NJ Health New Jersey Department of Health

Right to Know Hazardous Substance Fact Sheet

Emergency Responders Quick Reference

Common Name: **SODIUM HYPOCHLORITE**

Synonyms: Clorox; Liquid Bleach; Sodium Oxychloride
CAS No: 7681-52-9
Molecular Formula: NaOCl
RTK Substance No: 1707
Description: Clear, slightly yellow or green liquid with a strong *Chlorine* odor

HAZARD DATA

Hazard Rating

3 - Health

0 - Fire

0 - Reactivity

DOT#: UN 1791

ERG Guide #: 154

Hazard Class: 8 (Corrosive)

Firefighting

Sodium Hypochlorite is not combustible but is a STRONG OXIDIZER which enhances the combustion of other substances.

Use dry chemical, CO_2, water spray or foam as extinguishing agents.

POISONOUS GASES ARE PRODUCED IN FIRE, including *Sodium Oxide* and *Chlorine*.

Use water spray to keep fire-exposed containers cool.

Sodium Hypochlorite may ignite combustibles (wood, paper and oil).

Reactivity

Sodium Hypochlorite may react violently or explosively with STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC); ACID COMPOUNDS (such as ALUMINUM CHLORIDE, FERRIC CHLORIDE and ALUM); ACID-BASED CLEANING COMPOUNDS (such as BRICK and CONCRETE CLEANERS); and AMMONIA COMPOUNDS (such as AMMONIUM HYDROXIDE, AMMONIUM CHLORIDE and QUATERNARY AMMONIUM SALTS) to release *Chlorine* and other toxic gases.

Sodium Hypochlorite may react violently with ORGANIC MATERIALS (such as SOLVENTS, FUELS, ALCOHOLS, GLYCOLS and INSECTICIDES); AMINES; and ORGANIC POLYMERS to form *Chlorinated Organic compounds*, explosive compounds and *Chlorine gas*.

Sodium Hypochlorite is not compatible with HYDROGEN PEROXIDE and METALS (such as COPPER, NICKEL, COBALT and IRON), and should not be handled in equipment or piping containing STAINLESS STEEL, ALUMINUM, CARBON STEEL or OTHER COMMON METALS. The reaction may release *Oxygen gas* and can cause container rupture.

The reaction of **Sodium Hypochlorite** and REDUCING AGENTS (such as SODIUM BISULFITE and SODIUM THIOSULFATE) gives off heat.

SPILL/LEAKS

Isolation Distance:

Small Spill: 30 meters (100 feet)

Large Spill: 100 meters (300 feet)

Fire: 800 meters (1/2 mile)

Neutralize with *Sodium Bisulfite,* cover with *Soda Ash* and place into covered containers for disposal or wash with plenty of water.

DO NOT wash into sewer.

Sodium Hypochlorite is toxic to aquatic organisms.

PHYSICAL PROPERTIES

Odor Threshold:	*Chlorine*-like
Flash Point:	Noncombustible
Specific Gravity:	1.1, 5% solution (water = 1)
Water Solubility:	Soluble
Boiling Point:	Decomposes
Molecular Weight:	74.4
pH:	10.8 to 11.4 (5.25% solution in water)

EXPOSURE LIMITS

NIOSH:	0.5 ppm, 15-min Ceiling (as *Chlorine*)
AIHA:	2 mg/m^3, 15-min WEEL
IDLH:	30 ppm (as *Chlorine*)

PROTECTIVE EQUIPMENT

Gloves:	Butyl, Nitrile, Neoprene, Natural Rubber and Viton (>8-hr breakthrough for 30 to 70% solutions)
Coveralls:	Tychem® SL, CPF 3, Responder®; Zytron® 300; and ONESuit® TEC (>8-hr breakthrough for 30 to 70% solutions)
Respirator:	>2 mg/m^3 - full facepiece APR with Acid gas cartridge and N100 prefilters >20 mg/m^3 or >5 ppm *Chlorine* - Supplied air

HEALTH EFFECTS

Eyes:	Irritation, burns and possible eye damage
Skin:	Severe irritation, burns, rash and blisters
Inhalation:	Nose, throat and lung irritation, with coughing and severe shortness of breath (Pulmonary edema)
	Headache, dizziness, nausea and vomiting

FIRST AID AND DECONTAMINATION

Remove the person from exposure.

Flush eyes with large amounts of water for at least 30 minutes. Remove contact lenses if worn. Seek medical attention immediately.

Quickly remove contaminated clothing and wash contaminated skin with large amounts of water. Seek medical attention.

Begin artificial respiration if breathing has stopped and CPR if necessary.

Transfer promptly to a medical facility.

Medical observation is recommended as symptoms may be delayed.