

SAFETY DATA SHEET

SAN-I-KING NO. 451
Product ID: FP045101
Revised: 01-06-2023
Replaces: 06-22-2015

1. IDENTIFICATION

Product Identifier Used SAN-I-KING NO. 451
on the Label:

Other Identifiers: Bleach Sodium Hypochlorite
Product ID: MIXTURE
Recommended Use: EPA Registered Pesticide/ EPA Reg. No. 2686-20001
Restrictions on Use: No data available.

Hydrite Chemical Co.
17385 Golf Parkway
Brookfield, WI 53045
(262) 792-1450

EMERGENCY RESPONSE NUMBERS:
24 Hour Emergency #: (414) 277-1311
CHEMTREC Emergency #: (800) 424-9300

2. HAZARD(S) IDENTIFICATION

GHS Classification(s): Substance or mixture corrosive to metals Category 1
Skin Corrosion/Irritation Category 1B
Serious Eye Damage/Eye Irritation Category 1
Hazardous to the aquatic environment - Acute Category 1
Acute Toxicity - Inhalation Vapour Category 4
Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 3

GHS Label Elements:

GHS Hazard Symbols:



Signal Word: Danger

Hazard Statements: May be corrosive to metals.
Causes severe skin burns and eye damage.
Harmful if inhaled.
May cause respiratory irritation.
Very toxic to aquatic life.

Precautionary Statements:

Prevention: Keep only in original container.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.

Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for

breathing.
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.
Specific treatment (see First Aid on SDS or on this label).
Wash contaminated clothing before reuse.
Absorb spillage to prevent material damage.
Collect spillage.

Storage: Store in a well-ventilated place. Keep container tightly closed.
Store in a secure manner.
Store in corrosive resistant container with a resistant inner liner.

Disposal: Dispose of in accordance with local, regional and international regulations.

Hazards not otherwise classified: May react with various food sugars to form carbon monoxide. May react with certain metals to form explosive/flammable hydrogen gas. Mixing with acid detergents may form chlorine gas.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances/Mixtures:

<u>Chemical or Common Name/Synonyms</u>	<u>CAS Number</u>	<u>% by Wt.</u>
Water	7732-18-5	Balance
Sodium Hypochlorite	7681-52-9	~ 12.5 %
Sodium Hydroxide	1310-73-2	0.2-5.0 %
Sodium Carbonate	497-19-8	<= 1%

Note: Any chemical identity and/or exact percentage not expressly stated is being withheld as a trade secret or is due to batch variation.

4. FIRST-AID MEASURES

Description of Necessary Measures:

Eye Contact: If in eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention. Remove contact lens if easy to do. Do not permit victim to rub eyes. Do not attempt to neutralize with chemical agents. If necessary, continue flushing during transport to emergency care facility.

Skin Contact: If on skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Do not reuse clothing and shoes until cleaned. Do not apply oils or ointments unless ordered by the physician. If skin feels slippery, caustic may still be present in sufficient quantities to cause rash or burn. Continue washing skin until slick feeling is gone. Discard footwear which cannot be decontaminated. Discard contaminated leather articles such as shoes and belt.

Inhalation: If inhaled: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY. If using mouth to mouth, use rescuer protection (pocket mask, etc). Symptoms of pulmonary edema can be delayed up to 48 hours after exposure.

Ingestion: If swallowed: If fully conscious, drink a quart of water. DO NOT induce vomiting. CALL A PHYSICIAN IMMEDIATELY. If unconscious or in convulsions, take immediately to a hospital or a physician. NEVER induce vomiting or give anything by mouth to an unconscious victim. If vomiting occurs spontaneously, keep head below

hips to prevent aspiration of liquid into the lungs. Do not give sodium bicarbonate, fruit juices or vinegar. If vomiting occurs spontaneously, keep airway clear and give more water.

