

CUSTOMER: 275804

ORDER #: 983468

BATCH #: 123470007

STICKER #: 123470131

ZONE #:BB

BARCODE #:9611019095150216722710

PRODUCT NAME: CHEMSEARCH 999

**Material Safety Data Sheet: CHEMSEARCH 999**

Supersedes Date 01/30/2012

Issuing Date 10/26/2012

**1. PRODUCT AND COMPANY IDENTIFICATION**

Product Name CHEMSEARCH 999

Product Code 1748

Recommended use Water treatment chemical

Chemical nature Aqueous solution of alkali salts

Information on Manufacturer:

Emergency Telephone Number

CHEMSEARCH DIV. OF NCH CORP.

CHEMTREC® 800-424-9300

BOX 152170

IRVING, TX 75015

**2. HAZARDS IDENTIFICATION****Emergency Overview****WARNING**

Oxidizing agent

Severe skin irritation

Causes severe eye irritation

May be harmful if inhaled

Harmful if swallowed

Color Colorless - Light yellow

Physical State Liquid

Odor Odorless

Potential Health Effects

Principle Route of Exposure

Primary Routes of Entry

Acute Effects

Eyes

Skin

Inhalation

Ingestion

Chronic Toxicity

Target Organ Effects

Aggravated Medical Conditions

Potential Environmental Effects

Skin contact, Eye contact, Inhalation.

Inhalation, Ingestion.

Severe irritation. May cause irreversible eye damage.

Severe irritation.

Causes respiratory tract irritation. Inhalation may cause central nervous system effects. May cause central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Blood disorder may occur after prolonged inhalation. Methemoglobinemia.

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Toxic if swallowed. Blood disorder may occur after ingestion. Components of the product create formation of methemoglobin.

Prolonged exposure can be harmful for certain organs, e.g. liver, kidneys, blood, nervous system and skin. Methemoglobinemia. Cyanosis. Experiments have shown reproductive toxicity effects on laboratory animals.

Respiratory system, Skin, Blood, Spleen, Heart, Liver, Kidney, Central nervous system, Testes. Cardiovascular, Skin disorders, Respiratory disorders, Blood disorders, Liver disorders, Kidney disorders, Neurological disorders.

See Section 12 for additional Ecological information.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

| Component                      | CAS-No     |
|--------------------------------|------------|
| Sodium nitrite                 | 7632-00-0  |
| Sodium metaborate tetrahydrate | 10555-76-7 |

**4. FIRST AID MEASURES**

General advice

Avoid contact with skin, eyes and clothing. Avoid breathing vapors, mist, or gas.

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

Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention immediately. Wash contaminated clothing before re-use.

Inhalation

If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Ingestion

Clean mouth with water and afterwards drink plenty of water

Notes to physician

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 |
| Autoignition Temperature                                        | No information available.                                                                                                                                                                           |                |                |
| Flammability Limits in Air % Hydrogen, by reaction with metals. |                                                                                                                                                                                                     | Upper 75       | Lower 4        |
| Suitable Extinguishing Media                                    | Water spray. Carbon dioxide (CO <sub>2</sub> ). Foam. Alcohol-resistant foam. Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |                |                |
| Specific hazards arising from the chemical                      | Contact with metals may evolve flammable hydrogen gas. Oxidizing potential. Material can create slippery conditions.                                                                                |                |                |
| 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 0 | Instability 0  |
| HMIS                                                            | Health 3                                                                                                                                                                                            | Flammability 0 | Instability 0  |

## 6. ACCIDENTAL RELEASE MEASURES

|                           |                                                                                                                                                                                                                            |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal Precautions      | Use personal protective equipment. Ensure adequate ventilation. 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            | Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.                                                                                                                                                                   |              |              |
| Storage             | Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Metal containers must be lined. 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      |
| Storage Conditions  | Indoor                                                                                                                                                                                                                                         | X            | Outdoor      |
|                     |                                                                                                                                                                                                                                                |              | Heated       |
|                     |                                                                                                                                                                                                                                                |              | Refrigerated |

