005 01/09/06 SODIUM NITRITE SOLUTION

PRODUCT NAME: SODIUM NITRITE SOLUTION

MSDS NUMBER: DQ3740CR

DATE ISSUED: 01/05/2006

SUPERSEDES: 09/01/2003

ISSUED BY: 004705

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Material Safety Data Sheet

CHEMICAL PRODUCT / COMPANY IDENTIFICATION

Material Identification

Formula: $NaNO_2$ (in water)

CAS Name: NITROUS ACID, SODIUM SALT

Grade: TECHNICAL; OXIDIZING SALT SOLUTION

Company Identification
Manufacturer / Distributor:
REPAUNO PRODUCTS, LLC
200 N. Repauno Avenue
Gibbstown, NJ 08027

Key Phone Numbers:
Product Information: 1-877-648-7483
Transport Emergency: 1-800-424-9300 (CHEMTREC)
Medical Emergency: 1-856-224-7008

COMPOSITION / INFORMATION ON INGREDIENTS

Components

| Material | CAS Number | Composition % |
|---|---|---|
| Technical Grade: | | |
| 'SODIUM NITRITE* | 7632-00-0 | 41 |
| 'WATER | 7732-18-5 | 59 |
| Oxidizing Salt Solution: | | |
| SODIUM NITRITE* | 7632-00-0 | 40 |
| SODIUM CARBONATE | 497-19-8 | 2 |
| SODIUM NITRATE* | 7631-99-4 | 10 |
| 'WATER | 7732-18-5 | 48 |

* Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372

HAZARDS IDENTIFICATION

Potential Health Effects

Harmful or fatal if swallowed. Harmful if inhaled. Overexposure by inhalation or ingestion may cause reduced oxygen carrying capacity of blood. Causes skin and eye irritation.

Human Health Effects

Human health effects of overexposure to the product by skin or eye contact

may include skin irritation with discomfort or rash; or eye irritation with discomfort, tearing, or blurring of vision. Sodium nitrite has been infrequently associated with skin sensitization in humans. By inhalation, irritation of the upper respiratory passages with coughing may occur. By inhalation or ingestion, the effects may include low blood pressure with headache and fainting, or nonspecific discomfort such as nausea or weakness. Overexposure may also cause methemoglobinemia (reduced oxygen carrying capacity of the blood) with cyanosis (bluish discoloration of the skin), possibly progressing to dizziness, incoordination, shortness of breath, increased pulse rate, and loss of consciousness.

Sodium nitrite can also react with certain amines forming compounds which may cause cancer, mutations, or other toxicity. These compounds, known as nitrosamines, can be formed in acidic environments such as that found in the stomach. Since many medications and chemicals contain an amine group, simultaneous exposure to nitrites should be avoided.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

Inhalation
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Skin Contact
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing. Call a physician. Wash clothing before reuse.

Eye Contact
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

Ingestion
If swallowed, immediately give two glasses of water and induce vomiting. Call a physician. Never give anything by mouth to an unconscious person.

Notes to Physicians
Absorption of this product into the body leads 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. Cyanocobalamin (Vitamin B-12), 1 mg intramuscularly, will speed recovery. Intravenous fluids and blood transfusions may be indicated in very severe exposures.

FIRE FIGHTING MEASURES

Flammable Properties

Autodecomposition: 490 deg C (914 deg F) after drydown. Will not burn.

Fire and Explosion Hazards

Strong oxidizer when water is removed. Combustible materials may catch fire more easily after being wet with sodium nitrite and dried. Product intensifies combustion of other materials. Fires are difficult to extinguish. See "Decomposition".

Extinguishing Media

As appropriate for combustibles in area.

Fire Fighting Instructions

Flood with water.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during cleanup.

Accidental Release Measures

Flush spill area with plenty of water. Comply with Federal, State, and local regulations on reporting releases. The Superfund reportable discharge for sodium nitrite is 100 lbs.

HANDLING AND STORAGE

Handling (Personnel)

Do not take internally. Keep from contact with clothing and other combustible materials. Avoid contact with eyes and skin. Avoid breathing vapors or mist. Avoid breathing dust from dried-down product. Wash thoroughly after handling.

