

**MSDS****Material Safety Data Sheet**24 hour Emergency Telephone:  
Chemtrec: 1-800-424-9300

Outside U.S. and Canada Chemtrec: 202-483-7616

**NOTE:** CHEMTREC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.From: Vinquiry, Inc.  
7795 Bell Road  
Windsor, CA 95492**VINQUIRY**

All Non-emergency questions should be directed to Customer Service (1-707-838-6312) for assistance.

**Gold Coast #6**Contains: **Sodium Thiosulfate Crystals and Sodium Hydroxide Solution 1N**

Vinquiry Product Codes: 10-114-0000, 10-114-0237, 10-114-0473, 10-114-0946

MSDS Number: GC114 --- *Effective Date: 01/01/01***SODIUM THIOSULFATE**

## Product Identification

**Synonyms:** Sodium thiosulfate, pentahydrate; thiosulfuric acid, disodium salt, pentahydrate**CAS No.:** 7772-98-7 (Anhydrous)**Molecular Weight:** 248.17**Chemical Formula:** Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>·5H<sub>2</sub>O**2. Composition/Information on Ingredients**

Ingredient	CAS No	Percent	Hazardous
Sodium Thiosulfate	7772-98-7	100%	Yes

**3. Hazards Identification****Emergency Overview****CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.**

VINQUIRY INC. SAFETY DATA Ratings (Provided here for your convenience)

Health Rating: 0 - None

Flammability Rating: 0 - None

Reactivity Rating: 1 - Slight

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT

Storage Color Code: Orange (General Storage)

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## Potential Health Effects

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### **Inhalation:**

May cause irritation to the respiratory tract. Symptoms may include coughing and shortness of breath.

### **Ingestion:**

Low level of toxicity by ingestion. Diarrhea may occur by ingestion of large quantities.

### **Skin Contact:**

Irritation may occur from prolonged skin contact.

### **Eye Contact:**

Contact may cause mechanical irritation.

### **Chronic Exposure:**

Chronic exposure may cause skin effects.

### **Aggravation of Pre-existing Conditions:**

No information found.

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## 4. First Aid Measures

### **Inhalation:**

Remove to fresh air. Get medical attention for any breathing difficulty.

### **Ingestion:**

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

### **Skin Contact:**

Wash exposed area with soap and water. Get medical advice if irritation develops.

### **Eye Contact:**

Wash thoroughly with running water. Get medical advice if irritation develops.

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## 5. Fire Fighting Measures

### **Fire:**

Not considered to be a fire hazard.

### **Explosion:**

Not considered to be an explosion hazard.

### **Fire Extinguishing Media:**

Use any means suitable for extinguishing surrounding fire.

### **Special Information:**

Use protective clothing and breathing equipment appropriate for the surrounding fire.

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## 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

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## 7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

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## 8. Exposure Controls/Personal Protection

### **Airborne Exposure Limits:**

None established.

### **Ventilation System:**

In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, a local exhaust system should be considered.

### **Personal Respirators (NIOSH Approved):**

For conditions of use where exposure to the dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

### **Skin Protection:**

Wear protective gloves and clean body-covering clothing.

### **Eye Protection:**

Safety glasses. Maintain eye wash fountain and quick-drench facilities in work area.

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## 9. Physical and Chemical Properties

### **Appearance:**

Monoclinic, colorless crystals.

### **Odor:**

Odorless.

### **Solubility:**

79g/100 ml water @ 4C (39F)

### **Density:**

1.75

### **pH:**

No information found.

### **% Volatiles by volume @ 21C (70F):**

0

### **Boiling Point:**

> 100C (> 212F)

### **Melting Point:**

48C (118F) Loses water @ 100C (212F)

### **Vapor Density (Air=1):**

No information found.

### **Vapor Pressure (mm Hg):**

No information found.

**Evaporation Rate (BuAc=1):**

No information found.

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## 10. Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage. Stability limited in solution.

**Hazardous Decomposition Products:**

Oxides of sulfur and hydrogen sulfide.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

Sodium nitrate, halogens, and oxidizing agents. Reacts with acids to release sulfur dioxide.

**Conditions to Avoid:**

Incompatibles.

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## 11. Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure.

-----\Cancer Lists\-----			
Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Sodium Thiosulfate (7772-98-7)	No	No	None

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## 12. Ecological Information

**Environmental Fate:**

No information found.

**Environmental Toxicity:**

No information found.

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## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

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## 14. Transport Information

Not regulated.

