

Safety Data Sheet: CHEM-AQUA 999

Supersedes Date 05/19/2014

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1. PRODUCT AND COMPANY IDENTIFICATION

Product Name CHEM-AQUA 999
Recommended use Water treatment chemical
Information on Manufacturer
CHEM-AQUA, INC
BOX 152170
IRVING, TEXAS 75015

Product Code 0376
Chemical nature Aqueous solution of alkali salts
Emergency Telephone Number
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color Colorless - Light yellow

Physical State Liquid

Odor Odorless

GHS Classification

Physical Hazards

Substances/mixtures corrosive to metal

Category 1

Health Hazard

Acute Oral Toxicity

Category 3

Skin Corrosion/Irritation

Category 1

Serious Eye Damage/Eye Irritation

Category 1

Reproductive Toxicity

Category 2

Specific target organ systemic toxicity (repeated exposure)

Category 2

Other hazards

None

Labeling

Signal Word

DANGER



Hazard Statements

H314 - Causes severe skin burns and eye damage

H302 - Harmful if swallowed

H373 - May cause damage to organs through prolonged or repeated exposure

H290 - May be corrosive to metals

H361 - Suspected of damaging fertility or the unborn child

Precautionary Statements

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

P280 - Wear protective gloves, protective clothing, eye protection and face protection.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P260 - Do not breathe mist

P271 - Use in a well-ventilated area.

P270 - Do not eat, drink or smoke when using this product

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water or shower

P332 + P313 - If skin irritation occurs, get medical attention.

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 physician

P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P342 + P311 - If experiencing respiratory symptoms, call a physician

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Call a physician if unwell.

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

P406 - Store in a corrosion-resistant container.

P390 - Absorb spillage to prevent damage

P501 - Dispose of contents and container in accordance with applicable regulations.

2 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Sodium nitrite	7632-00-0	15-40
Sodium metaborate tetrahydrate	10555-76-7	1-5
Sodium hydroxide	1310-73-2	0.075

4. FIRST AID MEASURES

General advice	Do not get in eyes, on skin or on clothing. Do not breathe mist.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.
Skin Contact	Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.
Inhalation	Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.
Notes to physician	The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed. Since reversion of methemoglobin to hemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures.

5. FIRE-FIGHTING MEASURES

Flash Point	Does not flash	Method	Not applicable
Flammability Limits in Air	% Hydrogen, by reaction with metals.	Upper	75
Suitable Extinguishing Media	Water spray. Carbon dioxide (CO ₂). Foam. Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.	Lower	4
Specific hazards arising from the chemical	Material can create slippery conditions. Contact with metals may evolve flammable hydrogen gas.		
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.		
NFPA	Health 3	Flammability 1	Instability 0
HMIS	Health 3	Flammability 1	Instability 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions	Do not flush into surface water or sanitary sewer system.
Methods for Containment	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Methods for Cleaning Up	Pick up and transfer to properly labeled containers.
Neutralizing Agent	Acetic acid, diluted.

7. HANDLING AND STORAGE

Handling	Do not get in eyes, on skin or on clothing. Do not breathe mist.			
Storage	Store in original container. Metal containers must be lined. Keep containers tightly closed in a dry, cool and well-ventilated place. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.			
Storage Temperature	Minimum	35 °F / 2 °C	Maximum	115 °F / 46 °C
Storage Conditions	Indoor	X	Outdoor	Heated Refrigerated

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Sodium metaborate tetrahydrate	TWA: 2 mg/m ³	No data available	No data available
Sodium hydroxide	Ceiling: 2 mg/m ³	TWA: 2 mg/m ³	10 mg/m ³ Ceiling: 2 mg/m ³

Engineering Measures	Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should
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Personal Protective Equipment	be achieved by the use of local exhaust ventilation and good general extraction.
Eye/Face Protection	Tightly fitting safety goggles. Face-shield.
Skin Protection	Wear suitable protective clothing, Impervious gloves.
Respiratory Protection	In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General Hygiene Considerations	Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	Viscosity	Non viscous
Color	Colorless - Light yellow	Odor	Odorless
Odor Threshold	Not applicable	Appearance	Transparent
pH	12.4	Specific Gravity	1.21
Evaporation Rate	0.43	Percent Volatile (Volume)	84.2
VOC Content (%)	0	VOC Content (g/L)	0
Vapor Pressure	13.12 mmHg @ 70°F	Vapor Density	0.6 (Air = 1.0)
Solubility	Completely soluble	n-Octanol/Water Partition	No data available
Melting Point/Range	No data available	Decomposition Temperature	No data available
Boiling Point/Range	> 212 °F / 100 °C	Flammability (solid, gas)	No data available
Flash Point	Does not flash	Method	Not applicable
Autoignition Temperature	No information available.		
Flammability Limits in Air %	Hydrogen, by reaction with metals.	Upper 75 Lower 4	

