

Section I - General Information

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Date of Issue:
10/23/2007 12:00:00 AM
Chemical Name & Synonyms:
N/A
Chemical Family:
Alkaline Nitrite mixture
Manufacturer Name:
CHEM-AQUA, INC
Manufacturer Address:
BOX 152170
IRVING, TEXAS 75015
Prepared By:
M MCDOWELL/CHEMIST

Supersedes:
10/23/2007 12:00:00 AM
Trade Name & Synonyms:
CHEM-AQUA 999
Formula is a mixture:

Product Code Number: 0376
Emergency Phone Number: 800-424-9300

Section II - Hazardous Ingredients

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
SODIUM NITRITE	TOX/IRR	N/E 1	N/E 2	N/E	7632-00-0
SODIUM METABORATE TETRAHYDRATE	IRRITANT	N/E 1	N/E 2	N/E	10555-76-7

Section III - Physical Data

Boiling Point (°F): 212°	Specific Gravity (H₂O=1): 1.21
Vapor Pressure (mm Hg): 13.1	Color: Colorless-Lt yellow
Vapor Density (Air=1): 0.6	Odor: Odorless
pH @ 100% : 12	Clarity: Transparent
% Volatile by Volume: 84	Evaporation Rate (BuAc=1): 0.43
H₂O Solubility: Complete	Viscosity: Non-Viscous

Section IV - Fire and Explosion Hazard

Flash Point: >200°F
Flammable Limits: N/A
LEL: N/A
Method Used: Setaflash
UEL: N/A
Aerosol Level (NFPA 30B): N/A

Extinguishing Media:

<input checked="" type="checkbox"/> Foam	<input checked="" type="checkbox"/> Alcohol Foam	<input checked="" type="checkbox"/> CO2
<input checked="" type="checkbox"/> Dry Chemical	<input checked="" type="checkbox"/> Water Spray	<input type="checkbox"/> Other

NFPA 704 Hazard Rating:

4-Extreme	Health: 2
3-High	Flammability: 0
2-Moderate	Instability: 1
1-Slight	Special:
0-Insignificant	

Special Fire Fighting Procedures:

Firefighters should wear a self-contained breathing apparatus and full protective gear. Extinguishing media should be chosen based on the nature of the surrounding fire. Cool fire-exposed containers with water spray to prevent bursting.

Unusual Fire and Explosion Hazards:

The use of water spray (fog), while effective, may cause frothing and foaming. Never use a water jet as this will just spread the fire. Upon decomposition this material releases Oxygen which may intensify the fire. Contact with combustible materials may cause fire. Use care as spills may be slippery.

Section V - Health and Hazard Data

Threshold Limit Value:
Not Established.

Effects of Overexposure:

Acute: (Short Term Exposure)

Eye contact: Causes irritation seen as tearing, redness, and blurred vision. May cause corneal damage.
Skin contact: May cause irritation seen as itching and redness.
Inhalation: Mist may cause respiratory irritation seen as coughing and sneezing. May cause effects similar to ingestion.
Ingestion: May cause irritation with possible nausea, vomiting, and diarrhea. May cause central nervous system effects such as headache, weakness, fainting, nausea, and low blood pressure and may be fatal. Overexposure may cause methemoglobinemia (reduced oxygen carrying capacity of the blood) with cyanosis (bluish discoloration of the skin) progressing to dizziness, incoordination, loss of consciousness, shortness of breath, and increased pulse rate.

Chronic: (Long Term Exposure)

Overexposure may cause methemoglobinemia (reduced oxygen carrying capacity of the blood) with cyanosis (bluish discoloration of the skin) progressing to dizziness, incoordination, loss of consciousness, shortness of breath, and increased pulse rate. Long-term ingestion produced unspecified pathological changes in the adrenals, brain, heart, kidneys, liver, lungs, and spleen. Medical conditions aggravated by exposure are pre-existing respiratory and skin conditions such as asthma, emphysema, and dermatitis; pre-existing liver kidney diseases. Target organs: Blood, central nervous system, heart, kidneys, liver, lungs, and spleen. The primary routes of exposure are skin and eye contact.

Primary Routes of Entry

<input checked="" type="checkbox"/> Inhalation	<input checked="" type="checkbox"/> Ingestion	<input type="checkbox"/> Absorption
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Emergency First Aid Procedures:

Inhalation:
Remove from the area to fresh air. Seek medical attention if respiratory irritation develops or if breathing becomes difficult.

Eye Contact:

Rinse the eyes with water. Remove any contact lenses and continue flushing with plenty of water for several minutes. Seek medical attention if irritation develops.

Skin Contact:

Wash affected areas with plenty of soap and water for several minutes. Seek medical attention if irritation develops.

Ingestion:

Give 3 to 4 glasses of water, but DO NOT induce vomiting. If vomiting occurs, give fluids again. Get immediate medical attention. Do not give anything by mouth to an unconscious or convulsing person.

Notes to Physician:

Introduction to the body may lead to the formation of methemoglobin which, in sufficient concentration, causes cyanosis. Since reversion of methemoglobin to hemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures such as bed rest and oxygen inhalation. Thorough cleansing of the entire contaminated area of the body including scalp and nails is of utmost importance. If cyanosis is severe, intravenous injection of methylene blue, 1 mg/kg of body weight, may be of value. Cyanocobalamin (vitamin b-12), 1 mg intramuscularly, will speed recovery. Intravenous fluids and blood transfusions may be indicated in very severe exposures.

Section VI - Toxicity Information

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC NTP OSHA ACGIH Other

VOC content: 0% by weight, 0% by volume, 0 g/L

SODIUM NITRITE

ORL-HMN TDL₀: 14 mg/kg 4.

