

MATERIAL SAFETY DATA SHEET

SODIUM HYPOCHLORITE

I. PRODUCT IDENTIFICATION

MANUFACTURER'S NAME
Alexander Chemical Corporation
1211 W. 22nd St., Oak Brook, IL 60521
CHEMICAL NAME *Sodium Hypochlorite*
CHEMICAL FAMILY *Oxidizing Agent (Hypochlorite)*
CAS No. 7681-52-9
SHIPPING NAME AND HAZARD CLASS - (DOT)

REGULAR TELEPHONE No. (312) 986-1650
EMERGENCY TELEPHONE No. (312) 986-1650
TRADE NAME AND SYNONYMS *Javel Water Bleach, Soda Bleach*
FORMULA *NaOCl*
MOLECULAR WEIGHT 74.45

- A. "Hypochlorite solution containing more than 7% available chlorine by weight."
- Corrosive Material
B. "Hypochlorite solution containing not more than 7% available chlorine by weight." - ORM-B

II. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT

Sodium hypochlorite is manufactured only in solution form. "Household bleach" contains not more than 7% available chlorine (= 6.67 wt. % NaOCl) with about 0.3 to 0.5% excess NaOH for stability control. Industrial bleach contains from 7% - 15% available chlorine (6.67 - 13.06 weight % NaOCl) with about 0.05 to 0.85% excess NaOH for stability control.

III. PHYSICAL DATA

BOILING POINT 110° C for 15% NaOCl

SPECIFIC GRAVITY 50 gpl - 1.08
(H₂O = 1) 100 gpl - 1.14
140 gpl - 1.21

VAPOR PRESSURE v.p. of water plus decomposition product v.p.

VAPOR DENSITY NA

% VOLATILE BY VOLUME Variable - Water vapor plus products of decomposition.

SOLUBILITY IN WATER Complete

PH Approximately 12

EVAPORATION RATE NA

COLOR Light Yellow-Green

CHEMICAL FAMILY Oxidizing Agent

ODOR Pungent like chlorine

IV. FIRE AND EXPLOSION DATA

FLASHPOINT

Nonflammable

SPECIAL FIRE FIGHTING PROCEDURES

Avoid fumes from spilled or exposed liquid, dilute copiously, ventilate, and be prepared to use respiratory protection if needed. Acid contamination will produce very irritating fumes similar to chlorine gas.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Bleach decomposes when heated; decomposition products may cause containers to rupture or explode. Vigorous reaction possible with organic materials or oxidizing agents; may result in a fire.

V. HEALTH HAZARD INFORMATION

HEALTH HAZARD DATA
INHALATION

Fumes from spills are very irritating to mucous membranes. Very little hazard from properly stored solution.

SKIN CONTACT

Irritant, reddening of skin, skin damage.

EYE CONTACT

Severe irritation.

INGESTION

Causes irritation of membranes of the mouth, throat, and stomach pain and possible ulceration. LD₅₀ (oral, rat) for 5.25% NaOCl is approximately 13g/kg body weight and for 12.5% NaOCl is approximately 5g/kg body weight.

EFFECTS OF OVEREXPOSURE

ACUTE

CHRONIC

EMERGENCY AND FIRST AID PROCEDURES

EYES

INHALATION

INGESTION

*Irritating effects increase with strength of solution and time of exposure.
Constant irritant to eyes, throat.*

Copious eye wash with water for at least 15 minutes. Consult an eye specialist immediately.

Remove person to fresh air.

If accidentally swallowed, drink water, milk, and obtain medical attention. DO NOT USE BAKING SODA OR ACIDIC ANTIDOTES.

CONDITIONS CONTRIBUTING TO INSTABILITY

COMPATIBILITY

HAZARDOUS DECOMPOSITION PRODUCTS

VI. REACTIVITY DATA

Solutions of sodium hypochlorite are fairly stable in concentrations below 1%. Stability decreases with concentration, heat, light exposure, decrease in pH, and contamination with heavy metals, such as, nickel, cobalt, copper, and iron.

Avoid contamination with heavy metals (act as catalysts), reducing agents, organics, ether, ammonia, acids.

Hypochlorous acid (HOCl), chlorine, hydrochloric acid. Composition depends upon temperature and decrease in pH. Additional decomposition products, which depend upon pH, temperature and time, are sodium chloride, sodium chlorate and oxygen.

AQUATIC TOXICITY (e.g., 96 HR. TLM)

WASTE DISPOSAL METHOD

HANDLING SPILLS

NEUTRALIZING CHEMICALS

VII. DISPOSAL, SPILL OR LEAK PROCEDURES

Not established, but if not dilute may seriously affect aquatic life. Do not allow spilled material to enter sewers or streams.

Reduce with chemicals listed below. Keep on alkaline side and dilute with copious quantities of water. Main end product is salt water. (NaCl)

Flush with water to dilute as much as possible, avoid heat and contamination with acid materials. Do not use combustible materials such as sawdust to absorb hypochlorite.

Reducing agents such as bisulfites or ferrous salt solutions; some heat will be produced.

VENTILATION REQUIREMENTS

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY

EYES

GLOVES

OTHER

VIII. SPECIAL PROTECTION INFORMATION

No special ventilation required unless bleach is exposed to decomposition condition; i.e., spills or acidic conditions.

When fumes are present use NIOSH approved respirator with acid type canister. Use goggles when dispensing solutions stronger than household bleach (7%).

Use rubber or plastic gloves when exposed to solutions stronger than household bleach (7%).

Use rubber apron, etc. to protect body from any splashing conditions. Use rubber protective shoes if spills occur. Safety showers and eyewash fountains should be available in storage and handling area.

PRECAUTIONARY STATEMENTS

PROPER HANDLING AND STORAGE REQUIREMENTS

NATIONAL REGULATORY CONCERNS. FEDERAL

IX. SPECIAL PRECAUTIONS

Normal handling of household bottled bleach requires safety requirements as stated on the labels. Full protection should be provided when handling bulk shipments of concentrated, industrial bleach solutions.

Store in vented, closed, clean, non-corrosive containers in a cool, dry location, away from direct sunlight and not adjacent to chemicals which may react with the bleach if spillage occurs. If shipped, must comply with DOT, etc. shipping regulations. If closed containers become heated, the containers should be vented to release decomposition products (mainly oxygen under normal decomposition). Do not mix or contaminate with ammonia, hydrocarbons, acids, alcohols, ethers.

EPA Pesticide regulations applicable and registration as a pesticide required when used for disinfection purposes.

THIS PRODUCT IS LISTED ON THE TOXIC SUBSTANCES CONTROL ACT (TSCA) INVENTORY OF CHEMICAL SUBSTANCES.

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