Storage
Do not store with acids, ammonium salts, cyanides, amines or reducing agents.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Good general ventilation should be provided to minimize contact with vapors, or dust from dried-down product.

Personal Protective Equipment

Eye/Face: Coverall chemical splash goggles.
Protective Gloves: Rubber gloves.

If product is allowed to dry and dusty conditions exist, use NIOSH/MSHA approved respiratory protection.

Exposure Guidelines: Applicable Exposure Limits

Sodium Nitrite

PEL (OSHA): None Established
TLV (ACGIH): None Established
WEEL (AIHA): None Established

Sodium Nitrate

PEL (OSHA): None Established
TLV (ACGIH): None Established
WEEL (AIHA): None Established

Sodium Carbonate
PEL (OSHA): None Established
TLV (ACGIH): None Established

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Solubility in Water: 100 WT% Technical and Oxidizing Salt Solution
Odor: Odorless
Form: Clear liquid

| Properties | Technical Grade | Oxidizing Salt Solution |
|---|---|---|
| Color | Pale Yellow | Straw Colored |
| Boiling Pt., 760 mm Hg (239 deg F) | 115 deg C | 114.5 deg C (238 deg F) |
| Freezing Point (30 deg F) | -1 deg C | &10-20 deg C (50-68 deg F) |
| Specific Gravity (60 deg F) | 1.32 at 16 deg C | &1.4/16 deg C (34/60 deg F) |
| Vapor Pressure at: | | |
| 25 deg C | 17 mm Hg | &50 mm Hg |
| 38 deg C | 35 mm Hg | &90 mm Hg |
| Vapor Density (Air=1) | Less than 1 | Less than 1 |
| pH Information | 8.9 | 19 |
| Evaporation Rate | Greater than 1 | Greater than 1 |

STABILITY AND REACTIVITY

Chemical Stability

Unstable with heat after dry down.

Decomposition

Decomposes with heat.

Decomposition temperature is 490 deg C (914 deg F) after drydown to produce oxygen and toxic nitrogen gases.

Polymerization

Polymerization will not occur.

Other Hazards

Incompatibility: Incompatible with acids, ammonium salts, amines, activated carbon, cyanides, and reducing agents. May react with secondary or tertiary amines to form nitrosamines. (Certain nitrosamines are cancer-suspect agents.)

TOXICOLOGICAL INFORMATION

Animal Data

Sodium Nitrite

Inhalation 4-hour LC50: 1.45 mg/L in rats

Oral LD50: 120 mg/kg in rats

The compound is an eye irritant, is untested for skin irritancy, but is not a skin sensitizer in animals. No local or systemic effects were reported after 30 days of skin exposure. By inhalation, two to four weeks exposure produced only increased activity of lung enzymes. By ingestion, the effect of a single exposure is reported to be methemoglobinemia. Repeated exposure produced methemoglobinemia, decreased hemoglobin, an increase in brain dopamine, and nonspecific effects such as weight loss and irritation. Long-term ingestion produced methemoglobinemia, and unspecified pathological changes in the liver, spleen, kidneys, adrenals, brain, heart, and lungs.

Reactivity: No
Pressure: No

* Will not burn, but dried-down material is an oxidizer; can cause nearby combustible materials to burn more readily

Lists:

SARA Extremely Hazardous Substance: No

CERCLA Hazardous Substance: Yes

SARA Toxic Chemical: Yes

Canadian WHMIS Classification:

C; D-1B; D-2B

OTHER INFORMATION

Additional Information

NPCA-HMIS Ratings:

Health (Acute): 2*
Flammability: 0**
Reactivity: 1
Personal Protection: Varies

Personal Protection rating to be supplied by user depending on use conditions.

* Chronic
** Will not burn, but dried-down material is an oxidizer; can cause nearby combustible materials to burn more readily.

---------- FOR ADDITIONAL INFORMATION ----------
CONTACT: MSDS COORDINATOR UNIVAR USA INC.
DURING BUSINESS HOURS, PACIFIC TIME (425)889-3400
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