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1 Identification

- · Product identifier
- · Trade name:
- · Article number: 5755
- · 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 Respiratory Protective Equpiment.

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 stictly 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).

The American Association of Poison Control Centers (24-hour hotline): 1-800-222-1222

2 Hazard(s) identification

· Classification of the substance or mixture

Skin Corrosion 1B H314 Causes severe skin burns and eye damage.

Eye Damage 1 H318 Causes serious eye damage.

Toxic to Reproduction 1B H360 May damage fertility or the unborn child.

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

- · Label elements
- · Hazard pictograms







GHS05

GHS07

GHS09

· Signal word Danger

· Hazard-determining components of labeling:

Disodium metasilicate

Disodium tetraborate, decahydrate

Triazole derivative, neutralised*

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

· Hazard statements

H314 Causes severe skin burns and eye damage.

H360 May damage fertility or the unborn child.

H335 May cause respiratory irritation.

· Precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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(Contd. of page 1)

P260 Do not breathe dusts or mists. P264 Wash thoroughly after handling.

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

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

If on skin: Wash with plenty of water. P302+P352

IF INHALED: Remove person to fresh air and keep comfortable for breathing. P304+P340

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P310 Immediately call a poison center/doctor.

P308+P313 IF exposed or concerned: Get medical advice/attention. If skin irritation occurs: Get medical advice/attention. P332+P313 Take off contaminated clothing and wash it before reuse. P362+P364 Store in a well-ventilated place. Keep container tightly closed. P403+P233

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 3Fire = 1Reactivity = 0

· HMIS-ratings (scale 0 - 4)



*3 Health = *3 Fire = 1

- · 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:		
CAS: 6834-92-0	Disodium metasilicate Alternative CAS number: 10213-79-3	25 – 50%
CAS: 1303-96-4	Disodium tetraborate, decahydrate	25 – 50%
CAS: 7631-95-0	Sodium molybdate Alternative CAS number: 10102-40-6	2.5 – 10%
	Triazole derivative, neutralised*	2.5 – < 10%
CAS: 78620-07-2	Hydroxyphosphonoacetic acid, trisodium salt	2.5 – < 10%
CAS: 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.

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· After eye contact:

Check for and remove any contact lenses.

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

Corrosive.

In case of fire, the following can be released:

Carbon monoxide (CO)

Boron compounds

Nitrogen oxides (NOx)

Phosphorous oxides

Toxic metal oxide smoke

Silicon compounds

- · 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.

 \cdot Methods and material for containment and cleaning up:

Pick up mechanically.

Ensure adequate ventilation.

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:		
CAS: 6834-92-0	Disodium metasilicate	3.8 mg/m ³
CAS: 1303-96-4	Disodium tetraborate, decahydrate	6 mg/m ³
	(Cr	ntd on page 4)

US

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		(Contd. of page 3)	
CAS: 7631-95-0	Sodium molybdate	3.2 mg/m ³	
CAS: 64665-57-2	Sodium 4(or 5)-methyl-1H-benzotriazolide	1.9 mg/m ³	
PAC-2:			
CAS: 6834-92-0	Disodium metasilicate	42 mg/m ³	
CAS: 1303-96-4	Disodium tetraborate, decahydrate	190 mg/m³	
CAS: 7631-95-0	Sodium molybdate	17 mg/m ³	
CAS: 64665-57-2	Sodium 4(or 5)-methyl-1H-benzotriazolide	21 mg/m ³	
PAC-3:			
CAS: 6834-92-0	Disodium metasilicate	250 mg/m ³	
CAS: 1303-96-4	Disodium tetraborate, decahydrate	1,100 mg/m³	
CAS: 7631-95-0	Sodium molybdate	100 mg/m ³	
CAS: 64665-57-2	Sodium 4(or 5)-methyl-1H-benzotriazolide	130 mg/m³	

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.
- $\cdot \ Further \ information \ about \ storage \ conditions:$

Store in cool, dry conditions in well sealed receptacles.

Store in a bunded 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.

At this time, the other constituents have no known exposure limits.

CAS:	1303-96-4 Disodium tetraborate, decahydrate
REL	Long-term value: 5 mg/m ³
TLV	Short-term value: 6* mg/m³ Long-term value: 2* mg/m³ *as inhalable fraction, A4
CAS:	7631-95-0 Sodium molybdate
	Long-term value: 5 mg/m³ as Mo
	Long-term value: 0.5 mg/m³ as Mo; A3; respirable fraction

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(Contd. of page 4)

- · 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.

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



Protective gloves.

Use gloves tested and approved under appropriate government standards such as NIOSH (US) or EN374 (EU).

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.

· Limitation and supervision of exposure into the environment

Do not allow to enter drains, sewers or watercourses.

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information
- \cdot Appearance:

Form: Solid
Color: Whitish
Odor: Mild

· Odor threshold: Not determined.

• pH-value at 20 °C (68 °F): 11 - 12 (1%)

· Change in condition

Melting point/Melting range: Undetermined.

