

GlycoClean™ C-70 Hydronic System Pre-Cleaner

Version number: 1.0

SECTION 1: Identification

1.1 Product identifier

Trade name

GlycoClean™ C-70 Hydronic System Pre-Cleaner

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

Relevant identified uses

Alkaline cleaner/ detergent

Uses advised against

Do not use for squirting or spraying
Do not use for products which come into direct contact with the skin

1.3 Details of the supplier of the safety data sheet

CORECHEM INC
4320 Greenway Drive
Knoxville, TN 37918, United States

Telephone: 865 524 4239
Telefax: 865 524 3375
e-mail: regulatory@corecheminc.com

1.4 Emergency telephone number

Poison center		
Country	Name	Telephone
-	CHEMTREC International (outside USA)	1-703-527-3887
United States	CHEMTREC USA	(800) 424-9300

As above or nearest toxicological information centre.

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Classification				
Section	Hazard class	Category	Hazard class and category	Hazard statement
A.10	acute toxicity (oral)	4	Acute Tox. 4	H302
A.2	skin corrosion/irritation	1	Skin Corr. 1	H314
A.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318

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Classification				
Section	Hazard class	Category	Hazard class and category	Hazard statement
A.7	reproductive toxicity	1B	Repr. 1B	H360FD
B.16	substance or mixture corrosive to metals	1	Met. Corr. 1	H290

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Signal word Danger

Pictograms

GHS05, GHS07,
GHS08



Hazard statements

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H360FD May damage fertility. May damage the unborn child.

Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220 Keep/store away from clothing/combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
P234 Keep only in original container.
P260 Do not breathe mist/vapors/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
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 or shower.
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.
P308+P313 If exposed or concerned: Get medical advice/attention.

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Precautionary statements

P310	Immediately call a poison center/doctor.
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use water to extinguish.
P390	Absorb spillage to prevent material damage.
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazardous ingredients for labelling

disodium tetraborate decahydrate
potassium hydroxide
sodium nitrite

2.3 Other hazards

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0.1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

Description of the mixture

Hazardous ingredients					
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Specific Conc. Limits
Potassium hydroxide	CAS No 1310-58-3	5 – < 10	Acute Tox. 4 / H302 Skin Corr. 1A / H314 Eye Dam. 1 / H318 Met. Corr. 1 / H290	 	Skin Corr. 1A; H314: C $\geq 5\%$ Skin Corr. 1B; H314: 2 % $\leq$ C < 5 % Skin Irrit. 2; H315: 0.5 % $\leq$ C < 2 % Eye Dam. 1; H318: C $\geq 2\%$ Eye Irrit. 2; H319: 0.5 % $\leq$ C < 2 %
Disodium tetraborate decahydrate	CAS No 1303-96-4	5 – < 10	Eye Irrit. 2 / H319 Repr. 1B / H360FD	 	-
Trisodium orthophosphate dodecahydrate	CAS No 10101-89-0	5 – < 10	Skin Irrit. 2 / H315 Eye Irrit. 2A / H319 STOT SE 3 / H335		-

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Hazardous ingredients					
Name of sub-stance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Specific Conc. Limits
Sodium nitrite	CAS No 7632-00-0	5 – < 10	Acute Tox. 3 / H301 Eye Irrit. 2A / H319 Ox. Sol. 2 / H272		-
Sodium 4(or 5)-methyl-1H-benzotriazole	CAS No 64665-57-2	0.3 – < 1	Acute Tox. 4 / H302 Skin Corr. 1B / H314 Eye Dam. 1 / H318 Repr. 2 / H361d		-

For full text of H-phrases: see SECTION 16

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Self-protection of the first aider.

Remove affected person from the danger area and lay down.

Do not leave affected person unattended.

Take off immediately all contaminated clothing.

In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air.

Mouth to mouth resuscitation should be avoided. Use alternative methods, preferably with oxygen or compressed air driven apparatus.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

Following skin contact

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

Call a physician immediately. Causes poorly healing wounds.

