h (OECD Test Guideline 209)  
Remarks: (anhydrous substance)

### **12.2 Persistence and degradability**

The methods for determining biodegradability are not applicable to inorganic substances.

### **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

Discharge into the environment must be avoided.

## 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 | EMS-No: F-A, S-B  
Proper shipping name: DISODIUM TRIOXOSILICATE

#### 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 nonahydrate CAS-No.13517-24-3

## Section 16 Other Information

## Further information

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## Preparation Information

UTEX Culture Collection of Algae  
UTEX Staff Scientists  
512-471-4019

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