Most Important Symptoms/Effects, Acute and Delayed:

Eye Contact: CORROSIVE-Causes severe irritation and burns. Small amounts may cause: permanent eye damage. blindness. Symptoms may include: stinging. tearing. redness. swelling. blurred vision.

Skin Contact: CORROSIVE-Causes severe irritation and burns. Corrosive action causes burns and frequently deep ulceration with ultimate scarring. Contact may cause: redness. swelling. burns. blistering. tissue destruction. Note that irritation may follow an initial latency. The latency may vary as much as hours for dilute solutions to minutes for more concentrated solutions.

Skin Absorption: No absorption hazard expected under normal use.

Inhalation: CORROSIVE-Causes severe irritation and burns. May cause: difficulty breathing. coughing. choking. nausea. pulmonary edema. May irritate or burn: nose. throat. mucous membranes. Symptoms may include: sore throat. shortness of breath. wheezing. tightness of the chest. chest pain. impaired lung function. pneumonitis. Effects may be delayed.

Ingestion: CORROSIVE-Causes severe irritation and burns. May cause damage to the: mouth. esophagus. stomach. May cause: nausea. vomiting. colitis. delirium. hypotension. confusion. convulsions. circulatory collapse. Ingestion can cause severe burns and complete tissue perforation of the mucous membranes of the mouth, throat and stomach. May be fatal if swallowed. Aspiration into the lungs may occur during ingestion or vomiting resulting in mild to severe pulmonary injury and possibly death.

Indication of Immediate Medical Attention and Special Treatment Needed: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. This material will have corrosive effects in which case it may not be advisable to induce vomiting. Acute effects can include mucosal damage and severe laryngeal edema associated with corrosive agents. Maintain under observation for 48 hours due to the risk of pulmonary edema. Steroid therapy, if given early, has been reported effective in preventing pulmonary edema. The absence of visible signs or symptoms of burns does not reliably exclude the presence of actual tissue damage.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: For fires in area use appropriate media. For example: Water fog. Foam. Dry chemical. Carbon dioxide. DO NOT USE: Jet of high pressure water.

Specific Hazards Arising from the Chemical:

Fire and Explosion Hazards: Product may react with some metals (ex.: Aluminum, Zinc, Tin, etc.) to release flammable hydrogen gas. May generate potentially explosive oxygen. Contact with combustible materials may cause a fire. Contact with acids may generate sufficient heat to ignite nearby combustible material.

Hazardous Combustion Products: Chlorine-containing gases. Metal oxides. Oxygen. Halogenated compounds. Toxic fumes. Hydrogen chloride. Chlorine. Sodium chlorate. Sodium oxides. Disodium oxide. Corrosive vapors. Carbon dioxide. Sodium oxide.

Special Protective Equipment and Precautions for Fire-Fighters: Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers and disperse vapors. Move containers from fire area if possible without hazard. Use water spray to cool fire-exposed containers, but avoid getting water into containers.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, Emergency Procedures: CORROSIVE MATERIAL. Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit.

Methods and Materials for Containment and Clean Up: Keep away from combustibles and easily oxidizable materials. Do not attempt to neutralize spilled materials. Toxic chlorine gas may be released. DO NOT use combustible materials such as sawdust. Contain spill, place into drums for proper disposal. Soak up residue with non-flammable absorbent material. DO NOT use sawdust or other cellulose-type material. Place in non-leaking containers for immediate disposal. Flush remaining area with water to remove trace residue and dispose of properly. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling. Empty containers retain product residue (vapor, dust, or liquid) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other source of ignition. They may explode and cause injury or death. Mixing this product with gross filth such as feces, urine, etc. or with ammonia, acids, detergents or other chemicals may release hazardous gases irritating to eyes, lungs and mucous membranes. CORROSIVE MATERIAL. Avoid dust or mist formation. Add product very slowly while stirring constantly. If product is added too rapidly or without stirring and becomes concentrated at the bottom of the mixing vessel, excessive heat may be generated resulting in dangerous boiling and spattering and possible immediate violent irruption of highly caustic solution.