Wash contaminated clothing before reuse.

Following eye contact

Rinse immediately carefully and thoroughly with eye shower or water.

Remove contact lenses, if present and easy to do. Continue rinsing.

Get immediate medical advice/attention.

Following ingestion

Rinse mouth immediately and drink plenty of water.

Do NOT induce vomiting.

Get immediate medical advice/attention.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

This information is not available.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

None

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Substance or mixture corrosive to metals.

Hazardous combustion products

nitrogen oxides (NO_x), carbon monoxide (CO), carbon dioxide (CO₂), phosphorus oxides (P_xO_y), metal oxides, oxides of boron

5.3 Advice for firefighters

Non-combustible.

Keep containers cool with water spray.

In case of fire and/or explosion do not breathe fumes.

Coordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

chemical protection suit, Self-contained breathing apparatus (SCBA)

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Do not breathe mist/vapors/spray.

Do not get in eyes, on skin, or on clothing.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to clean up a spill

Collect spillage.

Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal.

Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Obtain special instructions before use.

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

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Specific notes/details

None.

Handling of incompatible substances or mixtures

Do not mix with acids.

Do not mix with reducing agents.

Keep away from

aluminum

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.

Remove contaminated clothing and protective equipment before entering eating areas.

Do not breathe mist/vapors/spray.

Do not get in eyes, on skin, or on clothing.

Avoid contact during pregnancy/while nursing.

Wash thoroughly after handling.

Preventive skin protection (barrier creams/ointments) is recommended.

7.2 Conditions for safe storage, including any incompatibilities

Corrosive conditions

Store in corrosive resistant container with a resistant inner liner.

Flammability hazards

None.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Observe compatible storage of chemicals.

Protect against external exposure, such as

heat, frost

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

Ventilation requirements

Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Keep container tightly closed and in a well-ventilated place.

Store in corrosive resistant container with a resistant inner liner.

Storage temperature

Minimum storage temperature: 0 °C

Maximum storage temperature: 40 °C

Packaging compatibilities

Only packagings which are approved (e.g. acc. to DOT) may be used.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

The following constituents are the only constituents of the product which have a PEL, a TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Occupational exposure limit values (Workplace Exposure Limits)									
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Notation	Source
US	Disodium tetraborate decahydrate	1303-96-4	PEL (CA)	-	5	-	-	-	Cal/OSHA PEL
US	Disodium tetraborate decahydrate	1303-96-4	REL	-	5 (10 h)	-	-	-	NIOSH REL
US	Sodium borate decahydrate	1303-96-4	TLV®	-	2	-	6	I	ACGIH® 2023
US	Potassium hydroxide	1310-58-3	REL	-	-	-	-	-	NIOSH REL
US	Potassium hydroxide	1310-58-3	TLV®	-	-	-	-	-	ACGIH® 2023
US	Potassium hydroxide (caustic potash)	1310-58-3	PEL (CA)	-	-	-	-	-	Cal/OSHA PEL

Notation

i inhalable fraction

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

8.2 Exposure controls

Avoid contact during pregnancy/while nursing.

Appropriate engineering controls

Use local and general ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Hand protection

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
No information available	No information available	No information available

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Body protection

Protective clothing against liquid chemicals.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	Liquid
Color	light amber
Odor	Characteristic
Odor threshold	Not determined
Other safety parameters	
pH (value)	13.5
Melting point/freezing point	Not determined
Boiling point or initial boiling point and boiling range	Not determined
Flash point	Not determined

