SAFETY DATA SHEET SS099

1. IDENTIFICATION

Product Name:	**Sodium Hypochlorite**
Synonyms:	Bleach, hypochlorite solution, SUPERCHLOR, SUPERCHLOR SHOCK, NaOCl
CAS Number:	7681-52-9
Product Use:	Sanitation/disinfection in potable water, swimming pool chlorination, wastewater treatment, institutional and industrial cleaners, paper and textile manufacture.
Manufacturer/Supplier:	Slack Chemical Co., Inc 465 South Clinton St. Carthage, NY 13619 800.479.0430

Transportation Emergency Number: CHEMTREC: 800.424.9300

2. HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards	Corrosive to metals	Category 1
Health Hazards	Skin corrosion/irritation	Category 1
	Eye damage/irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3
Environmental Hazards	Hazardous to aquatic environment, acute	Category 1
	Hazardous to aquatic environment, chronic	Category 2

GHS Label Elements

Signal Word: **DANGER!**

Hazard Statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements

P234	Keep only in original packaging.

P260	Do not breathe dusts or mists.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301/330/331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303/361/353	IF ON SKIN: Take of immediately all contaminated clothing. Rinse skin with water.
P304/340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305/351/338	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 POISON CENTER or doctor.
P312	Call a POISON CENTER or doctor if you fell unwell.
P321	Specific treatment (see first aid section).
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material-damage.
P391	Collect spillage.
P403/233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.
P501	Dispose of contents in accordance with local/regional/national/international regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	Weight %
Sodium Hypochlorite	7681-52-9	10 - 20
Sodium Hydroxide	1310-73-2	< 2

4. FIRST AID MEASURES

Inhalation: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice. Have the product container or label with you when calling a poison control center, doctor, or going for treatment.

Eye: Hold eyelid(s) open and rinse slowly and gently with water for 15 – 20 minutes. Remove contact lenses, if present, after the first 5 minutes and then continue rinsing. Call a poison control center or doctor for treatment advice.

Skin: Take off contaminated clothing and rinse skin immediately with plenty of water for 15 – 20 minutes. Call a poison control center or doctor for treatment advice. Discard contaminated clothing or launder before reuse.

Ingestion: Call a poison control center or doctor immediately for treatment advice. Have affected person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water fog, foam, dry chemical powder or carbon dioxide.

Fire Fighting Procedures: In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Unusual Fire and Explosion Hazards: No unusual fire or explosion hazards noted.

Combustion Products: During fire, gases hazardous to health may be formed. Contact with combustibles may initiate or promote combustion. Acid and heat accelerate decomposition. Decomposition products may include chlorine gas.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Absorb spillage to prevent material damage. Local authorities should be advised if significant spillages cannot be contained.

Environmental Precautions: Do not discharge into drains, water courses or onto the ground. Environmental manager must be informed of all major releases.

Methods and Materials for Containment and Cleaning Up: Large Spills: Stop the flow of material, if can be done without risk. Dike the spilled material, where possible. Absorb in vermiculite, dry sand or earth and place into suitable containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Wear appropriate personal protective equipment. Do not get in eyes, on skin, on clothing. Use with adequate ventilation. Observe good industrial hygiene practices. Do not apply heat or direct sunlight. Temperature and product concentration affect product quality and decomposition rates.

Conditions for Safe Storage, Including Any Incompatibilities: Keep container tightly closed. Store in a cool and well-ventilated place. Store in a corrosive resistant container. Consult container manufacturer for additional guidance. Store away from and do not mix with incompatible materials such as acids, oxidizers, organics, reducing agents, and all metals except titanium.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters:

Component	OSHA PEL-TWA	ACGIH TLV-TWA
Sodium Hydroxide (CAS 1310-73-2)	2 mg/m^3	2 mg/m^3 (Ceiling)

Engineering Controls: Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Personal Protective Equipment (PPE)

Eye/Face Protection: Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

Skin Protection: Wear appropriate chemical resistant gloves. Wear appropriate chemical resistant clothing. Reports indicate that sodium hypochlorite can react with various fabrics usually increasing with concentration. Reactions vary significantly depending on strength of chemical, material, fabric treatment and color of dyes. Poly blend fabrics have a weaker response than natural fibers. Contact the Personal Protective Equipment manufacturer for specific information about their products.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits or to an acceptable level, an approved respirator must be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid, clear, yellow-green
Odor	Chlorine
Odor threshold	0.9 mg/m^3
pH	> 12
Melting/freezing point	-24°C (-11°F)
Boiling point	104°C (219°F)
Flash point	Not applicable
Evaporation rate	Not available
Flammability	Not applicable
Upper/lower flammability limits	Not applicable
Vapor pressure	12 mmHg (20°C)
Vapor density	Not available
Relative density	1.18 – 1.24
Solubility	100% (water)
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not applicable
Viscosity	Not available

10. STABILITY AND REACTIVITY

Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical Stability: Material is stable under normal conditions. Stability decreases with increased concentration, low pH as well as exposure to heat, sunlight, and contamination with heavy metals such as, but not limited to; nickel, copper, cobalt and iron.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur.