Conditions for Safe Storage, Including any Incompatibilities: CORROSIVE MATERIAL. Store in a cool, well ventilated area, out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Do not freeze. Avoid temperatures greater than 70 Deg. F. Product degrades more rapidly with increasing temperature. Avoid contact with combustible materials, wood and organic materials. DO NOT contaminate water, food or feed by storage or disposal. Highly corrosive to most metals with evolution of hydrogen gas. Deadly carbon monoxide gas can form in enclosed or poorly ventilated areas or tanks when alkaline products contact food, beverage, or dairy products. Do not enter such areas until they have been well ventilated and carbon monoxide and oxygen levels have been determined to be within OSHA acceptable limits. If carbon monoxide and oxygen levels cannot be measured, wear NIOSH-approved, self-contained breathing apparatus.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA Exposure Guidelines:

Component	Limits
Sodium Hydroxide	2 mg/m3 TWA

ACGIH Exposure Guidelines:

Component	Limits
Sodium Hydroxide	2 mg/m3 Ceiling

Note:

*Exposure Limit for Chlorine: 1 ppm Ceiling; 3 mg/m3 Ceiling (OSHA); 0.5 ppm TWA; 1 ppm STEL (ACGIH).

Appropriate Engineering Controls: Local exhaust ventilation, process enclosures, or other engineering controls are required when handling or using this product to avoid overexposure. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly. Avoid creating dust or mist. Maintain adequate ventilation. Do not use in closed or confined spaces.

Individual Protection Measures:

Eye/Face Protection: Wear chemical safety goggles and a full face shield while handling this product. Do not wear contact lenses. Wear a full-face respirator, if needed.

Skin Protection: Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: Impervious. Chemical-resistant. Check gloves for leaks before use. Rinse and remove gloves immediately after use.

Respiratory Protection: Respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If vapors or mists are present, wear: NIOSH-Approved respirator. NIOSH-Approved Supplied Air Respirator (SAR). NIOSH-Approved self-contained breathing apparatus. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.

Other Protective Equipment: Eye-wash station. Safety shower. Rubber apron. Impervious clothing. Rubber boots. Protective clothing. Chemical safety shoes.

General Hygiene Conditions: Wash with soap and water before meal times and at the end of each work shift. Good manufacturing practices require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking. Handle in accordance with good industrial hygiene and safety practice. Food, beverages, and tobacco products should not be carried, stored or consumed where this material is in use. Reports indicate that sodium hypochlorite can react with various fabrics usually increasing with concentration. Reactions vary significantly depending on the strength of chemical, material treatment and color of dyes. Fire resistant clothing treated cotton has a stronger response than plain cotton. Poly blend fabrics and meta-aramid fabric have a weaker response than natural fibers. Contact the Personal Protective Equipment manufacturer for specific information about their products.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid.

Color: Clear. Yellow-green.

Odor: Chlorine odor.

Odor Threshold: N.D.

pH: 12.4 - 12.7 (as is)

Freezing Point (deg. F): ~ -10

Melting Point (deg. F): N.D.

Initial Boiling Point or Boiling Range: Not Estab.

Flash Point: NONE.

Flash Point Method: N.A.

Evaporation Rate (nBuAc = 1): N.D.

Flammability (solid, gas): N.D.

Lower Explosion Limit: N.A.

Upper Explosion Limit: N.A.

Vapor Pressure (mm Hg): Not Estab.

Vapor Density (air=1): N.D.

Specific Gravity or Relative Density: ~ 1.2

Solubility in Water: Complete

Partition Coefficient (n-octanol/water): N.D.

Auto-ignition Temperature: No Data

Decomposition Temperature: N.D.

Viscosity: N.D.

% Volatile (wt%): N.D.

VOC (wt%): 0

VOC (lbs/gal): 0

Fire Point: N.D.