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Evaporation rate	Not determined
Flammability (solid, gas)	Not relevant (fluid)
Explosive limits	Not determined
Vapor pressure	Not determined
Density	Not determined
Relative density	1.17 – 1.18 (water = 1)
Relative vapour density	this information is not available
Solubility(ies)	
Water solubility	Miscible in any proportion
Partition coefficient	
n-octanol/water (log KOW)	Not determined
Auto-ignition temperature	Not determined
Decomposition temperature	Not relevant
Viscosity	
Kinematic viscosity	Not determined
Dynamic viscosity	Not determined
Explosive properties	None
Oxidizing properties	None
Information for relevant hazard classes according to GHS	There is no additional information
9.2 Other information	There is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

Substance or mixture corrosive to metals.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials

acids, reducing agents, metals, organic materials

Release of flammable materials with:

light metals (due to the release of hydrogen in an acid/alkaline medium)

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure

If not otherwise specified the classification is based on:

Ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Test data are not available for the complete mixture.

Harmful if swallowed.

Acute toxicity of components

Acute toxicity estimate (ATE) of components							
Name of substance	CAS No	Exposure route		ATE			
Potassium hydroxide	1310-58-3	Oral		333 mg/kg			
Sodium nitrite	7632-00-0	Oral		85 mg/kg			
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	Oral		735 mg/kg			

Acute toxicity of components							
Name of substance	CAS No	Exposure route	End-point	Value	Species	Method	Source
Potassium hydroxide	1310-58-3	Oral	LD50	333 – 388 mg/kg	Rat	OECD Guideline 425	ECHA

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Acute toxicity of components							
Name of substance	CAS No	Exposure route	End-point	Value	Species	Method	Source
Disodium tetraborate decahydrate	1303-96-4	Oral	LD0	>2,500 mg/kg	Rat, male	OECD Guideline 401	ECHA
Disodium tetraborate decahydrate	1303-96-4	Dermal	LD0	>2,000 mg/kg	Rabbit	FIFRA (40 CFR 163)	ECHA
Sodium nitrite	7632-00-0	Oral	LD50	85 – 180 mg/kg	Rat	-	IUCLID
Trisodium orthophosphate dodecahydrate	10101-89-0	Oral	LD0	>2,000 mg/kg	Rat, female	OECD Guideline 420	ECHA
Trisodium orthophosphate dodecahydrate	10101-89-0	Dermal	LD0	>2,000 mg/kg	Rat	OECD Guideline 402	ECHA
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	Oral	LD50	735 mg/kg	Rat, female	OECD Guideline 401	ECHA
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	Oral	LD50	930 mg/kg	Rat, male	OECD Guideline 401	ECHA
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	Dermal	LD0	>2,000 mg/kg	Rabbit	OECD Guideline 402	ECHA

Skin corrosion/irritation

Causes severe burns.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Skin sensitization

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitization

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity

IARC Monographs

None of the ingredients are listed.

National Toxicology Program (United States)

None of the ingredients are listed.

OSHA Carcinogens

None of the ingredients are listed.

Reproductive toxicity

May damage the unborn child.
May damage fertility.

Specific target organ toxicity - single exposure

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Other information

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

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

Aquatic toxicity (acute) of components

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
Sodium nitrite	7632-00-0	LC50	96 h	0.54 – 26.3 mg/l	Rainbow trout (Oncorhynchus mykiss)	-	ECHA

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Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
Sodium nitrite	7632-00-0	LC50	96 h	4.93 mg/l	Cherax quadricarinatus	APHA 1980	ECHA
Sodium nitrite	7632-00-0	EC50	48 h	15.4 mg/l	Daphnia magna	OECD Guideline 202	ECHA
Sodium nitrite	7632-00-0	ErC50	72 h	>100 mg/l	Algae (Desmodesmus subspicatus)	OECD Guideline 201	ECHA
Trisodium orthophosphate dodecahydrate	10101-89-0	LC50	96 h	>100 mg/l	Rainbow trout (Oncorhynchus mykiss)	OECD Guideline 203	ECHA
Trisodium orthophosphate dodecahydrate	10101-89-0	EC50	48 h	>100 mg/l	Daphnia magna	OECD Guideline 202	ECHA
Trisodium orthophosphate dodecahydrate	10101-89-0	ErC50	72 h	>100 mg/l	Algae (Desmodesmus subspicatus)	OECD Guideline 201	ECHA
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	ErC50	72 h	53 mg/l	Algae (Skelet-onema costatum)	DIN EN ISO 10253	ECHA
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	LC50	96 h	55 mg/l	Sheepshead minnow (Cyprinodon variegatus)	-	ECHA
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	LC50	48 h	55 mg/l	Acartia tonsa, marine copepod	-	ECHA
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	EC50	48 h	8.58 mg/l	Daphnia	OECD Guideline 202	ECHA
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	EbC50	72 h	29 mg/l	Algae (raphidocelis subcapitata)	OECD Guideline 201	ECHA