Conditions to Avoid: Contact with incompatible materials. Avoid ultraviolet (UV) light sources and excessive heat. Reacts violently with strong acids. Acid contact will produce chlorine gas. Amine contact will produce chloramines.

Incompatible Materials: Strong oxidizing agents, acids, metals, organic compounds and ammonia.

Hazardous Decomposition Products: Hypochlorous acid, chlorine, and hydrochloric acid. Composition depends upon temperature and decrease in pH. Additional decomposition products, which depend upon temperature, pH and time, are sodium chlorate and oxygen.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.

Inhalation: Vapors and spray mist may irritate throat and respiratory system and cause coughing.

Skin Contact: Causes skin burns.

Eye Contact: Causes eye burns.

Symptoms Related to Physical, Chemical and Toxicological Characteristics: Corrosive effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Acute Toxicity Values:

Component	Route	Species	Value
Sodium Hypochlorite (CAS 7681-52-9)	Dermal LD_{50}	Rabbit	> 2 g/kg
	Oral LD_{50}	Rat	3 – 5 g/kg
Sodium Hydroxide (CAS 1310-73-2)	Dermal LD_{50}	Rabbit	> 2 g/kg
	Oral LD_{50}	Rat	300 – 500 mg/kg

Skin Corrosion/Irritation: Causes severe skin burns.

Serious Eye Damage/Irritation: Causes severe eye damage.

Respiratory or Skin Sensitization: Not available.

Germ Cell Mutagenicity: Not available.

Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive Toxicity: Not available.

Specific Target Organ Toxicity (STOT) – Single Exposure: May cause respiratory irritation.

Specific Target Organ Toxicity (STOT) – Repeated Exposure: No available.

Aspiration Hazard: Not classified, however droplets of the product may be aspirated into the lungs through ingestion or vomiting and may cause a serious chemical pneumonia.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Component	Species	Value	
Sodium Hypochlorite (CAS 7681-52-9)	Fathead minnow *(Pimephales promelas)*	5.9 mg/L	(LC_{50}-96 hr)
	Water flea *(Ceriodaphnia dubia)*	0.05 mg/L	(LC_{50}-24 hr)
Sodium Hydroxide (CAS 1310-73-2)	Brook trout *(Salvelinus fontinalis)*	25 mg/L	(LC_{50}-NR)
	Water flea *(Ceriodaphnia dubia)*	40.4 mg/L	(EC_{50}-48 hr)

Persistence/Degradability: Not available.

Bioaccumulation: Not available.

Soil Mobility: Not available.

Other Adverse Affects: No other adverse environmental effects are expected from this component.

13. DISPOSAL CONSIDERATIONS

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container may need to be disposed of as hazardous waste. Do not allow this material to drain into sewers or water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents and container in accordance with local, regional, national and/or international regulations. Empty containers should be taken to an approved waste handling site

for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

U.S. Department of Transportation (DOT)

UN/NA Number:	UN 1791
Proper Shipping Name:	Hypochlorite solutions
Hazard Class:	8
Packing Group:	PG III
Marine Pollutant:	No
Labels Required:	Corrosive
Reportable Quantity:	100 lb
Exemption(s):	49 CFR 173.154 – Quantities not over 1.3 gallons

15. REGULATORY INFORMATION

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants:
Sodium Hypochlorite (CAS 7681-52-9) – No
Sodium Hydroxide (CAS 1310-73-2) – No

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention 40 CFR 68.130:
Sodium Hypochlorite (CAS 7681-52-9) – No
Sodium Hydroxide (CAS 1310-73-2) – No

Clean Water Act (CWA) 40 CFR 401.15:
Sodium Hypochlorite (CAS 7681-52-9) – No
Sodium Hydroxide (CAS 1310-73-2) – No

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 40 CFR 302.4:
Sodium Hypochlorite (CAS 7681-52-9) – Yes
Sodium Hydroxide (CAS 1310-73-2) – Yes

SARA Section 302 Extremely Hazardous Substance 40 CFR 355:
Sodium Hypochlorite (CAS 7681-52-9) – No
Sodium Hydroxide (CAS 1310-73-2) – No

SARA Section 311/312 40 CFR 370:
Sodium Hypochlorite (CAS 7681-52-9) – Yes
Sodium Hydroxide (CAS 1310-73-2) – Yes

SARA Section 313 40 CFR 372:
Sodium Hypochlorite (CAS 7681-52-9) – No
Sodium Hydroxide (CAS 1310-73-2) – No

Toxic Substances Control Act (TSCA):
Sodium Hypochlorite (CAS 7681-52-9) – Yes
Sodium Hydroxide (CAS 1310-73-2) – Yes

Canadian Environmental Protection Act, Domestic Substance List (CEPA-DSL):
Sodium Hypochlorite (CAS 7681-52-9) – Yes
Sodium Hydroxide (CAS 1310-73-2) – Yes

California Proposition 65:

Sodium Hypochlorite (CAS 7681-52-9) – No
Sodium Hydroxide (CAS 1310-73-2) – No

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA):

EPA Reg. No. 59074-20001

16. OTHER INFORMATION

HMIS RATINGS		NFPA RATINGS	
Health	2	Health	2
Flammability	0	Flammability	0
Reactivity	2	Reactivity	2

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