

Safety Data Sheet: CHEMSEARCH 777

Supersedes Date 09/06/2011

Issuing Date 04/10/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name CHEMSEARCH 777
Recommended use Water treatment chemical
Information on Manufacturer
CHEMSEARCH FE DIV. OF NCH CORP.
BOX 152170
IRVING, TX 75015

Product Code 0182
Chemical nature Aqueous solution of alkali salts
Emergency Telephone Number
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color Dark violet

Physical State Liquid

Odor Odorless

GHS

Classification

Physical Hazards

Substances/mixtures corrosive to metal

Category 1

Health Hazard

Acute Oral Toxicity
Skin Corrosion/Irritation
Serious Eye Damage/Eye Irritation
Respiratory Sensitization
Skin Sensitization
Reproductive Toxicity
Carcinogenicity
Specific target organ systemic toxicity (repeated exposure)

Category 4
Category 2
Category 1
Category 1
Category 1
Category 2
Category 2
Category 2

Other hazards

None

Labeling

Signal Word

DANGER



Hazard Statements

H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H302 - Harmful if swallowed
H373 - May cause damage to organs through prolonged or repeated exposure
H361 - Suspected of damaging fertility or the unborn child
H351 - Suspected of causing cancer
H290 - May be corrosive to metals

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
P281 - Use personal protective equipment as required
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
P363 - Wash contaminated clothing before reuse
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.
P406 - Store in a corrosion-resistant container.
P390 - Absorb spillage to prevent damage
P501 - Dispose of contents and container in accordance with applicable regulations.

5 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Component | CAS-No | Weight % |
|------------------------------|-----------|----------|
| Sodium nitrite | 7632-00-0 | 3-7 |
| Sodium metaborate, anhydrous | 7775-19-1 | 3-7 |
| Sodium sulfite | 7757-83-7 | 0.1-1 |
| Sodium hydroxide | 1310-73-2 | 0.1-1 |
| Phenolphthalein | 77-09-8 | 0.1-1 |

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. May cause sensitization of susceptible persons. |

5. FIRE-FIGHTING MEASURES

| | | | |
|--|---|-----------------------|----------------------|
| Flash Point | Does not flash | Method | Not applicable |
| Flammability Limits in Air % Hydrogen, by reaction with metals. | | Upper 75 | Lower 4 |
| 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. | | |
| 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. 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 | 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 container tightly closed in a dry 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 | 120 °F / 49 °C |
| 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, anhydrous | TWA: 2 mg/m ³ | No data available | No data available |
| Sodium sulfite | No data available | 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 |
| Phenolphthalein | No data available | No data available | No data available |

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

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 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 | Dark violet | Odor | Odorless |
| Odor Threshold | Not applicable | Appearance | Transparent |
| pH | 12.4 | Specific Gravity | 1.1 |
| Evaporation Rate | 0.53 (Butyl acetate=1) | Percent Volatile (Volume) | 94 |
| VOC Content (%) | 0 | VOC Content (g/L) | 0 |
| Vapor Pressure | 15.4 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, Acids, Alkali metals, Ammonia, Amines. |
| Hazardous Decomposition Products | Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Sulfur oxides, 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 | 1,531.12 |
| Dermal LD50 | No information available |
| Inhalation LC50 | |
| Gas | No information available |
| Mist | 101.85 |
| Vapor | 101.85 |

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

Severe irritation. May cause allergic skin reaction.

Inhalation

Harmful by inhalation. Causes burns. May cause allergic respiratory reaction. Methemoglobinemia. Blood disorder may occur after prolonged inhalation.

Ingestion

If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. May produce an allergic reaction. 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. May cause skin sensitization in some individuals. May cause respiratory sensitization in some individuals. Contains a known or suspected reproductive toxin. Contains a known or suspected carcinogen.

Target Organ Effects

Liver, Kidney, Spleen, Blood, Heart, Testes, Central nervous system, Immune system, Respiratory system, Eyes, Skin.

Aggravated Medical Conditions

Skin disorders, Respiratory disorders, Neurological disorders, Blood disorders, Liver disorders,

Kidney disorders, Heart disease.

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, anhydrous | no data available | no data available | no data available | no data available | no data available |
| Sodium sulfite | = 820 mg/kg (Rat) | no data available | > 22 mg/L (Rat) 1 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 |
| Phenolphthalein | no data available | no data available | 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, anhydrous | no data available | no data available | no data available | X | testes |
| Sodium sulfite | no data available | Skin sensitization, respiratory sensitization | no data available | no data available | Respiratory system, Immune system, CNS |
| Sodium hydroxide | no data available | no data available | no data available | no data available | eyes, respiratory system, skin |
| Phenolphthalein | no data available | no data available | no data available | no data available | lungs |

Carcinogenicity

| Component | ACGIH | IARC | NTP | OSHA | Other |
|------------------------------|----------------|----------------|------------------------|----------------|----------------|
| Sodium nitrite | not applicable | not applicable | not applicable | not applicable | not applicable |
| Sodium metaborate, anhydrous | not applicable | not applicable | not applicable | not applicable | not applicable |
| Sodium sulfite | not applicable | not applicable | not applicable | not applicable | not applicable |
| Sodium hydroxide | not applicable | not applicable | not applicable | not applicable | not applicable |
| Phenolphthalein | not applicable | Group 2B | Reasonably Anticipated | X | 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 metaborate, anhydrous | no data available | no data available | no data available | no data available | N/A |
| Sodium sulfite | no data available | LC50 220 - 460 mg/L Leuciscus idus 96 h | EC50 = 770 mg/L 17 h | 330: 24 h Psammechinus miliaris mg/L LC50 | -4 |
| Sodium hydroxide | no data available | LC50 = 45.4 mg/L Oncorhynchus mykiss 96 h | no data available | no data available | N/A |
| Phenolphthalein | 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

Corrosive liquid, basic, inorganic, n.o.s.

Hazard Class

8

UN-No

UN3266

Packing Group II
Reportable Quantity (RQ) Sodium Nitrite RQ = 1851.44 lbs
Description UN3266, Corrosive liquid, basic, inorganic,n.o.s.,(Sodium hydroxide), 8, PG II

TDG

Proper shipping name Environmentally hazardous substance, liquid, n.o.s
Hazard Class 8
UN-No UN3266
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
ERG Code 9L
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
EmS No. F-A, S-F
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 | 3-7 | 1.0 |
| Phenolphthalein | 77-09-8 | 0.1-1 | 0.1 |

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, anhydrous | Not applicable | Not applicable |
| Sodium sulfite | Not applicable | Not applicable |
| Sodium hydroxide | 1000 lb | Not applicable |
| Phenolphthalein | Not applicable | Not applicable |

16. OTHER INFORMATION

Prepared By Rachael Mohochi

Supersedes Date 09/06/2011

Issuing Date 04/10/2014

Reason for Revision No information available.

Glossary No information available.

List of References. No information available.

CHEMSEARCH FE DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage,

or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this document is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.