Aquatic toxicity (chronic)

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

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Aquatic toxicity (chronic) of components

Name of sub-stance	CAS No	Endpoint	Expos-ure time	Value	Species	Method	Source
Sodium nitrite	7632-00-0	LC50	80 d	>20 mg/l	Giant tiger prawn (Pen-aeus monodon)	APHA (1985) and Buikema et al. (1982)	ECHA
Sodium nitrite	7632-00-0	EC50	80 d	114.9 mg/l	Giant tiger prawn (Pen-aeus monodon)	APHA (1985) and Buikema et al. (1982)	ECHA
Sodium nitrite	7632-00-0	EC50	180 min	510 mg/l	Activated sludge, muni-cipal	OECD Guideline 209	ECHA
Sodium nitrite	7632-00-0	NOEC	29 d	1.05 mg/l	Carp (cyprinus carpio)	OECD Guideline 210	ECHA
Sodium nitrite	7632-00-0	NOEC	80 d	2 mg/l	Giant tiger prawn (Pen-aeus monodon)	APHA (1985) and Buikema et al. (1982)	ECHA
Sodium nitrite	7632-00-0	NOEC	72 h	100 mg/l	Algae (Des-modesmus subspicatus)	OECD Guideline 210	ECHA
Sodium nitrite	7632-00-0	Growth (Eb-Cx) 10%	180 min	210 mg/l	Activated sludge, muni-cipal	OECD Guideline 209	ECHA
Sodium nitrite	7632-00-0	Growth (Eb-Cx) 80%	180 min	940 mg/l	Activated sludge, muni-cipal	OECD Guideline 209	ECHA
Trisodium or-thophosphate dodecahydrate	10101-89-0	EC50	3 h	>1,000 mg/l	Activated sludge of a pre-dominantly do-mestic sewage	OECD Guideline 209	ECHA
Trisodium or-thophosphate dodecahydrate	10101-89-0	NOEC	72 h	>100 mg/l	Algae (Des-modesmus subspicatus)	OECD Guideline 201	ECHA
Trisodium or-thophosphate dodecahydrate	10101-89-0	NOEC	3 h	1,000 mg/l	Activated sludge of a pre-dominantly do-mestic sewage	OECD Guideline 209	ECHA
Sodium 4(or 5)-methyl-1H-ben-zotriazole	64665-57-2	EC50	21 d	>18.4 – <37.6 mg/l	Daphnia magna	OECD Guideline 202, Part II	ECHA

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Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	EC50	1 d	1,060 mg/l	Belebtschlamm	DIN EN ISO 8192	ECHA
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	NOEC	21 d	18.4 mg/l	Water flea (Daphnia galeata)	OECD Guideline 202, Part II	ECHA
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	NOEC	72 h	30 mg/l	Algae (Skelet-onema cost-atum)	DIN EN ISO 10253	ECHA
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	LOEC	21 d	37.6 mg/l	Daphnia magna	OECD Guideline 202, Part II	ECHA
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	Growth (Eb-Cx) 10%	21 d	0.4 mg/l	Water flea (Daphnia galeata)	OECD Guideline 211	ECHA
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	Growth (Eb-Cx) 10%	72 h	6 mg/l	Algae (raphido-celis subcapit-ata)	OECD Guideline 201	ECHA
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	Growth (Eb-Cx) 90%	72 h	200 mg/l	Algae (raphido-celis subcapit-ata)	OECD Guideline 201	ECHA
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	Growth (Eb-Cx) 10%	1 d	394 mg/l	Belebtschlamm	DIN EN ISO 8192	ECHA
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	Growth rate (ErCx) 10%	72 h	1.18 mg/l	Algae (Des-modesmus subspicatus)	OECD Guideline 201	ECHA

