Safety Data Sheet: CHEMSEARCH 777 PLUS

Supercedes Date 07/12/2016 **Issuing Date** 05/23/2018

1. PRODUCT AND COMPANY IDENTIFICATION

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

Product Code C360
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** Sweet

GHS Classification

Physical Hazards

Corrosive to Metals	Category 1

Health Hazard

Acute Oral Toxicity	Category 4
Skin Corrosion/Irritation	Category 1
Serious Eye Damage/Eye Irritation	Category 1
Respiratory Sensitization	Category 1
Reproductive Toxicity	Category 2
Carcinogenicity	Category 2

Other hazards
None

Labeling
Signal Word
DANGER

Hazard statements
H314 - Causes severe skin burns and eye damage
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H302 - Harmful if swallowed
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.
P285 - In case of inadequate ventilation wear respiratory protection
P260 - Do not breathe mist
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.
P333 + P313 - If skin irritation or rash occurs, get medical attention
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.
P390 - Absorb spillage to prevent damage.
P406 - Store in a corrosion-resistant container.
P501 - Dispose of contents and container in accordance with applicable local regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight %
Sodium nitrite	7632-00-0	3-7
Sodium tetraborate	1330-43-4	1-5
Sodium hydroxide	1310-73-2	0.1-1.0
Sodium sulfite	7757-83-7	0.1-1.0
Phenolphthalein	77-09-8	0.1-1.0

*The exact percentage (concentration) of composition has been withheld as a trade secret

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. May cause sensitization by inhalation. 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** No data available

Flammability Limits in Air %: Hydrogen, by reaction with metals. **Upper:** 75 **Lower:** 4

Suitable Extinguishing Media

Water spray. Carbon dioxide (CO2). 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, NOHSC (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** 40 °F / 4 °C **Maximum** 120 °F / 49 °C

Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH
Sodium tetraborate	TWA: 2 mg/m^3 inhalable fraction STEL: 6 mg/m^3	No data available	TWA: 1 mg/m^3
Sodium hydroxide	Ceiling: 2 mg/m^3	TWA: 2 mg/m^3	10 mg/m^3

			Ceiling: 2 mg/m^3

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**	Sweet
Odor Threshold	Not applicable	**Appearance**	Transparent
pH	12	**Specific Gravity**	1.084
Evaporation Rate	0.55 (Butyl acetate=1)	**Percent Volatile (Volume)**	94.4
VOC Content (%)	0	**VOC Content (g/L)**	0
Vapor Pressure	15.75 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	No data available	**Flammability (solid, gas)**	No data available
Flash Point	Does not flash	**Method**	No data available
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, Reducing agents, Combustible material, Nitrates, Organic materials.
Decomposition Temperature No data available
Hazardous Decomposition Products Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Sulfur oxides, Hydrogen, by reaction with metals, Sodium oxides, Metal oxides.
Possibility of Hazardous Reactions None under normal processing.

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD50 No information available
Dermal LD50 No information available
Inhalation LC50

- **Gas** No information available
- **Mist** No information available
- **Vapor** No information available

Principle Route of Exposure Skin contact, Eye contact, Inhalation.
Primary Routes of Entry Skin contact, Ingestion, Skin Absorption.
Acute Effects:

- **Eyes** Corrosive to the eyes and may cause severe damage including blindness.
- **Skin** Causes severe skin burns.
- **Inhalation** Causes burns. May cause sensitization by inhalation. Methemoglobinemia. Blood disorder may occur after prolonged inhalation.
- **Ingestion** Harmful if swallowed. If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Blood disorder may occur after ingestion. Components of the product create formation of methemoglobin. May produce an allergic reaction.

Chronic Toxicity Inhaled corrosive substances can lead to a toxic edema of the lungs. Liver and kidney injuries may occur. Contains a known or suspected reproductive toxin. Contains a known or suspected carcinogen.
Target Organ Effects Liver, Kidney, Spleen, Blood, Heart, Central nervous system, Respiratory system, Eyes, Skin, Immune system.
Aggravated Medical Conditions Skin disorders, Respiratory disorders, Neurological disorders, Blood disorders, Liver

disorders, Kidney disorders, Heart disease.

Component Information

Acute Toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50	Draize Test	Other
Sodium nitrite 7632-00-0	= 85 mg/kg (Rat)	no data available	= 5.5 mg/L (Rat) 4 h	No data available	No data available
Sodium tetraborate 1330-43-4	= 2660 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	No data available	No data available	No data available
Sodium hydroxide 1310-73-2	No data available	= 1350 mg/kg (Rabbit)	No data available	No data available	No data available
Sodium sulfite 7757-83-7	= 820 mg/kg (Rat)	no data available	> 22 mg/L (Rat) 1 h	No data available	No data available

Chemical Name	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Sodium tetraborate 1330-43-4	No data available	No data available	No data available	X	Skin; Eyes; Respiratory system
Sodium hydroxide 1310-73-2	No data available	No data available	No data available	No data available	Skin; Eyes; Respiratory system
Sodium sulfite 7757-83-7	No data available	respiratory sensitization	No data available	No data available	Immune system
Phenolphthalein 77-09-8	No data available	No data available	No data available	X	No data available

Carcinogenicity

Chemical Name	ACGIH	IARC	NTP	OSHA	Other
Sodium sulfite 7757-83-7	not applicable	Group 3	not applicable	not applicable	not applicable
Phenolphthalein 77-09-8	not applicable	Group 2B	Reasonably Anticipated	X	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Crustacea	Partition coefficien
Sodium nitrite	No information available.	LC50 = 0.19 mg/L Oncorhynchus mykiss 96 h 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 = 2.3 mg/L Pimephales promelas 96 h LC50 = 20 mg/L Pimephales promelas 96 h	No information available	No information available.	-3.7
Sodium tetraborate	EC50 = 158 mg/L Desmodesmus subspicatus 96 h EC50 2.6 - 21.8 mg/L Pseudokirchneriella subcapitata 96 h	LC50 = 340 mg/L Limanda limanda 96 h	No information available	1085 - 1402: 48 h Daphnia magna mg/L LC50	N/A
Sodium hydroxide	No information available.	LC50 = 45.4 mg/L Oncorhynchus mykiss 96 h	No information available	No information available.	N/A
Sodium sulfite	No information available.	No information available.	EC50 = 770 mg/L 17 h	No information available.	-4

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	Corrosive liquid, basic, inorganic, n.o.s.
Hazard Class	8
UN-No	UN3266
Packing Group	II
Description	UN3266, Corrosive liquid, basic, inorganic,n.o.s.,(Sodium hydroxide), 8, PG 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
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:

Chemical Name	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

See Section 2

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA EHS RQs
Sodium nitrite	100 lb	Not applicable
Sodium hydroxide	1000 lb	Not applicable

16. OTHER INFORMATION

Prepared By	Adrienne McKee
Supercedes Date	07/12/2016
Issuing Date	05/23/2018
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.