



Safety Data Sheet

Issue Date: 16-Jun-2002

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Version 1

1. IDENTIFICATION

Product Identifier

Product Name Sodium Hypochlorite Solution

Other means of identification

SDS # BDS-004

UN/ID No UN1791

Recommended use of the chemical and restrictions on use

Recommended Use Bleach.

Details of the supplier of the safety data sheet

Supplier Address

Bi-State Detergent Systems, Inc
3207 Bear Tooth Court
Bettendorf, IA 52722

Emergency Telephone Number

Company Phone Number 1-563-355-6269 (Phone)

1-563-355-6607 (Fax)

Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)

1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Colorless liquid

Physical State Liquid

Odor Chlorine

Classification

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

Signal Word

Danger

Hazard Statements

Causes severe skin burns and eye damage

**Precautionary Statements - Prevention**

Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Immediately call a poison center or doctor/physician
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a poison center or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a poison center or doctor/physician
IF SWALLOWED: rinse mouth. Do NOT induce vomiting
Immediately call a poison center or doctor/physician

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Very toxic to aquatic life with long lasting effects
Very toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Sodium hypochlorite	7681-52-9	7-13

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES**First Aid Measures****General Advice**

Immediately call a poison center or doctor/physician.

Eye Contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

Skin Contact

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. DO NOT attempt to neutralize with chemical agents. Seek medical attention.

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If conscious and alert, wash mouth and nasal passages with water repeatedly. If breathing is difficult, give oxygen. Immediately call a poison center or doctor/physician.

Ingestion

IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Drink large amounts of water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, keep head below hips to prevent aspiration and monitor breathing. Seek medical attention immediately.

Most important symptoms and effects**Symptoms**

Causes severe skin burns and eye damage. Blindness may occur. May cause irritation to the mucous membranes and upper respiratory tract. Prolonged or repeated overexposure by inhalation may cause pneumonia, lung damage, damage to the respiratory system, even death. Ingestion may cause severe irritation, tissue ulceration, gastrointestinal damage, circulatory collapse, convulsions, coma, even death. Overexposure may aggravate pre-existing disorders of the eyes, skin and respiratory system.

Indication of any immediate medical attention and special treatment needed**Notes to Physician**

Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Water. Water spray (fog).

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Non-flammable. Product will not burn. May intensify fire; oxidizer. Product is an oxidizer. It may react vigorously with organics or other materials resulting in an explosion and fire.

Hazardous Combustion Products May emit toxic fumes under fire 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. Prevent human exposure to fire, fumes, smoke and products of combustion. Evacuate non-essential personnel.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal Precautions**

Use personal protective equipment as required. Evacuate unnecessary personnel. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Environmental Precautions

See Section 12 for additional Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up**Methods for Containment**

Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up

Recover free liquid. To clean up residue, add reducing agents such as bisulfites or ferrous salt solutions. Some heat will be produced. Maintain pH on alkaline side (>7.5) and dilute with large quantities of water. For spills in excess of allowable limits refer to CERCLA 40 CFR 302 for detailed instructions.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling

Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed and store in a cool, dry and well-ventilated place. Store locked up. Protect from direct sunlight. Keep away from heat. Separate from oxidizing materials, metallic powders and other easily oxidized organic materials and reducing agents. Product is an oxidizer. It may react vigorously with organics or other materials resulting in an explosion and fire. CAUTION - material is corrosive. Keep out of the reach of children.

Incompatible Materials

Amphoteric metals. Copper, zinc, aluminum, and their alloys. Brass. Strong reducing agents. Hydrogen. Hydrazine. Sulfides. sulfites. Nitrites. Organic acids. Inorganic acids. Organic bases. Hydrocarbons. Organic mixtures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas. Use mechanical ventilation. Local exhaust is required. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Wear chemical tight goggles and full face shield.

Skin and Body Protection

Neoprene, butyl or nitrile rubber gloves with cuffs. Coveralls, apron or other equipment should be worn to minimize skin contact.

Respiratory Protection

In case of inadequate ventilation or risk of inhalation of vapors, use suitable respiratory equipment. For emergencies, a NIOSH/MSHA approved positive pressure breathing apparatus should be readily available.