12.2 Persistence and degradability

Biodegradation

Test data are not available for the complete mixture.

Degradability of components

Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
Sodium 4(or 5)-methyl-1H-benzotriazole	64665-57-2	Oxygen depletion	4 %	28 d	EU method C.4-D	ECHA

Persistence

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0.1\%$.

12.6 Other adverse effects

Data are not available.

Harmful effect on fish, plankton and other organisms due to pH shift possible.

Remarks

Keep away from drains, surface and ground water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packages

Completely emptied packages can be recycled.

Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1 UN number

DOT UN1760

IMDG-Code UN1760

ICAO-TI UN1760

14.2 UN proper shipping name

DOT Corrosive liquid, n.o.s.

IMDG-Code CORROSIVE LIQUID, N.O.S.

ICAO-TI Corrosive liquid, n.o.s.

Technical name (hazardous ingredients) sodium hydroxide, tolytriazole, sodiumsalt

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14.3 Transport hazard class(es)

DOT	8
IMDG-Code	8
ICAO-TI	8

14.4 Packing group

DOT	II
IMDG-Code	II
ICAO-TI	II

14.5 Environmental hazards

-

14.6 Special precautions for user

-

14.7 Transport in bulk according to IMO instruments

-

14.8 Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT) Additional information

Particulars in the shipper's declaration	UN1760, Corrosive liquid, n.o.s., (sodium hydroxide, tolytriazole, sodiumsalt), 8, II
Reportable quantity (RQ)	2,000 lbs (908 kg)
Danger label(s)	8
	
Special provisions (SP)	B2, IB2, T11, TP2, TP27
ERG No	154

International Maritime Dangerous Goods Code (IMDG) Additional information

Marine pollutant	-
Danger label(s)	8
	
Special provisions (SP)	274
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
EmS	F-A, S-B

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Stowage category	B
International Civil Aviation Organization (ICAO-IATA/DGR) Additional information	
Danger label(s)	8
	
Special provisions (SP)	A3
Excepted quantities (EQ)	E2
Limited quantities (LQ)	0,5 L

SECTION 15: Regulatory information

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

National regulations (United States)

Toxic Substance Control Act (TSCA) Not all ingredients are listed (ACTIVE)

Superfund Amendment and Reauthorization Act (SARA TITLE III)

The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

None of the ingredients are listed

Specific Toxic Chemical Listings (EPCRA Section 313)

Toxics Release Inventory: Specific Toxic Chemical Listings				
Name of substance	Name acc. to inventory	CAS No	Remarks	Effective date
Sodium nitrite	Sodium nitrite	7632-00-0	-	1995-01-01

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Name of substance	Name acc. to inventory	CAS No	Remarks	Statutory code	Final RQ pounds (Kg)
Trisodium orthophosphate dodecahydrate	Sodium phosphate, tribasic, dodecahydrate	10101-89-0	-	1	5000 (2270)
Potassium hydroxide	Potassium hydroxide	1310-58-3	-	1	1000 (454)
Sodium nitrite	Sodium nitrite	7632-00-0	-	1	100 (45,4)

Legend

1 "1" indicates that the statutory source is section 311(b)(2) of the Clean Water Act

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Clean Air Act

None of the ingredients are listed

Right to Know Hazardous Substance List

Toxic or Hazardous Substance List (MA-TURA)