ORL-HMN LDL₀: 71 mg/kg 4.

ORL-RAT LD₅₀: 120 mg/kg 3.

IHL-RAT LC₅₀: 1.45 mg/L/4h 3.

EYE-RBT SDT: 500 mg/24h mild 4.

SODIUM METABORATE TETRAHYDRATE

ORL-RAT LD₅₀: 2330 mg/kg 3.

SKN LD₅₀: >2000 mg/kg (estimated) 3.

Animal feeding studies in rats, mice, and dogs demonstrated effects on fertility and testes. Studies with the chemically related boric acid in the rat, mouse, and rabbit demonstrated developmental effects on the fetus, including fetal weight loss and minor skeletal variations. 3.

Section VII - Reactivity Data

Stability

Stable Unstable

Conditions to Avoid:

Extreme Heat

Hazardous Polymerization

Will not occur May occur

Conditions to Avoid:

N/A

Incompatibility (Materials to Avoid):

Strong oxidizing agents such as Chlorine bleach and concentrated Hydrogen Peroxide; reducing agents such as metal hydrides or alkali metals. Under certain conditions, nitrites may react with secondary amines to form carcinogenic Nitrosamines.

Hazardous Decomposition Products:

Oxides of Nitrogen and Sodium; Oxygen.

Section VIII - Spill Or Leak Procedures

Steps to be Taken if Material is Released or Spilled:

Wear appropriate protective clothing. Use care as spills may be slippery. Shut off source of leak. Dike and contain spill. Absorb with an inert material and transfer all material into a properly labeled container for disposal. Prevent product from contaminating soil or from entering sewage and drainage systems and bodies of water. Flush area with water.

Waste Disposal Method(s):

Dispose of in accordance with all Federal, state, and local regulations.

Neutralizing Agent:

Use dilute acids such as Hydrochloric Acid or Vinegar. Add cautiously while mixing. Wear appropriate protective clothing.

Section IX - Special Protection Information**Required Ventilation:**

Local ventilation is recommended to control exposure from operations that can generate excessive levels of mists. Local ventilation is preferred, because it prevents dispersion into work areas by controlling it at its source.

Respiratory Protection:

Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). For concentrations above the TLV and/or PEL but less than 10 times these limits, a NIOSH approved half-facepiece respirator equipped with appropriate chemical cartridges may be used. For concentrations greater than 10 times the TLV and/or PEL, consult the NIOSH respirator decision logic found in publication No. 87-116 or ANSI Z88.2-1992. None required under normal conditions of use.

Glove Protection:

Neoprene or nitrile rubber gloves if repeated or prolonged skin contact is likely. Ensure compliance with OSHA's personal protective equipment (PPE) standard for hand protection, 29 CFR 1910.138.

Eye Protection:

Safety glasses with side shields if the method of application presents the likelihood of eye contact. Ensure compliance with OSHA's Personal Protective Equipment (PPE) standard for eye and face protection, 29 CFR 1910.133.

Other Protection:

Wear general-duty work clothes and shoes. A safety shower and an eyewash station should be available.

Section X - Storage and Handling Information**Storage Temperature**

Max: 120°F Min: 35°F

Storage Conditions

Indoors Outdoors Heated Refrigerated

Precautions to be Taken in Handling and Storing:

Always store material in its original container. Keep container tightly closed when not in use. Keep from freezing. If product freezes, allow it to slowly warm to room temperature and stir thoroughly before using.

Other Precautions:

Keep out of reach of children. Read the entire label before using the product. Follow the label directions.

Section XI - Regulatory Information

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Upper % Limit</u>
SODIUM NITRITE	7632-00-0	25

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Please call 1-800-527-9919 for additional information if you are a California customer. This MSDS is not intended for users in the state of California.

Section XII - References

1. Threshold Limit Values for chemical substances and physical agents and biological exposure indices, ACGIH, 2007.
2. OSHA PEL.
3. Vendor's MSDS.
4. Registry of toxic effects of chemical substances, CCINFOWeb, 2007.

All the components of this product are in compliance with the Toxic Substances Control Act (TSCA) and are either listed on the TSCA inventory or otherwise exempted from listing.

IRR: Irritant, OSHA: Occupational Safety & Health Administration, IARC: International Agency for the Research on Cancer, TOX: Toxic, NFPA: National Fire Protection Association, ppm: Parts Per Million, UEL: Upper Explosion Limit, STEL: Short-term Exposure Limit, SKN: Skin, IHL: Inhalation, COMB: Combustible, CORR: Corrosive, MUT: Mutagenic, CARC: Carcinogenic, N/A: Not Applicable, TLV: Threshold Limit Value, N/E: Not Established, ORL: Oral, FLAM: Flammable, ASPHYX: Asphyxiant, C.O.C.: Cleveland Open Cup, PNOR: Particles Not Otherwise Regulated, LEL: Lower Explosion Limit, mg/L: Milligrams per Liter, PNOS: Particles Not Otherwise Specified, g/L: Grams per Liter, PMCC: Pensky-Martin Closed Cup, NTP: National Toxicology Program, µg/L: Micrograms per Liter, TCC: Tagliabue Closed Cup, SEV: Severe, RBT: Rabbit, INV: Intravenous, ACGIH: American Conference of Governmental Industrial Hygienists, PEL: Permissible Exposure Limit, MOD: Moderate, IPT: Intraperitoneal, gm/kg: Grams per Kilogram, C.C.C.: Cleveland Closed Cup, HMN: Human, mg/m³: Milligrams per Cubic Meter, mg/kg: Milligrams per Kilogram, VOC: Volatile Organic Compound, SDT: Standard Draize Test, MSE: Mouse, GPG: Guinea Pig.

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