



## Standard Operating Procedure (SOP)



### SODIUM HYPOCHLORITE (BLEACH)

Effective Date: 8/23/2013

Revised Date: 8/23/2022

#### Introduction

This SOP applies to SODIUM HYPOCHLORITE (BLEACH).

#### Potential Hazards

- Causes severe skin burns and eye damage.
- Incompatibilities: Strong acids, Organic materials, powdered metals.
- Reacts violently with ammonium salts, aziridine, methanol, and phenylacetonitrile, sometimes resulting in explosions.
- Reacts with primary aliphatic or aromatic amines to form explosively unstable n-chloroamines.
- Reaction with formic acid becomes explosive at 55°C.

#### Health Hazards

##### HEALTH HAZARD INFORMATION



Signal word: **Danger**

Hazard statement(s):

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.  
H272 May intensify fire; oxidiser.

#### Personal Protective Equipment

##### EYE PROTECTION

Safety glasses with side shields are appropriate for situations where there is no risk of fumes or vapors. In cases where fumes or vapors may be present, safety goggles must be worn, as these provide much better protection against these hazards.

##### HAND PROTECTION

Nitrile gloves generally provide the best overall protection for the widest range of chemicals. Charts with breakthrough times are available from each manufacturer and are usually located on their website. Neoprene gloves offer greater protection than Nitrile gloves, and should be used when working with concentrated, highly corrosive or toxic materials.

##### LAB COATS

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Button lab coats, closed toed shoes, long pants and long sleeved clothing shall be worn when handling SODIUM HYPOCHLORITE. Protective clothing shall be worn to prevent any possibility of skin contact with SODIUM HYPOCHLORITE.

#### WORK PRACTICES

- ALWAYS check the Safety Data Sheet of a chemical/agent before mixing it with bleach to ensure compatibility.
- NEVER mix bleach with an unknown liquid or unknown residue.
- Do not mix bleach with any compound that is incompatible with oxidizers.

#### Special Handling Procedures and Storage Requirements

##### PROPERTIES



Liquid. Mixes with water. Corrosive. Increases fire risk. Contact with combustible material may cause fire.

##### SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



**X** — Must not be stored together

**O** — May be stored together with specific preventions

**+** — May be stored together

Additional Lab Specific Special Handling/Storage Procedures

#### Waste Disposal

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Chemicals shall not be drain disposed unless prior approval is given by EHS.

Excess SODIUM HYPOCHLORITE and all waste material containing SODIUM HYPOCHLORITE must be placed in a container labeled with the following **“HAZARDOUS WASTE SODIUM HYPOCHLORITE”**, AND THE FULL CHEMICAL NAME.

Contact EHS at x3427 for hazardous waste removal.

#### Emergency Numbers

Fire and Medical Emergencies	x5911 (911 on cell phone)
Environmental Health and Safety	x3427
FastMed Urgent Care (employees)	(336) 714-4616
Student Health (students only)	x5218
Poison Control	800-222-1222

#### First Aid

##### INGESTION

- For advice, contact a Poisons Information Center or a doctor at once.
- Urgent hospital treatment is likely to be needed.
- **If swallowed do NOT induce vomiting.**
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Transport to hospital or doctor without delay.

##### EYE CONTACT

If this product comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Center or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

##### SKIN CONTACT

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If skin or hair contact occurs:

- Immediately flush body and clothes with large amounts of water, using safety shower if available.
- Quickly remove all contaminated clothing, including footwear.
- Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Center.
- Transport to hospital, or doctor.

#### **INHALATION**

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.
- Inhalation of vapors or aerosols (mists, fumes) may cause lung oedema.
- Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs).
- As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.
- Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered.

#### **Spill and Accident Procedures**

Do NOT absorb spillage in combustibles. Absorb with dry agent. Dilute with water. Stop leak if safe to do so. Use only in well ventilated areas. Dispose of this material and its container at hazardous or special waste collection point. This material and its container must be disposed of in a safe way. To clean the floor and all objects contaminated by this material, use water.

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