

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/28/2023

Reviewed on 06/28/2023

1 Identification

- **Product identifier**

- **Trade name:**

- **Article number:** 9278

- **Application of the substance / the mixture** Water treatment

- **Uses advised against**

Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).

Any use involving aerosol formation or vapour release in excess of the assigned WEL where workers are exposed without suitable RPE.

Processes involving extreme heat use advised against.

Processes involving the use of incompatible substances - refer to section 10.

Processes where workers who may be pregnant or breastfeeding could potentially come into direct contact with the undiluted product.

The product is strictly intended for industrial or professional use only.

- **Details of the supplier of the safety data sheet**

- **Manufacturer/Supplier:**

- **Information department:** Product safety department.

- **Emergency telephone number:**

CHEMTREC: 800-424-9300 (Domestic North America) OR 703-527-3887 (International, collect calls accepted).

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Toxic to Reproduction 1B

H360 May damage fertility or the unborn child.



GHS05 Corrosion

Eye Damage 1

H318 Causes serious eye damage.



GHS07

Skin Irritation 2

H315 Causes skin irritation.

Specific Target Organ Toxicity - Single Exposure 3 H335 May cause respiratory irritation.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms** GHS05, GHS07, GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

Sodium Silicate, Molar ratio 1.6 - 2.6

Disodium tetraborate, decahydrate

Triazole derivative, neutralised*

Sodium 4(or 5)-methyl-1H-benzotriazolide

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/28/2023

Reviewed on 06/28/2023

(Contd. of page 1)

- **Hazard statements**

Causes skin irritation.
Causes serious eye damage.
May damage fertility or the unborn child.
May cause respiratory irritation.

- **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.
IF exposed or concerned: Get medical advice/attention.
If skin irritation occurs: Get medical advice/attention.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 1
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = *3
Fire = 1
Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

1344-09-8	Sodium Silicate, Molar ratio 1.6 - 2.6	25–50%
1303-96-4	Disodium tetraborate, decahydrate	25–50%
7631-95-0	Sodium molybdate	2.5–10%
	Triazole derivative, neutralised*	2.5–<10%
78620-07-2	Hydroxyphosphonoacetic acid trisodium salt	2.5–<10%
64665-57-2	Sodium 4(or 5)-methyl-1H-benzotriazolide	0.1–<1%

- **Additional information:** *Equilibrium of Ionic pairs.

4 First-aid measures

- **Description of first aid measures**

- **General information:** Immediately remove any clothing soiled by the product.

- **After inhalation:** Supply fresh air and to be sure call for a doctor.

- **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

- **After eye contact:**

Check for and remove any contact lenses.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/28/2023

Reviewed on 06/28/2023

(Contd. of page 2)

Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

- **Information for doctor:** Treat symptomatically and supportively.

- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire fighting measures that suit the environment.

- **For safety reasons unsuitable extinguishing agents:** Water with full jet

- **Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

- **Advice for firefighters**

- **Protective equipment:**

Do not inhale explosion gases or combustion gases.

Wear self-contained respiratory protective device.

Wear fully protective suit.

- **Additional information**

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

- **Environmental precautions:**

Do not allow to penetrate the ground/soil.

Do not allow to enter sewers/ surface or ground water.

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

Ensure adequate ventilation.

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

- **Protective Action Criteria for Chemicals**

- **PAC-1:**

1303-96-4	Disodium tetraborate, decahydrate	6 mg/m ³
7631-95-0	Sodium molybdate	3.2 mg/m ³
64665-57-2	Sodium 4(or 5)-methyl-1H-benzotriazolide	1.9 mg/m ³

- **PAC-2:**

1303-96-4	Disodium tetraborate, decahydrate	190 mg/m ³
7631-95-0	Sodium molybdate	17 mg/m ³
64665-57-2	Sodium 4(or 5)-methyl-1H-benzotriazolide	21 mg/m ³

- **PAC-3:**

1303-96-4	Disodium tetraborate, decahydrate	1,100 mg/m ³
-----------	-----------------------------------	-------------------------

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/28/2023

Reviewed on 06/28/2023

(Contd. of page 3)

7631-95-0	Sodium molybdate	100 mg/m ³
64665-57-2	Sodium 4(or 5)-methyl-1H-benzotriazolide	130 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Prevent formation of dust.
Ensure good ventilation/exhaustion at the workplace.
Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Prevent any seepage into the ground.
Do not store in aluminium or galvanised containers.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Store in a banded area.
- **Storage class:** 6.1 C
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

1303-96-4 Disodium tetraborate, decahydrate

REL	Long-term value: 5 mg/m ³
TLV	Short-term value: 6* mg/m ³ Long-term value: 2* mg/m ³ *as inhalable fraction, A4

7631-95-0 Sodium molybdate

PEL	Long-term value: 5 mg/m ³ as Mo
TLV	Long-term value: 0.5 mg/m ³ as Mo; A3; respirable fraction

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
Select PPE appropriate for the operations taking place taking into account the product properties.
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not inhale dust / smoke / mist.
Take note of assigned Workplace Exposure Limits.
A safe system of work must be formulated and followed to ensure that workers who may be pregnant or breastfeeding do not come into direct contact with the product.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/28/2023

Reviewed on 06/28/2023

(Contd. of page 4)

- **Breathing equipment:** Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**



Protective gloves conforming to EN374.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Safety glasses with side-shields conforming to EN166.