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## 15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----  
Ingredient TSCA EC Japan Australia  
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Sodium Thiosulfate (7772-98-7) Yes Yes Yes Yes

-----\Chemical Inventory Status - Part 2\-----  
Ingredient Korea DSL NDSL Phil.  
-----  
Sodium Thiosulfate (7772-98-7) Yes Yes No Yes

-----\Federal, State & International Regulations - Part 1\-----  
-SARA 302- -SARA 313-----  
Ingredient RQ TPQ List Chemical Catg.  
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Sodium Thiosulfate (7772-98-7) No No No No

-----\Federal, State & International Regulations - Part 2\-----  
Ingredient CERCLA -RCRA- -TSCA-  
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Sodium Thiosulfate (7772-98-7) No 261.33 8(d) No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No  
SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No  
Reactivity: No (Mixture / Solid)

**Australian Hazchem Code:** No information found.

**Poison Schedule:** No information found.

**WHMIS:**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

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## 16. Other Information

**NFPA Ratings:** Health: 1 Flammability: 0 Reactivity: 0

**Label Hazard Warning:**

CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

**Label Precautions:**

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

Avoid breathing dust.

Keep container closed.

Use with adequate ventilation.

**Label First Aid:**

If inhaled, remove to fresh air. Get medical attention for any breathing difficulty. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists. If swallowed, induce vomiting immediately as directed by medical personnel. Never give

anything by mouth to an unconscious person.

**Product Use:**

Laboratory Reagent.

**Revision Information:**

No changes.

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# SODIUM HYDROXIDE SOLUTIONS AND CONCENTRATES

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## 1. Product Identification

**Synonyms:** Sodium hydroxide, 0.2 to 2.0 normal volumetric solutions; DILUT-IT(R) analytical concentrates; Sodium Hydroxide Concentrate Solution StandARd(R)

**CAS No.:** 1310-73-2

**Molecular Weight:** 40.00

**Chemical Formula:** NaOH in water

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## 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Sodium Hydroxide	1310-73-2	0.8 - 8%	Yes
Water	7732-18-5	92 - 99%	No

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## 3. Hazards Identification

### Emergency Overview

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**DANGER! CORROSIVE. HARMFUL IF SWALLOWED OR INHALED. CAUSES BURNS TO ANY AREA OF CONTACT. REACTS WITH WATER, ACIDS AND OTHER MATERIALS.**

**J.T. Baker SAFETY DATA<sup>(tm)</sup>** Ratings (Provided here for your convenience)

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Health Rating: 2 - Moderate

Flammability Rating: 0 - None

Reactivity Rating: 1 - Slight

Contact Rating: 3 - Severe (Corrosive)

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES

Storage Color Code: White Stripe (Store Separately)

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### Potential Health Effects

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The health effects from exposure to diluted forms of this chemical are not well documented. They are expected to be less severe than those for concentrated forms which are referenced in the descriptions below.

**Inhalation:**

Severe irritant. Effects from inhalation of mist vary from mild irritation to serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may include sneezing, sore throat or runny nose. Severe pneumonitis may occur.

**Ingestion:**

Corrosive! Swallowing may cause severe burns of mouth, throat, and stomach. Severe scarring of tissue and death may result. Symptoms may include bleeding, vomiting, diarrhea, fall in blood pressure. Damage may appear days after exposure.

**Skin Contact:**

Corrosive! Contact with skin can cause irritation or severe burns and scarring with greater exposures.

**Eye Contact:**

Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent impairment of vision, even blindness.

**Chronic Exposure:**

Prolonged contact with dilute solutions or dust has a destructive effect upon tissue.

**Aggravation of Pre-existing Conditions:**

Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

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## 4. First Aid Measures

**Inhalation:**

Remove to fresh air. Get medical attention for any breathing difficulty.

**Ingestion:**

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**Skin Contact:**

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician, immediately. Wash clothing before reuse.

**Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

**Note to Physician:**

Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, the use of therapeutic doses of steroids should be considered. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also required.

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## 5. Fire Fighting Measures

**Fire:**

Not considered to be a fire hazard.

**Explosion:**

Not considered to be an explosion hazard.

**Fire Extinguishing Media:**

Use any means suitable for extinguishing surrounding fire. Adding water to caustic solution generates large amounts of heat.

**Special Information:**

Use protective clothing and breathing equipment appropriate for the surrounding fire.

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## 6. Accidental Release Measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. Contain and recover liquid when possible. Do not flush caustic residues to the sewer. Residues from spills can be diluted with water, neutralized with dilute acid such as acetic, hydrochloric or sulfuric. Absorb neutralized caustic residue on clay, vermiculite or other inert substance and package in a suitable container for disposal. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

NEUTRACIT(R)-2 or BuCAIM(R) caustic neutralizers are recommended for spills of this product.

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## 7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Protect from freezing. Always add the caustic to water while stirring; never the reverse. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. Do not store with aluminum or magnesium. Do not mix with acids or organic materials.

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## 8. Exposure Controls/Personal Protection

**Airborne Exposure Limits:**

Sodium hydroxide:

-OSHA Permissible Exposure Limit (PEL):

2 mg/m<sup>3</sup> Ceiling

-ACGIH Threshold Limit Value (TLV):

2 mg/m<sup>3</sup> Ceiling

**Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

**Personal Respirators (NIOSH Approved):**

If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

**Skin Protection:**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Eye Protection:**

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

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## 9. Physical and Chemical Properties

Physical data is displayed for a 5% solution of sodium hydroxide.

**Appearance:**

Clear, colorless solution.

**Odor:**

Odorless.

**Solubility:**

Miscible in water.

**Density:**

5% solution: 1.05

**pH:**

14.0

**% Volatiles by volume @ 21C (70F):**

No information found.

**Boiling Point:**

102C (216F) (5% solution)

**Melting Point:**

-4C (25F) (5% solution)

**Vapor Density (Air=1):**

No information found.

**Vapor Pressure (mm Hg):**

No information found.

**Evaporation Rate (BuAc=1):**

No information found.

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## 10. Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage.

**Hazardous Decomposition Products:**

No hazardous decomposition products.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

Sodium hydroxide in contact with acids and organic halogen compounds, especially trichloroethylene, may cause violent reactions. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum, magnesium, tin, and zinc cause formation of flammable hydrogen gas. Sodium hydroxide, even in fairly dilute solution, reacts readily with various sugars to produce carbon monoxide. Precautions should be taken including monitoring the tank atmosphere for carbon monoxide to ensure safety of personnel before vessel entry.

**Conditions to Avoid:**

Heat, moisture, incompatibles.

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## 11. Toxicological Information

Sodium hydroxide: irritation data: skin, rabbit: 500 mg/24H severe; eye rabbit: 50 ug/24H severe.  
Investigated as a mutagen.

-----\Cancer Lists\-----

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Sodium Hydroxide (1310-73-2)	No	No	None
Water (7732-18-5)	No	No	None

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## 12. Ecological Information

**Environmental Fate:**

No information found.

**Environmental Toxicity:**

No information found.

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## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

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## 14. Transport Information

**Domestic (Land, D.O.T.)**

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**Proper Shipping Name:** SODIUM HYDROXIDE SOLUTION

**Hazard Class:** 8

**UN/NA:** UN1824

**Packing Group:** II

**Information reported for product/size:** 208L

**International (Water, I.M.O.)**

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**Proper Shipping Name:** SODIUM HYDROXIDE SOLUTION

**Hazard Class:** 8

**UN/NA:** UN1824

**Packing Group:** II

**Information reported for product/size:** 208L

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## 15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----				
Ingredient	TSCA	EC	Japan	Australia
Sodium Hydroxide (1310-73-2)	Yes	Yes	Yes	Yes
Water (7732-18-5)	Yes	Yes	Yes	Yes

-----\Chemical Inventory Status - Part 2\-----				
Ingredient	Korea	--Canada--		
		DSL	NDSL	Phil.
Sodium Hydroxide (1310-73-2)	Yes	Yes	No	Yes
Water (7732-18-5)	Yes	Yes	No	Yes

-----\Federal, State & International Regulations - Part 1\-----				
Ingredient	-SARA 302-		-----SARA 313-----	
	RQ	TPQ	List	Chemical Catg.
Sodium Hydroxide (1310-73-2)	No	No	No	No
Water (7732-18-5)	No	No	No	No

-----\Federal, State & International Regulations - Part 2\-----			
Ingredient	CERCLA	-RCRA-	-TSCA-
		261.33	8(d)
Sodium Hydroxide (1310-73-2)	1000	No	No
Water (7732-18-5)	No	No	No

Chemical Weapons Convention: No      TSCA 12(b): No      CDTA: No  
SARA 311/312: Acute: Yes      Chronic: No      Fire: No      Pressure: No  
Reactivity: No      (Pure / Liquid)

**Australian Hazchem Code: 2R**

**Poison Schedule: S5**

**WHMIS:**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

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## 16. Other Information

**NFPA Ratings:** Health: **3** Flammability: **0** Reactivity: **0**

**Label Hazard Warning:**

DANGER! CORROSIVE. HARMFUL IF SWALLOWED OR INHALED. CAUSES BURNS TO ANY AREA OF CONTACT. REACTS WITH WATER, ACIDS AND OTHER MATERIALS.

**Label Precautions:**

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

Do not breathe mist.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

**Label First Aid:**

If swallowed, give several glasses of water or milk to drink. Vomiting may occur spontaneously, but DO NOT INDUCE! Never give anything by mouth to an unconscious person. In case of contact,

immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. In all cases get medical attention immediately.

**Product Use:**

Laboratory Reagent.

**Revision Information:**

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## **Disclaimer**

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