(Contd. on page 6)

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	(Contd. of page 5
Boiling point/Boiling range:	Undetermined.
· Flash point:	>93 °C (>199.4 °F)
· Flammability:	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.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with	
Water:	Soluble.
· Partition coefficient (n-octanol/wat	ter): 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.
- $\cdot \textbf{\textit{Possibility of hazardous reactions}} \ No \ dangerous \ reactions \ known.$
- Conditions to avoid No further relevant information available.
- · Incompatible materials: Strong oxidising agents.
- · Hazardous decomposition products:

Boron compounds

Carbon monoxide and carbon dioxide

Phosphorus compounds

Nitrogen oxides (NOx)

Silicon compounds

Toxic metal oxide smoke

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· LD/LC50 values that are relevant for classification:			
ATE (Acute Toxio	city Estimate)	
Oral	LD50	7 042 3 mg/kg	

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(Contd. of page 6) CAS: 6834-92-0 Disodium metasilicate Dermal LD50 > 5,000 mg/kg (rabbit) CAS: 1303-96-4 Disodium tetraborate, decahydrate LD50 Oral > 2,000 mg/kg (rat)LD50 > 2,000 mg/kg (rabbit) Dermal Inhalative LC50/4 h > 2.04 mg/l (rat) CAS: 7631-95-0 Sodium molybdate Oral LD50 > 2,000 mg/kg (rat) LD50 Dermal > 2,000 mg/kg (rat)Inhalative LC50/4 h > 3.92 mg/l (rat) CAS: 78620-07-2 Hydroxyphosphonoacetic acid, trisodium salt

Primary irritant effect:

LD50

Oral

· on the skin: Causes severe skin burns and eye damage.

1,383 mg/kg (rat)

- · on the eye: Causes serious eye damage.
- · Sensitization: Based on available data, the classification criteria are not met.
- · Additional toxicological information:

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.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- · Reproductive toxicity May damage fertility or the unborn child.
- · Specific target organ toxicity single exposure May cause respiratory irritation.
- · Specific target organ toxicity repeated exposure

Based on available data, the classification criteria are not met.

· Aspiration hazard Based on available data, the classification criteria are not met.

12 Ecological information

- · Toxicity
- · Aquatic toxicity:

CAS: 6834-92-0 Disodium metasilicate

EC50 (96 h) 1,700 mg/l (Bacteria)

CAS: 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 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.

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(Contd. of page 7)

- · 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.

- · Uncleaned packagings:
- · Recommendation:

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. Disposal must be made according to official regulations.

Container remains hazardous when empty. Continue to observe all precautions.

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.

4 4 70			P	4 •
14.1	ransport	m	orma	non

· UN-Number · DOT, ADR/RID/ADN, IMDG, IATA	UN3263
· UN proper shipping name	
· DOT	Corrosive solid, basic, organic, n.o.s. (Disodium
	trioxosilicate)
· ADR/RID/ADN	UN3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.
	(DISODIUM TRIOXOSILICATE)
· IMDG, IATA	CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.
	(DISODIUM TRIOXOSILICATE)

- · Transport hazard class(es)
- \cdot DOT



· Class 8 Corrosive substances

· Label 8

· ADR/RID/ADN



· Class 8 (C8) Corrosive substances

(Contd. on page 9)

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(Contd. of page 8) 8 · Label · IMDG, IATA · Class 8 Corrosive substances · Label · Packing group · DOT, ADR/RID/ADN, IMDG, IATA Π · Environmental hazards: Not applicable. Warning: Corrosive substances · Special precautions for user · Hazard identification number (Kemler code): 80 F-A,S-B · EMS Number: · Segregation groups (SGG18) Alkalis · Stowage Category SG35 Stow "separated from" SGG1-acids · Segregation Code · 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. · ADR/RID/ADN · Excepted quantities (EQ) Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g · IMDG · Limited quantities (LQ) 1 kg · Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g UN 3263 CORROSIVE SOLID, BASIC, ORGANIC, · UN "Model Regulation": N.O.S. (DISODIUM TRIOXOSILICATE), 8, II

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 ingredients are listed as 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.

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· 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.

· Cancerogenity categories

· EPA (Environmental Protection Agency)

CAS: 1303-96-4 Disodium tetraborate, decahydrate

I (oral)

· TLV (Threshold Limit Value)

CAS: 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

· Signal word Danger

· Hazard-determining components of labeling:

Disodium metasilicate

Disodium tetraborate, decahydrate

Triazole derivative, neutralised*

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

· Hazard statements

H314 Causes severe skin burns and eye damage.

H360 May damage fertility or the unborn child.

H335 May cause respiratory irritation.

· Precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dusts or mists. P264 Wash thoroughly after handling.

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

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

P302+P352 If on skin: Wash with plenty of water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P310 Immediately call a poison center/doctor.

P308+P313 IF exposed or concerned: Get medical advice/attention.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 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.

· Department issuing SDS: Product safety department.

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(Contd. of page 10)

· Contact:

· Date of preparation / last revision 08/14/2024 / 2

· 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 Corrosion 1B: Skin corrosion/irritation - Category 1B

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

* Data compared to the previous version altered.