Name of substance	Name acc. to inventory	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Thres hold	De Minimis Concentration Threshold
Trisodium orthophosphate dodecahydrate	Sodium phosphate, tribasic	10101-89-0	-	-	-	1.0 %
Trisodium orthophosphate dodecahydrate	Sodium phosphate, tribasic	7601-54-9	-	-	-	1.0 %
Potassium hydroxide	Potassium hydroxide	1310-58-3	-	-	-	1.0 %
Sodium nitrite	Sodium nitrite	7632-00-0	-	-	-	1.0 %

Hazardous Substances List (MN-ERTK)

Name of substance	Name acc. to inventory	CAS No	References	Remarks
Disodium tetraborate decahydrate	Borates, tetra, sodium salts	-	A	-
Trisodium orthophosphate dodecahydrate	Trisodium phosphate	7601-54-9	I	-
Potassium hydroxide	Potassium hydroxide	1310-58-3	A	-

Legend

- A American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1992-93", available from ACGIH
- I American Industrial Hygiene Association (AIHA), "Workplace Environmental Exposure Level Guides" (1992), available from AIHA

Hazardous Substance List (NJ-RTK)

Name of substance	Name acc. to inventory	CAS No	Remarks	Classifications	Listed in	Substance number	DOT number
Disodium tetraborate decahydrate	Borate, inorganic compounds	-	-		24	0241	-
Trisodium orthophosphate dodecahydrate	SODIUM PHOSPHATE, TRIBASIC (PHOSPHORIC ACID, TRISODIUM SALT)	7601-54-9	-	R1.	31720	1724	3082

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Name of substance	Name acc. to inventory	CAS No	Remarks	Classifications	Listed in	Substance number	DOT number
Potassium hydroxide	Potassium hydroxide (caustic potash)	1310-58-3	-	CO R1.	2 3 4 15 17 20	1571	1813
Sodium nitrite	Sodium nitrite	7632-00-0	-		3 6 17 18 20	2258	1500

Legend

- 15 "Fire Protection Guide to Hazardous Materials," N FPA 49 (Hazardous Chemicals Data), NFPA 325 (Guide to Fire Hazard Properties of Flammable Liquids, Gases, and Volatile Solids), and NFPA 704 (Standard System for the Identification of the Hazards of Materials for Emergency Response), National Fire Protection Association (NFPA), 2001.
- 17 "2008 Emergency Response Guidebook," Research and Special Programs Administration, U.S. Department of Transportation, 2008.
- 18 List of Toxics Release Inventory Chemicals, Section 313, Emergency Planning and Community Right to Know Act (EPCRA), Toxics Release Inventory (TRI) Program, U.S. Environmental Protection Agency, 40 CFR 372.65, July 1, 2008.
- 2 "2009 TLVs® and BEIs®, Threshold Limit Values and Biological Exposure Indices," American Conference of Governmental Industrial Hygienists (ACGIH), 2009.
- 20 List of Hazardous Substances and Reportable Quantities (RQ), Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), U.S. Environmental Protection Agency, 40 CFR 302, Table 302.4, July 1, 2008.
- 3 Office of Hazardous Materials Safety, Research and Special Programs Administration, U.S. Department of Transportation, 49 CFR 172.101-Hazardous Materials Table, October 1, 2008.
- 4 "NIOSH Pocket Guide to Chemical Hazards," National Institute for Occupational Safety and Health (NIOSH), U.S. Department of Health and Human Services, No. 2005-149, September 2005.
- 6 "Environmental Hazardous Substance List," New Jersey Department of Environmental Protection, N.J.A.C. 7:1G-2, as printed in the Community Right to Know Survey Instruction Book, 2008.
- CO Corrosive
- R1 Reactive - First Degree

Hazardous Substance List (Chapter 323) (PA-RTK)