10. STABILITY AND REACTIVITY

Reactivity: Oxidizer. Avoid other reducing agents, combustibles and organic materials. Corrosive to most metals.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur under normal conditions. Reacts with strong acids to generate hydrogen chloride. Reacts with strong oxidizing agents to generate chlorine gas. Contact with water may cause violent reaction with evolution of heat. To dilute: Add product slowly to lukewarm water; not water to product. Contact with acid or incompatible materials may cause a violent reaction with evolution of heat. May react with certain metals to produce flammable hydrogen gas. Reactions with various food sugars may form carbon monoxide.

Conditions to Avoid (e.g., static discharge, shock, or vibration): Avoid exposure to light. Avoid temperatures greater than 70 Deg. F. Product degrades more rapidly with increasing temperature. Keep away from incompatibles.

Incompatible Materials: Acids. Metals such as aluminum, zinc, tin, etc. Magnesium. Chromium. Brass. Bronze. Copper. Lead. Other alkali sensitive metals or alloys. Organic materials. Organic nitro compounds. Chlorinated hydrocarbons. Fluorinated hydrocarbons. Acetaldehyde. Chlorine trifluoride. Hydroquinone. Maleic anhydride. Tetrahydrofuran. Acrolein. Phosphorous. Trichloroethylene. Leather. Wool. Phosphorous pentoxide. Halogenated compounds. Glycols. Explosives. Acrylonitrile. 1,2-Dichloroethylene. Tetrachloroethane. Organic peroxides. Sodium tetrahydroborate. Food sugars. Silver nitrate. Ammonia. Chloroform. Methanol. Zirconium. Strong oxidizing agents. Metals. Nitro-organic compounds. Iron. Cobalt. Nickel. ammonium hydroxide. household products. Halogenated organics. Urea. Tin. Aluminum. Reducing agents. Amines. Ammonium salts. Aziridine. Cellulose. Ethyleneimine. Bisulfates. Soaps. Oxidizable metals. Phenyl acetonitrile. Zinc.

Hazardous Decomposition Products: Chlorine-containing gases. Reacts with acids to release poisonous chlorine gas. Sodium oxide. Hypochlorous acid. Oxygen. Hydrogen chloride. Hydrogen gas. Carbon monoxide. Flammable dichloroacetylene. Phosphine. Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure: Eyes. Skin. Ingestion. Inhalation.

Symptoms/Effects: Acute, Delayed and Chronic:

Eye Contact: CORROSIVE-Causes severe irritation and burns. Small amounts may cause: permanent eye damage. blindness. Symptoms may include: stinging. tearing. redness. swelling. blurred vision.

Skin Contact: CORROSIVE-Causes severe irritation and burns. Corrosive action causes burns and frequently deep ulceration with ultimate scarring. Contact may cause: redness. swelling. burns. blistering. tissue destruction. Note that irritation may follow an initial latency. The latency may vary as much as hours for dilute solutions to minutes for more concentrated solutions.

Skin Absorption: No absorption hazard expected under normal use.

Inhalation: CORROSIVE-Causes severe irritation and burns. May cause: difficulty breathing. coughing. choking. nausea. pulmonary edema. May irritate or burn: nose. throat. mucous membranes. Symptoms may include: sore throat. shortness of breath. wheezing. tightness of the chest. chest pain. impaired lung function. pneumonitis. Effects may be delayed.

Ingestion: CORROSIVE-Causes severe irritation and burns. May cause damage to the: mouth. esophagus. stomach. May cause: nausea. vomiting. colitis. delirium. hypotension. confusion. convulsions. circulatory collapse. Ingestion can cause severe burns and complete tissue perforation of the mucous membranes of the mouth, throat and stomach. May be fatal if swallowed. Aspiration into the lungs may occur during ingestion or vomiting resulting in mild to severe pulmonary injury and possibly death.