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Guidelines

| Component                      | ACGIH TLV                                             | OSHA PEL          | NIOSH             |
|--------------------------------|-------------------------------------------------------|-------------------|-------------------|
| Sodium nitrite                 | No data available                                     | No data available | No data available |
| Sodium metaborate tetrahydrate | TWA: 2 mg/m <sup>3</sup><br>STEL: 6 mg/m <sup>3</sup> | No data available | No data available |

|                                |                                                                                                                                                                                           |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Engineering Measures           | Use with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.                                                                                            |
| Personal Protective Equipment  |                                                                                                                                                                                           |
| Eye/Face Protection            | Tightly fitting safety goggles. Face-shield.                                                                                                                                              |
| Skin Protection                | Wear suitable protective clothing. Impervious gloves.                                                                                                                                     |
| Respiratory Protection         | In case of insufficient ventilation wear suitable respiratory equipment. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. |
| General Hygiene Considerations | Remove and wash contaminated clothing before re-use.                                                                                                                                      |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                           |                          |                  |                    |
|---------------------------|--------------------------|------------------|--------------------|
| Physical State            | Liquid                   | Viscosity        | Non viscous        |
| Color                     | Colorless - Light yellow | Odor             | Odorless           |
| Appearance                | Transparent              | pH               | 12.4               |
| Specific Gravity          | 1.21                     | Evaporation Rate | 0.44               |
| Percent Volatile (Volume) | 84.4                     | VOC Content (%)  | 0                  |
| VOC Content (g/L)         | 0                        | Vapor Pressure   | 13.2 mmHg @ 70°F   |
| Vapor Density             | 0.6 (Air = 1.0)          | Solubility       | Completely soluble |
| Boiling Point/Range       | > 212 °F / 100 °C        |                  |                    |

## 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, Contact with metals liberates hydrogen gas.

**Hazardous Decomposition Products**

Sodium oxides, Nitrogen oxides (NOx), Hydrogen, by reaction with metals.

**Possibility of Hazardous Reactions**

Oxidizing properties

**11. TOXICOLOGICAL INFORMATION****Product Information**

No information available.

**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 metaborate tetrahydrate | no data available  | no data available | no data available      | no data available | no data available |

**Chronic Toxicity**

| 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                                               |

**Carcinogenicity**

| Component                      | ACGIH          | IARC           | NTP            | OSHA           | Other          |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|
| Sodium nitrite                 | not applicable | not applicable | not applicable | not applicable | not applicable |
| Sodium metaborate tetrahydrate | 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 = 0.19 mg/L Oncorhynchus mykiss 96 h<br>LC50 0.092 - 0.13 mg/L Oncorhynchus mykiss 96 h<br>LC50 0.4 - 0.6 mg/L Oncorhynchus mykiss 96 h<br>LC50 0.65 - 1 mg/L Oncorhynchus mykiss 96 h<br>LC50 = 2.3 mg/L Pimephales promelas 96 h<br>LC50 = 20 mg/L Pimephales promelas 96 h | no data available | no data available | -3.7    |
| Sodium metaborate tetrahydrate | no data available | no data available                                                                                                                                                                                                                                                                  | 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**

&lt;400# - NOT REGULATED &gt;399# - ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (SODIUM NITRITE)

**UN-No**

UN3082

**Packing Group**

III

**Reportable Quantity (RQ)**

RQ @ 400lbs

**Description**

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (SODIUM NITRITE), 9, III, RQ

## TDG

Proper shipping name <400#- NOT REGULATED >399#- ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (SODIUM NITRITE)  
 Hazard Class 9  
 UN-No UN3082  
 Packing Group III  
 Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.,(SODIUM NITRITE), 9, PG III, RQ

## ICAO

UN-No UN3082  
 Proper Shipping Name <400#- NOT REGULATED >399#- ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (SODIUM NITRITE)  
 Hazard Class 9  
 Packing Group III  
 Shipping Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.,(SODIUM NITRITE), 9, PG III, RQ

## IATA

UN-No UN3082  
 Proper Shipping Name <400# - NOT REGULATED >399# - ENVIRONMENTALLY HAZAROUS SUBSTANCE, LIQUID, N.O.S., (SODIUM NITRITE)  
 Hazard Class 9  
 Packing Group III  
 Shipping Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.,(SODIUM NITRITE), 9, PG III, RQ

## IMDG/IMO

Proper Shipping Name <400# - NOT REGULATED >399# - ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (SODIUM NITRITE)  
 Hazard Class 9  
 UN-No UN3082  
 Packing Group III  
 Shipping Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.,(SODIUM NITRITE), 9, PG III, RQ

## 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 | 25       | 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 metaborate tetrahydrate | Not applicable           | Not applicable |

## Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

## WHMIS Hazard Class

D1B Toxic materials, C Oxidizing materials.



#### 16. OTHER INFORMATION

|                     |                           |
|---------------------|---------------------------|
| Supersedes Date     | 01/30/2012                |
| Issuing Date        | 10/26/2012                |
| Reason for Revision | No information available. |
| Glossary            | No information available. |
| List of References. | No information available. |

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