10. STABILITY AND REACTIVITY

Chemical Stability	Stable. Hazardous polymerization does not occur.
Conditions to Avoid	None known
Incompatible Products	Strong oxidizing agents, Reducing agents, Avoid amines, Acids, Metals.
Hazardous Decomposition Products	Sodium oxides, Nitrogen oxides (NOx), Hydrogen, by reaction with metals.
Possibility of Hazardous Reactions	None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information

The following values are calculated based on chapter 3.1 of the GHS document (Rev. 3, 2009):

Oral LD50	339.44
Dermal LD50	124,133.50
Inhalation LC50	
Gas	No information available
Mist	22.00
Vapor	22.00

Principle Route of Exposure	Skin contact, Eye contact, Inhalation.
Primary Routes of Entry	Inhalation, Ingestion, Skin Absorption.

Acute Effects

Eyes	Corrosive to the eyes and may cause severe damage including blindness.
Skin	Causes skin burns.
Inhalation	Harmful by inhalation. Causes burns. Blood disorder may occur after prolonged inhalation. Methemoglobinemia.
Ingestion	If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Toxic if swallowed. Blood disorder may occur after ingestion. Components of the product create formation of methemoglobin.

Chronic Toxicity

Inhaled corrosive substances can lead to a toxic edema of the lungs. The absorption of this product into the body may lead to the formation of methemoglobin that, in sufficient concentration, causes cyanosis. Liver and kidney injuries may occur. Contains a known or suspected reproductive toxin. Respiratory system, Skin, Blood, Spleen, Heart, Liver, Kidney, Central nervous system, Testes. Skin disorders, Respiratory disorders, Cardiovascular, Kidney disorders, Liver disorders, Neurological disorders, Blood disorders.

Target Organ Effects

Aggravated Medical Conditions

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Sodium nitrite	= 85 mg/kg (Rat)	no data available	= 5.5 mg/L (Rat) 4 h	no data available	no data available
Sodium hydroxide	no data available	= 1350 mg/kg (Rabbit)	no data available	no data available	no data available

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Sodium nitrite	no data available	no data available	no data available	no data available	liver, kidneys, nervous

					system, spleen, blood, heart
Sodium metaborate tetrahydrate	no data available	no data available	no data available	X	Testes
Sodium hydroxide	no data available	no data available	no data available	no data available	eyes, respiratory system, skin

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA	Other
Sodium nitrite	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Sodium nitrite	no data available	LC50 0.092 - 0.13 mg/L Oncorhynchus mykiss 96 h LC50 0.4 - 0.6 mg/L Oncorhynchus mykiss 96 h LC50 0.65 - 1 mg/L Oncorhynchus mykiss 96 h LC50 = 0.19 mg/L Oncorhynchus mykiss 96 h LC50 = 2.3 mg/L Pimephales promelas 96 h LC50 = 20 mg/L Pimephales promelas 96 h	no data available	no data available	-3.7
Sodium hydroxide	no data available	LC50 = 45.4 mg/L Oncorhynchus mykiss 96 h	no data available	no data available	N/A

Persistence and Degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal

Dispose of in accordance with local regulations.

Container Disposal

Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name Corrosive liquid, basic, inorganic, n.o.s.
Hazard Class 8
UN-No UN3266
Packing Group II
Reportable Quantity (RQ) Sodium Nitrite RQ @ 400LBS
Description UN3266, Corrosive liquid, basic, inorganic, n.o.s.,(Sodium Hydroxide), 8, PG II

TDG

Hazard Class 8
UN-No UN266
Packing Group II

ICAO

UN-No UN3266
Proper Shipping Name Corrosive liquid, basic, inorganic, n.o.s.
Hazard Class 8
Packing Group II
Shipping Description UN3266, Corrosive liquid, basic, inorganic, n.o.s.,(Sodium Hydroxide), 8, PG II

IATA

UN-No UN3266
Proper Shipping Name Corrosive liquid, basic, inorganic, n.o.s.
Hazard Class 8
Packing Group II
Shipping Description UN3266, Corrosive liquid, basic, inorganic, n.o.s.,(Sodium Hydroxide), 8, PG II

IMDG/IMO

Proper Shipping Name Corrosive liquid, basic, inorganic, n.o.s.
Hazard Class 8
UN-No UN3266
Packing Group II
Shipping Description UN3266, Corrosive liquid, basic, inorganic, n.o.s.,(Sodium Hydroxide), 8, PG II

15. REGULATORY INFORMATION

Inventories

TSCA Complies
DSL Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Sodium nitrite	7632-00-0	15-40	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	No	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Sodium nitrite	100 lb	Not applicable
Sodium hydroxide	1000 lb	Not applicable

16. OTHER INFORMATION

Prepared By Brittany Wilson
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Reason for Revision No information available.
Glossary No information available.
List of References. No information available.

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