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

- **Body protection:**



Protective work clothing

Body protection must be chosen depending on product properties, activity and possible exposure.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

· Form:	Solid
· Color:	Whitish
· Odor:	Mild
· Odor threshold:	Not determined.

- **pH-value at 20 °C (68 °F):** 11–11.5 (1%)

- **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	Undetermined.

- **Flash point:** >93 °C (>199.4 °F)

- **Flammability (solid, gaseous):** Not determined.

- **Decomposition temperature:** Not determined.

- **Ignition temperature:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

· Lower:	Not determined.
· Upper:	Not determined.

- **Vapor pressure:** Not applicable.

- **Density:** Not determined.

- **Relative density** Not determined.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/28/2023

Reviewed on 06/28/2023

(Contd. of page 5)

· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water:	Soluble.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
· Dynamic:	Not applicable.
· Kinematic:	Not applicable.
· Solvent content:	
· VOC content:	0.00 %
· Other information	NOTE: The physical data presented above are typical values and should not be construed as a specification.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Strong oxidising agents.
- **Hazardous decomposition products:**
 - Boron compounds
 - Phosphorus compounds
 - Nitrogen oxides (NOx)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Oral	LD50	7,042 mg/kg
------	------	-------------

1303-96-4 Disodium tetraborate, decahydrate

Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	>2.04 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** Causes skin irritation.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant
ROUTES OF EXPOSURE: Can be absorbed into the body by inhalation and by ingestion.

- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/28/2023

Reviewed on 06/28/2023

(Contd. of page 6)

· NTP (National Toxicology Program)
None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

· **Reproductive toxicity** May damage fertility or the unborn child.

12 Ecological information

· **Toxicity**

· Aquatic toxicity:
1303-96-4 Disodium tetraborate, decahydrate
EC50 (96 h) 133 mg/l (Bacteria)

· **Persistence and degradability** The organic portion of the product is biodegradable.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** Product is not expected to bioaccumulate.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Recommended Hierarchy of Controls:

- Minimize waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

· **Uncleaned packagings:**

· **Recommendation:**

Disposal must be made according to official regulations.

Containers, even those that are "empty," may contain residues that can develop flammable and/or hazardous vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· UN-Number	Void
· DOT, ADR/RID/ADN, IMDG, IATA	Void
· UN proper shipping name	Void
· DOT, ADR/RID/ADN, IMDG, IATA	Void

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/28/2023

Reviewed on 06/28/2023

(Contd. of page 7)

· Transport hazard class(es)	
· DOT, ADR/RID/ADN, ADN, IMDG, IATA	
· Class	Void
· Packing group	
· DOT, ADR/RID/ADN, IMDG, IATA	Void
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	Void

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

- **Hazardous Air Pollutants**

None of the ingredients is listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Carcinogenicity categories**

- **EPA (Environmental Protection Agency)**

1303-96-4 Disodium tetraborate, decahydrate

I (oral)

- **TLV (Threshold Limit Value)**

1303-96-4 Disodium tetraborate, decahydrate

A4

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms** GHS05, GHS07, GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

Sodium Silicate, Molar ratio 1.6 - 2.6

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/28/2023

Reviewed on 06/28/2023

(Contd. of page 8)

Disodium tetraborate, decahydrate
 Triazole derivative, neutralised*
 Sodium 4(or 5)-methyl-1H-benzotriazolide

· **Hazard statements**

Causes skin irritation.
 Causes serious eye damage.
 May damage fertility or the unborn child.
 May cause respiratory irritation.

· **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray
 Wear protective gloves/protective clothing/eye protection/face protection.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 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.
 IF exposed or concerned: Get medical advice/attention.
 If skin irritation occurs: Get medical advice/attention.
 Store in a well-ventilated place. Keep container tightly closed.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Contact:**

· **Date of preparation / last revision** 06/28/2023

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 NIOSH: National Institute for Occupational Safety
 OSHA: Occupational Safety & Health
 TLV: Threshold Limit Value
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit
 Skin Irritation 2: Skin corrosion/irritation – Category 2
 Eye Damage 1: Serious eye damage/eye irritation – Category 1
 Toxic to Reproduction 1B: Reproductive toxicity – Category 1B
 Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

US