Name acc. to inventory	CAS No	Classification
BORAX (B4NA2O7.10H2O)	1303-96-4	-
PHOSPHORIC ACID, TRISODIUM SALT, DODECAHYDRATE	10101-89-0	E
PHOSPHORIC ACID, TRISODIUM SALT	7601-54-9	E

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Name acc. to inventory	CAS No	Classification
POTASSIUM HYDROXIDE (K(OH))	1310-58-3	E
NITROUS ACID, SODIUM SALT	7632-00-0	E

Legend

E Environmental hazard

Hazardous Substance List (RI-RTK)

Name of substance	Name acc. to inventory	CAS No	References
Disodium tetraborate decahydrate	Borates, tetra, sodium salts	1303-96-4	T
Potassium hydroxide	Caustic potash	1310-58-3	T, F
Potassium hydroxide	Lye (potassium)	1310-58-3	T, F
Potassium hydroxide	Potassium hydroxide	1310-58-3	T, F

Legend

F Flammability (NFPA®)

T Toxicity (ACGIH®)

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

None of the ingredients are listed

Drug precursors, Chemicals designated within the Controlled Substances Act, 21 U.S.C. § 802, paragraphs 34 (list I) and 35 (list II)

None of the ingredients are listed

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System.

American Coatings Association.

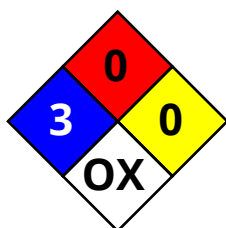
HEALTH	*	3
FLAMMABILITY		0
PHYSICAL HAZARD		1
PERSONAL PROTECTION		-

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Category	Rating	Description
Chronic	*	Chronic (long-term) health effects may result from repeated overexposure
Health	3	Major injury likely unless prompt action is taken and medical treatment is given
Flammability	0	Material that will not burn under typical fire conditions
Physical hazard	1	Material that is normally stable but can become unstable (self-react) at high temperatures and pressures. Material may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors
Personal protection	-	-

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).



Category	Degree of hazard	Description
Flammability	0	Material that will not burn under typical fire conditions
Health	3	Material that, under emergency conditions, can cause serious or permanent injury
Instability	0	Material that is normally stable, even under fire conditions
Special hazard	OX	Oxidizer that causes a severe increase in the burning rate of combustible materials with which it comes into contact

SECTION 16: Other information, including date of preparation or last revision

Date of preparation: 2023-12-01

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
ACGIH®	American Conference of Governmental Industrial Hygienists
ACGIH® 2023	From ACGIH®, 2023 TLVs® and BEIs® Book. Copyright 2023. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement
Acute Tox.	Acute toxicity

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Abbr.	Descriptions of used abbreviations
ATE	Acute Toxicity Estimate
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DEP CODE	Department of Environmental Protection Code
DGR	Dangerous Goods Regulations (see IATA/DGR)
DOT	Department of Transportation (USA)
EbC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
ERG No	Emergency Response Guidebook - Number
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
HHS	Higher hazard substance
IARC	International Agency for Research on Cancer
IARC Mono-graphs	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LHS	Lower hazard substance

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Abbr.	Descriptions of used abbreviations
LOEC	Lowest Observed Effect Concentration
Met. Corr.	Substance or mixture corrosive to metals
NFPA®	National Fire Protection Association (United States)
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NOEC	No Observed Effect Concentration
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
Ox. Sol.	Oxidizing solid
PBT	Persistent, Bioaccumulative and Toxic
Ppm	Parts per million
Repr.	Reproductive toxicity
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
TLV®	Threshold Limit Values
TWA	Time-weighted average
VPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H272	May intensify fire; oxidizer.
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H360FD	May damage fertility. May damage the unborn child.
H361d	Suspected of damaging the unborn child.

Responsible for the safety data sheet

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Jasper, GA Website: www.crc-us.com
USA

Disclaimer

This information is based upon the present state of our knowledge.
This SDS has been compiled and is solely intended for this product.