SAFETY DATA SHEET

Sodium Chlorate, Analyzed Reagent

Revised: 11/17/2026

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Sodium Chlorate, Analyzed Reagent
Synonyms: sodium chlorate
CAS Number: 7775-09-9
Grade/Purity: Analyzed Reagent (>= 99.0%)
Product Type: Inorganic Oxidizer (Solid)
Product Use: Industrial, Manufacturing or Laboratory use
Manufacturer/Supplier: Alliance Chemical, 204 South Edmond St, Taylor, Texas 76574
Information: 512-365-6838 | www.alliancechemical.com
Emergency: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Signal Word: Danger

GHS Pictograms:



Hazard Statements:

H271	May cause fire or explosion; strong oxidizer
H302	Harmful if swallowed
H411	Toxic to aquatic life with long lasting effects
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

Precautionary Statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220	Keep away from clothing and other combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P260	Do not breathe dust.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves, protective clothing, and eye/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P330	Rinse mouth.
P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes; remove contact lenses if present and easy to do; continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P370+P378	In case of fire: Use flooding quantities of water to extinguish. Do NOT use CO2, dry chemical, or foam.
P391	Collect spillage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents and container in accordance with all applicable regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	% MIN	% MAX	CAS #	EINECS# / ELINCS#	FORMULA	MOLECULAR WEIGHT
sodium chlorate	99	100	7775-09-9	231-887-4	$NaClO_3$	106.44 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse cautiously with water for at least 15 minutes, holding eyelids apart. Remove contact lenses if present and easy to do. Get medical attention.
Skin	Remove contaminated clothing. Wash immediately with plenty of water for at least 15 minutes. Launder clothing before reuse (fire hazard when dry). Get medical attention if irritation develops.
Inhalation	Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Do NOT induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Get immediate medical attention. Note to physician: chlorate causes methemoglobinemia (relatively resistant to methylene blue), hemolysis, and acute renal failure; monitor renal function.

5. FIRE-FIGHTING MEASURES

Suitable Media	Water spray or fog in large quantities. Do NOT use dry chemical or CO2.
Unsuitable Media	Do not use dry chemical, CO2, or foam.
Protective Equipment	Wear self-contained breathing apparatus and full protective clothing.
Combustion Products	Oxygen (intensifies fire), sodium chloride, and chlorine / chlorine dioxide. See Section 10.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental	Prevent leakage or spillage from entering drains, sewers, or waterways.
Containment & Cleanup	Sweep or vacuum up, avoiding dust. 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 away from combustible materials and heat. Keep away from: Combustible and organic materials, reducing agents, acids, ammonium salts, sulfur, metal powders. Keep containers tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.

Occupational Exposure Limits:

AGENCY	EXPOSURE LIMIT
OSHA PEL	None established
ACGIH TLV	None established
NIOSH REL	None established

IDLH	Not established

Eyes	Wear chemical safety goggles or face shield.
Skin	Wear chemical-resistant gloves and protective clothing.
Inhalation	Use a NIOSH-approved particulate respirator (N95 or P100) when dust is generated or exposure limits may be exceeded.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless to white crystalline solid
Odor	Odorless
Median Particle Size	Not Available
Particle Size Distribution	Not Available
Particle Shape	Not Available
Surface Area	Not Available
Dustiness	Not Available
Hygroscopicity	Not Available
pH	~6 - 8 (aqueous solution)
Melting Point	248 C (478 F)
Boiling Point	Decomposes (~300 C)
Flash Point	Not applicable (strong oxidizer)
Vapor Pressure	Negligible (non-volatile)
Specific Gravity	2.49 - 2.50
Solubility	~100 g/100 mL in water (25 C)
Molecular Formula	$NaClO_3$
Molecular Weight	106.44 g/mol

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Hazardous Reactions	Reacts violently or explosively with combustible/organic materials, reducing agents, sulfur, and powdered metals. Strong acids liberate unstable chloric acid; ammonium salts form unstable ammonium chlorate. Mixtures with combustibles can be friction-, shock-, and heat-sensitive.
Conditions to Avoid	Heat, flames, sparks, friction, impact and shock; contamination by combustibles, organics, reducing agents, acids, sulfur, or metal powders.
Incompatible Materials	Combustible and organic materials, reducing agents, acids, ammonium salts, sulfur, metal powders
Decomposition Products	Oxygen, sodium chloride, and chlorine / chlorine dioxide (not carbon oxides or hydrogen chloride).

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: See below. Target organs: blood (methemoglobinemia, hemolysis), kidneys, and thyroid (iodide-uptake inhibition); systemic effects may be delayed.

ROUTE	VALUE
LD50 Oral	~1,200 mg/kg (rat)
LD50 Dermal	> 2,000 mg/kg (not classified)
LC50 Inhalation	No reliable data

IARC	Not listed as carcinogen.
NTP	Not listed as carcinogen.

OSHA	Not listed as carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Fish LC50: > 1,000 mg/L (rainbow trout, 96 h); Daphnia EC50: > 1,000 mg/L (48 h) [PubChem]
Persistence	Inorganic salt; not biodegradable. Reduced to chloride under anaerobic conditions; persistent in aerobic soil (~0.5 - 5 years). Classified Aquatic Chronic 2 (H411) per harmonized CLP - based on non-rapid degradability and chronic aquatic-plant (herbicidal) effects, not on the acute fish/Daphnia values above.
Bioaccumulation	BCF: Low; not bioaccumulative
Mobility in Soil	Log Kow: High mobility in soil; highly water-soluble and readily leaches to groundwater. Log Kow not applicable (dissociating ionic salt).

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

US DOT	UN1495, Sodium chlorate, 5.1, PG II
IMDG	UN1495, Sodium chlorate, 5.1, PG II
IATA/ICAO	UN1495, Sodium chlorate, 5.1, PG II
Marine Pollutant	No for US DOT domestic non-bulk highway/rail (not listed in 49 CFR 172.101 App. B; mark not required per 49 CFR 171.4). Note: substance meets IMDG marine-pollutant criteria via Aquatic Chronic 2 for vessel transport.
ERG Guide	140 (Oxidizers)

15. REGULATORY INFORMATION

TSCA: Listed on the TSCA Inventory (ACTIVE). SARA 313 (TRI): Not listed. CERCLA: No reportable quantity. California Proposition 65: Not listed. State Right-to-Know: Listed in MA and PA (verify current NJ / RI lists for facility-specific reporting).	
SARA 311/312	See Section 2 for hazard classifications.

16. OTHER INFORMATION

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