Numerical Measures of Toxicity:

Component	Oral LD50	Dermal LD50	Inhalation LC50
Sodium Hypochlorite	Rat: 9 g/kg	Rabbit: > 20000 mg/kg	1H Rat: > 10.5 mg/L
Sodium Chloride	Rat: 3 g/kg	Rabbit: > 10000 mg/kg	1H Rat: > 42 mg/L
Sodium Hydroxide	Rat: 325 mg/kg	Rabbit: 1350 mg/kg	No Data
Sodium Carbonate	Rat: 4090 mg/kg	Rabbit: > 2000 mg/kg	2H Rat: 2300 mg/m3

Acute Toxicity Estimates (ATE):

Oral: 6500 mg/kg
Dermal: 27000 mg/kg
Inhalation Vapor: 18.8849 mg/L
Inhalation Dust/Mist: 16.2211 mg/L

Cancer Information:

This product does not contain 0.1% or more of the known or potential carcinogens listed in NTP, IARC, or OSHA.

Medical Conditions Aggravated by Exposure to Product: Respiratory system disorders. Skin disorders. Lung disorders. Cardiovascular disorders. Eye disorders.

Other: None known.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information: No data available.

Chemical Fate Information: No data available.

13. DISPOSAL CONSIDERATIONS

Hazardous Waste Number: D002

Disposal Method: Dispose of in a permitted hazardous waste management facility following all local, state and federal regulations. Since emptied containers retain product residue, follow label warnings even after container is emptied. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition. Disposal methods identified are for the product as sold. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permitted under applicable rules, regulations and/or laws governing your location. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

14. TRANSPORTATION INFORMATION

DOT (Department of Transportation):

Identification Number: UN1791
Proper Shipping Name: HYPOCHLORITE SOLUTION
Hazard class: 8
Packing Group: III
Marine Pollutant: sodium hypochlorite solution
Label Required: CORROSIVE
Reportable Quantity (RQ): 100# (Sodium Hypochlorite); 1000# (Sodium Hydroxide).

Note: This product is not regulated as a Marine Pollutant when transported in containers less than 119 gallons and shipped solely by air or land transportation.

15. REGULATORY INFORMATION

TSCA Inventory Status: This product or all components of this product are listed on the EPA/TSCA Inventory of Chemical Substances.

SARA Title III Section 311/312 Category Hazards: Please see Section 2 of this SDS.

Regulated Components:	CAS	CERCLA	SARA	SARA	U.S.	WI	Prop
Component	Number	RQ	EHS	313	HAP	HAP	65
Sodium Hypochlorite	7681-52-9	Yes	No	No	No	No	No
Sodium Hydroxide	1310-73-2	Yes	No	No	No	Yes	No

FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.

Hazards to Humans and Domestic Animals

Danger: Corrosive, may cause severe skin and eye irritation or chemical burns to broken skin. May be fatal if swallowed. Do not get in eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves when handling this product. Wash after handling. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until strong odors have dissipated.

Environmental Hazards

This product is toxic to fish and aquatic organisms. Do not discharge this product into lakes, streams, ponds, estuaries, oceans or public waters unless in accordance with the requirements of a National Pollution Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or the Regional Office of the EPA.

Physical and Chemical Hazards:

Strong Oxidizing Agent: Mix only with water according to label directions. Flush drains before and after use.

Mixing this product with organic matter (e.g., urine, feces, etc.) or chemicals (e.g., ammonia, acids, detergents, etc.) will release chlorine gas which is irritating to eyes, lungs and mucous membranes.

16. OTHER INFORMATION

Hazard Rating System

Health: 3
Flammability: 0
Reactivity: 1
* = Chronic Health Hazard

NFPA Rating System

Health: 3
Flammability: 0
Reactivity: 0
Special Hazard: None

SDS Abbreviations

N.A. = Not Applicable
N.D. = Not Determined
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound
C = Ceiling Limit
N.E./Not Estab. = Not Established

SDS Prepared by: CV

Reason for Revision: New format. Changes made throughout the SDS.

Revised: 01-06-2023

Replaces: 06-22-2015

The data in this Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as warranty or representation for which HYDRITE CHEMICAL CO. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.