

1. PRODUCT AND COMPANY IDENTIFICATION

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

**Product Code** 0182  
**Chemical nature** Aqueous solution of alkali salts  
**Emergency Telephone Number**  
 CHEMTREC 1-800-424-9300

2. HAZARDS IDENTIFICATION

**Emergency Overview**

**WARNING**  
 Severe skin irritation  
 Severe eye irritation  
 May cause allergic skin reaction  
 May cause allergic respiratory reaction  
 May be harmful if inhaled  
 Harmful if swallowed

**Color** dark violet **Physical State** Liquid **Odor** Odorless  
**Potential Health Effects**  
**Principle Route of Exposure** Skin contact, Eye contact, Inhalation.  
**Primary Routes of Entry** Inhalation, Ingestion, Skin Absorption.  
**Acute Effects**  
**Eyes** Severe irritation.  
**Skin** Severe irritation. May cause allergic skin reaction.  
**Inhalation** Irritating to respiratory system. May cause allergic respiratory reaction. Methemoglobinemia. Blood disorder may occur after prolonged inhalation.  
**Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May produce an allergic reaction. Blood disorder may occur after ingestion. Components of the product create formation of methemoglobin.  
**Chronic Toxicity** The absorption of this product into the body may lead to the formation of methemoglobin that, in sufficient concentration, causes cyanosis. May cause sensitization of susceptible persons. Contains a known or suspected carcinogen. Liver and kidney injuries may occur.  
**Target Organ Effects** Liver, Kidney, Spleen, Blood, Heart, Bone Marrow, Respiratory system, Central Nervous System, Eyes, Skin.  
**Aggravated Medical Conditions** Skin disorders, Respiratory disorders, Neurological disorders, Blood disorders, Liver disorders, Kidney disorders, Heart disease.  
**Potential Environmental Effects** See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

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

4. FIRST AID MEASURES

**General Advice** Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.  
**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** 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  
**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 (CO2). 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** 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** 2 **Flammability** 1 **Instability** 0  
**HMIS** **Health** 2 **Flammability** 1 **Instability** 0

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Use personal protective equipment. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
<b>Environmental Precautions</b>	Do not flush into surface water or sanitary sewer system.
<b>Methods for Containment</b>	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).
<b>Methods for Cleaning Up</b>	Pick up and transfer to properly labeled containers.
<b>Neutralizing Agent</b>	Neutralize with hydrochloric acid.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.		
<b>Storage</b>	Store in original container. 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.		
<b>Storage Temperature</b>	<b>Minimum</b>	35 °F / 2 °C	<b>Maximum</b>
<b>Storage Conditions</b>	<b>Indoor</b>	X	<b>Outdoor</b>
			<b>Heated</b>
			120 °F / 49 °C
			<b>Refrigerated</b>

## 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 <sup>3</sup> STEL: 6 mg/m <sup>3</sup>	No data available	No data available
Sodium sulfite	No data available	No data available	No data available
Sodium hydroxide	Ceiling: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> Ceiling: 2 mg/m <sup>3</sup>
Phenolphthalein	No data available	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.

## 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. Remove and wash contaminated clothing before re-use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Liquid	<b>Viscosity</b>	Non viscous
<b>Color</b>	dark violet	<b>Odor</b>	Odorless
<b>Appearance</b>	Transparent	<b>pH</b>	12.4
<b>Specific Gravity</b>	1.1	<b>Evaporation Rate</b>	0.53 (Butyl acetate=1)
<b>Percent Volatile (Volume)</b>	94	<b>VOC Content (%)</b>	0
<b>VOC Content (g/L)</b>	0	<b>Vapor Pressure</b>	15.4 mmHg @ 70°F
<b>Vapor Density</b>	0.6 (Air = 1.0)	<b>Solubility</b>	Completely soluble
<b>Boiling Point/Range</b>	> 212 °F / 100 °C		

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable. Hazardous polymerization does not occur.
<b>Conditions to Avoid</b>	None known
<b>Incompatible Products</b>	Strong oxidizing agents, Acids, Alkali metals, Ammonia, Amines.
<b>Hazardous Decomposition Products</b>	Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Sulfur oxides.
<b>Possibility of Hazardous Reactions</b>	None under normal processing

## 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, anhydrous	= 2330 mg/kg ( Rat )	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 > 5.5 mg/L ( Rat ) 4 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

## 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, anhydrous	no data available	no data available	no data available	no data available	no data available
Sodium sulfite	no data available	Skin sensitization, respiratory sensitization	no data available	no data available	Respiratory system, Bone marrow, 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	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	LC50= 330 mg/L 24 h	-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** Environmentally hazardous substances, liquid, n.o.s.  
**Hazard Class** 9  
**UN-No** UN3082  
**Packing Group** III  
**Reportable Quantity (RQ)** 840 lbs  
**Description** Environmentally hazardous substances, liquid, n.o.s.(Sodium nitrite),9,UN3082,PG III; <840# not regulated

**TDG**

**Proper shipping name** Environmentally hazardous substance, liquid, n.o.s.  
**Hazard Class** 9  
**UN-No** UN3082  
**Packing Group** III  
**Description** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Sodium nitrite),9,UN3082,PG III; <840# not regulated

**ICAO**

**UN-No** UN3082  
**Proper Shipping Name** Environmentally hazardous substance, liquid, n.o.s.\*  
**Hazard Class** 9  
**Packing Group** III  
**Shipping Description** Environmentally hazardous substance, liquid, n.o.s.\*(Sodium nitrite),9,UN3082,PG III; <840# not regulated

**IATA**

**UN-No** UN3082  
**Proper Shipping Name** Environmentally hazardous substance, liquid, n.o.s.\*  
**Hazard Class** 9  
**Packing Group** III  
**ERG Code** 9L  
**Shipping Description** UN3082,Environmentally hazardous substance, liquid, n.o.s.\*(Sodium nitrite),9,PG III; <840# not regulated

**IMDG/IMO**

**Proper Shipping Name** Environmentally hazardous substance, liquid, n.o.s.  
**Hazard Class** 9  
**UN-No** UN3082  
**Packing Group** III  
**EmS No.** F-A, S-F  
**Shipping Description** UN3082, Environmentally hazardous substance, liquid, n.o.s.(Sodium nitrite),9,PG III; <840# not regulated

## 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 40n 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

## 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

D2A Very toxic materials, D2B Toxic materials.



## 16. OTHER INFORMATION

Prepared By Rachael Mohochi  
Supersedes Date 09/25/2008  
Issuing Date 09/06/2011  
Reason for Revision No information available.  
Glossary No information available.  
List of References. No information available.

**CHEMSEARCH 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 MSDS 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.