General Hygiene Considerations Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Chlorine
Appearance	Colorless liquid	Odor Threshold	Not determined
Color	Colorless		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	12.0		
Melting Point/Freezing Point	Not determined		
Boiling Point/Boiling Range	100 °C / 212 °F		
Flash Point	Non-flammable		
Evaporation Rate	< 1	(Water = 1)	
Flammability (Solid, Gas)	Liquid-not applicable		
Upper Flammability Limits	Not applicable		
Lower Flammability Limit	Not applicable		
Vapor Pressure	17 mmHg	@ 20 C	
Vapor Density	>1	(Air=1)	
Specific Gravity	1.200	(1=Water)	
Water Solubility	Completely soluble		
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Auto-ignition Temperature	Not determined		
Decomposition Temperature	Not determined		
Kinematic Viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Product is an oxidizer. It may react vigorously with organics or other materials resulting in an explosion and fire		
Oxidizing Properties	May cause fire or explosion; strong oxidizer		

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Product is an oxidizer. It may react vigorously with organics or other materials resulting in an explosion and fire.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Keep out of reach of children. Contact with incompatible materials.

Incompatible Materials

Amphoteric metals. Copper, zinc, aluminum, and their alloys. Brass. Strong reducing agents. Hydrogen. Hydrazine. Sulfides. sulfites. Nitrites. Organic acids. Inorganic acids. Organic bases. Hydrocarbons. Organic mixtures.

Hazardous Decomposition Products

Decomposition will not occur if handled and stored properly. In case of fire, oxides of carbon, hydrocarbons, fumes or vapors, and smoke may be produced. Chlorine.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Causes severe eye damage.
Skin Contact	Causes severe skin burns.
Inhalation	Avoid breathing vapors or mists.
Ingestion	Do not taste or swallow.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
Sodium hypochlorite 7681-52-9	= 8200 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	-

Information on physical, chemical and toxicological effects

Symptoms	Please see section 4 of this SDS for symptoms.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen. However, the product as a whole has not been tested.
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Chemical Name	ACGIH	IARC	NTP	OSHA
Sodium hypochlorite 7681-52-9		Group 3		

IARC (International Agency for Research on Cancer)

Group 3 IARC components are "not classifiable as human carcinogens"

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium hypochlorite 7681-52-9	0.095: 24 h <i>Skeletonema costatum</i> mg/L EC50	0.06 - 0.11: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 4.5 - 7.6: 96 h <i>Pimephales promelas</i> mg/L LC50 static 0.4 - 0.8: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 0.28 - 1: 96 h <i>Lepomis macrochirus</i> mg/L LC50 flow-through 0.05 - 0.771: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through 0.03 - 0.19: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 semi-static 0.18 - 0.22: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static		2.1: 96 h <i>Daphnia magna</i> mg/L EC50 0.033 - 0.044: 48 h <i>Daphnia magna</i> mg/L EC50 Static

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Not considered mobile

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods****Disposal of Wastes**

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION**Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No	UN1791
Proper Shipping Name	Hypochlorite solutions
Hazard Class	8
Packing Group	II

IATA

UN/ID No	UN1791
Proper Shipping Name	Hypochlorite solutions
Hazard Class	8
Packing Group	II

IMDG

Proper Shipping Name	Hypochlorite solutions
Hazard Class	8
Packing Group	II

15. REGULATORY INFORMATION**International Inventories**

Not determined

US Federal Regulations**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium hypochlorite 7681-52-9	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

SARA 311/312 Hazard Categories

Not determined

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hypochlorite 7681-52-9 (7-13)	100 lb			X

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Sodium hypochlorite 7681-52-9	X	X	X

16. OTHER INFORMATION**NFPA****Health Hazards**

Not determined

Flammability

Not determined

Instability

Not determined

Special Hazards

Not determined

HMIS**Health Hazards**

2

Flammability

0

Physical Hazards

2

Personal Protection

Not determined

Issue Date:

16-Jun-2002

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15-Aug-2013

Revision Note:

New format

Disclaimer

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet