Safety Data Sheet · OSHA HCS 2024

Sodium Hypochlorite 5.25%

Technical · 5.25% w/w

Standard	Revised	Emergency
OSHA HCS 2024 · GHS Rev. 7	2026-11-19	Chemtel 1-800-255-3924 (24/7)

1 Identification

Product Identifier	Sodium Hypochlorite 5.25%
Grade	Technical
Concentration	5.25% w/w
CAS Number	7681-52-9
Chemical Formula	NaClO
Molecular Weight	74.44 g/mol
Manufacturer	Alliance Chemical 204 South Edmond Street, Taylor, TX 76574
Emergency Phone	Chemtel 1-800-255-3924 (24/7)
Synonyms	Bleach; liquid bleach; sodium oxychloride; hypochlorous acid, sodium salt
Recommended Use	Bleaching, cleaning and oxidizing agent; odor control.
Restrictions on Use	Never mix with acids, ammonia or other cleaning products: this releases toxic chlorine or chloramine gas. Not a registered disinfectant: make no disinfecting or sanitizing claims.

2 Hazard Identification



Corrosive



Environmental hazard

Classification

Corrosive to metals, Category 1

Skin corrosion/irritation, Category 1

Serious eye damage/eye irritation, Category 1

Hazardous to the aquatic environment, acute hazard, Category 1 †

Hazardous to the aquatic environment, long-term hazard, Category 2 †

† GHS environmental hazard class; not adopted under OSHA HCS (29 CFR 1910.1200).

Signal Word

Danger

Hazard Statements

EUH031 Contact with acids liberates toxic gas

H290 May be corrosive to metals

H314 Causes severe skin burns and eye damage

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 dust, fume, gas, mist, vapors or spray.

P264 Wash hands and face thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves, protective clothing, and eye/face protection.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 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.

P313 Get medical advice or attention.

P321 Specific treatment (see first-aid information on this label).

P363 Wash contaminated clothing before reuse.

P390 Absorb spillage to prevent material damage.

P391 Collect spillage.

P405 Store locked up.

P406 Store in a corrosion resistant container with a resistant inner liner.

P501 Dispose of contents and container in accordance with local, regional, national, and international regulations.

Classification, hazard (H) and precautionary (P) statements and pictograms per OSHA HCS 2024 (29 CFR 1910.1200, Appendices A–C), aligned with GHS Rev. 7.

3 Composition / Information on Ingredients

Component	CAS No.	Formula	Concentration
Sodium hypochlorite	7681-52-9	NaOCl	5.25% (w/w)
Sodium hydroxide	1310-73-2	NaOH	≤2.1% (w/w)

Concentrations are nominal; lot-specific values appear on the Certificate of Analysis. Components not contributing to classification are omitted.

4 First-Aid Measures

Eyes

Rinse with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention immediately.

Skin

Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing. Wash with soap. Get medical attention immediately.

Inhalation

Move person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

Ingestion

Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

Most Important Symptoms and Effects

Causes burns to the skin, eyes and mucous membranes; eye contact may cause permanent damage including blindness; ingestion burns the mouth, throat and stomach.

Immediate Medical Attention and Special Treatment	Immediate medical attention is required after eye or skin contact or ingestion; tissue damage may continue after exposure ends.

5 Fire-Fighting Measures

Suitable Extinguishing Media	Dry chemical, CO2, water spray. Use water spray to cool containers.
Unsuitable Extinguishing Media	Do not use a solid water stream as it may scatter and spread fire.
Specific Hazards Arising from the Chemical	Fire may release corrosive and toxic gases. Containers may rupture when heated.
Protective Equipment	Wear self-contained breathing apparatus and full protective clothing.
Hazardous Combustion Products	Chlorine gas, hydrogen chloride, hypochlorous acid and oxygen. Contact with acids releases chlorine gas.

6 Accidental Release Measures

Personal Precautions	Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.
Hazard-Specific Precautions	Do not touch spilled material without protective equipment. Neutralize residue only with a method suitable for the material, then collect.
Environmental Precautions	Prevent leakage or spillage from entering drains, sewers, or waterways.
Containment & Cleanup	Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7 Handling and Storage

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area. Use corrosion-resistant containers. Keep away from incompatible materials (see Section 10). Keep containers tightly closed.
Specific Storage Precautions	Store out of direct sunlight in a cool area, in the original vented container. Keep away from acids, ammonia and organic materials. Strength declines with time and heat.

8 Exposure Controls / Personal Protection

Occupational Exposure Limits

Limit	Value
ACGIH TLV	2 mg/m^3 Ceiling (CAS 1310-73-2)
Other Limits	AIHA WEEL STEL 2 mg/m^3 (CAS 7681-52-9)

Engineering Controls	Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.
Eye/Face Protection	Wear chemical safety goggles or face shield.
Skin Protection	Wear chemical-resistant gloves and protective clothing.

Respiratory Protection	Where mist, spray or dust is generated (e.g., spraying, atomization, pressure washing), use a NIOSH-approved half-face air-purifying respirator with combination acid gas / P100 cartridges. Ensure local exhaust ventilation.

Exposure limits sourced from NIOSH Pocket Guide, OSHA 29 CFR 1910.1000 and ACGIH TLVs.

9 Physical & Chemical Properties

Appearance	Pale yellow-green liquid
Odor	Chlorine (bleach) odor
Odor Threshold	0.3 ppm (as chlorine)
pH	11–13.5
Melting Point / Freezing Point	Not characterized for the 5.25% solution
Boiling Point	About 100 °C (212 °F), decomposes
Flash Point	Not applicable
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	No data available
Vapor Pressure	12–17.5 mmHg at 20 °C (water vapor)
Vapor Density	No data available
Relative Density	1.075 at 20/20 °C (water = 1)
Solubility	Completely miscible with water
Partition Coefficient (n-octanol/water)	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Particle Characteristics	Not applicable
Form	Liquid solution
Color	Clear/Greenish Yellow
Density	1.0726 g/cm^3 at 20 °C

Values shown reflect product-specific canonical data. Lot-specific ranges may vary; see the Certificate of Analysis for the shipped lot.

10 Stability and Reactivity

Reactivity	May be corrosive to metals.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Heat, direct sunlight and ultraviolet light (speed decomposition and strength loss), freezing, and contact with incompatible materials.
Incompatible Materials	Acids (release toxic chlorine gas); ammonia and ammonium compounds (form chloramines); reducing agents; hydrogen peroxide; organic and combustible materials; metals such as copper, nickel, cobalt and iron (speed decomposition).
Hazardous Decomposition Products	Chlorine gas, hydrogen chloride, hypochlorous acid and oxygen. Contact with acids releases chlorine gas.

11 Toxicological Information

See below for route-specific acute toxicity data.

Likely Routes of Exposure	Inhalation, skin contact, eye contact, ingestion.
Symptoms	Causes burns to the skin, eyes and mucous membranes; eye contact may cause permanent damage including blindness; ingestion burns the mouth, throat and stomach.
Delayed and Chronic Effects	No delayed or chronic effects identified beyond the classification in Section 2.

Route	Value
LD50 Oral (rat)	8,200–8,910 mg/kg (CAS 7681-52-9)

Carcinogen Classification

Agency	Status
IARC	Group 3 — not classifiable as to its carcinogenicity to humans (Sodium hypochlorite; IARC agent: Hypochlorite salts, Vol. 52).
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12 Ecological Information

Aquatic Hazard	H400 Very toxic to aquatic life H411 Toxic to aquatic life with long lasting effects
Ecotoxicity	Algae ErC50: 0.036 mg/L (72 h, Green algae); Daphnia EC50: 0.141 mg/L (48 h, Daphnia magna); Fish LC50: 0.58 mg/L (96 h, Lepomis macrochirus (bluegill sunfish)); Algae NOEC (chronic): 0.005 mg/L (72 h, Green algae (NOEC))
Persistence & Degradability	Not applicable (inorganic; reactive oxidizer, decomposes rapidly). Very toxic to aquatic life (algae M-factor 10).
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available

13 Disposal Considerations

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

EPA RCRA Waste Codes	D002 (corrosive) when the waste has a pH of 12.5 or more (40 CFR 261.22). Not a P- or U-listed waste.

If discarded, this material may be a corrosive hazardous waste (EPA RCRA D002, 40 CFR 261.22): aqueous with pH ≤ 2 or ≥ 12.5, or a liquid that corrodes steel at more than 6.35 mm per year. The waste generator must make the final hazardous-waste determination.

14 Transport Information

US DOT (49 CFR)

UN Number	UN1791
Proper Shipping Name	Hypochlorite solutions
Hazard Class	8
Packing Group	III
Additional US DOT Requirements	Bulk packaging over 119 gal (for example 275- and 330-gal totes): Marine Pollutant (sodium hypochlorite, 49 CFR 172.101 Appendix B). A package containing 100 lb or more of sodium hypochlorite (about 1,900 lb or 213 gal of 5.25% solution, so 275- and 330-gal totes) is a hazardous substance: UN1791, Hypochlorite solutions, 8, III, RQ (Sodium hypochlorite). Non-bulk packages by highway or rail are excepted from the marine-pollutant requirements (49 CFR 171.4(c)).
Environmental Hazards	Meets GHS aquatic-hazard criteria; may be a marine pollutant under the IMDG Code (vessel transport).

IMDG / IATA classifications may differ from US DOT. Verify current regulations before international shipment.

15 Regulatory Information

Inventory / List	Status
California Proposition 65	Not listed
US EPA TSCA Active Inventory	Listed
EPCRA SARA 313 (TRI)	Not listed
CERCLA Reportable Quantity (RQ)	Sodium hypochlorite (CAS 7681-52-9) 100 lb (45.4 kg), about 1,900 lb or 213 US gal of 5.25% solution; sodium hydroxide (CAS 1310-73-2) 1000 lb (454 kg).

SARA 311/312 hazard categories correspond to the GHS classification in Section 2. Data retrieved as of: California Proposition 65 2026-11-02; US EPA TSCA Active Inventory 2026-11-02; EPCRA SARA 313 (TRI) 2026-11-02.

16 Other Information

Revision Date	2026-11-19
Format	16-section format per OSHA HCS 2024 (29 CFR 1910.1200, Appendix D), aligned with GHS Rev. 7.

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