# SAFETY DATA SHEET

**Creation Date** 24-November-2010 **Revision Date** 06-May-2025 **Revision Number** 5

## 1. Identification

**Product Name** **Sodium chlorate**

**Cat No. :** **14267**

**CAS-No** 7775-09-9
**Synonyms** No information available

**Recommended Use** Laboratory chemicals.
**Uses advised against** Food, drug, pesticide or biocidal product use.

**Details of the supplier of the safety data sheet**

**Company**
**Importer/Distributor**
Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

**Emergency Telephone Number**
For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
**CHEMTREC** Tel. No. **US:**001-800-424-9300 / **Europe:**001-703-527-3887

## 2. Hazard(s) identification

**Classification**

**WHMIS 2015 Classification** Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

| | |
|---|---|
| **Oxidizing solids** | Category 1 |
| **Acute oral toxicity** | Category 3 |

**Label Elements**

**Signal Word**
Danger

**Hazard Statements**
May cause fire or explosion; strong oxidizer
Toxic if swallowed

**Precautionary Statements**
**Prevention**
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep/Store away from clothing/combustible materials
Take any precaution to avoid mixing with combustibles
Wash face, hands and any exposed skin thoroughly after handling
Wear fire resistant or flame retardant clothing
**Response**
IF SWALLOWED: Immediately call a POISON CENTER/doctor
IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes
Rinse mouth
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion
**Storage**
Store locked up
**Disposal**
Dispose of contents/container to an approved waste disposal plant

## 3. Composition/Information on Ingredients

| Component | CAS-No | Weight % |
|---|---|---|
| Sodium chlorate | 7775-09-9 | <=100 |

## 4. First-aid measures

**General Advice** Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

**Eye Contact** In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

**Inhalation** Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

**Ingestion** Do NOT induce vomiting. Call a physician or poison control center immediately.

**Most important symptoms/effects** . May cause methemoglobinemia
**Notes to Physician** Treat symptomatically

## 5. Fire-fighting measures

| | |
|---|---|
| **Suitable Extinguishing Media** | Water spray. Carbon dioxide ($CO_2$). Dry chemical. Chemical foam. |
| **Unsuitable Extinguishing Media** | No information available |
| **Flash Point** | No information available |
| **Method -** | No information available |
| **Autoignition Temperature** | No information available |
| **Explosion Limits** | |
| **Upper** | No data available |
| **Lower** | No data available |
| **Oxidizing Properties** | Oxidizer |
| **Sensitivity to Mechanical Impact** | No information available |
| **Sensitivity to Static Discharge** | No information available |

**Specific Hazards Arising from the Chemical**
Oxidizer: Contact with combustible/organic material may cause fire. Decomposes violently at elevated temperatures. Thermal decomposition can lead to release of irritating gases and vapors. May ignite combustibles (wood paper, oil, clothing, etc.).

**Hazardous Combustion Products**
Chlorine. Hydrogen chloride gas. Sodium oxides.
**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA**

| Health | Flammability | Instability | Physical hazards |
|---|---|---|---|
| 3 | 0 | 1 | OX |

## 6. Accidental release measures

| | |
|---|---|
| **Personal Precautions** | Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. |
| **Environmental Precautions** | Should not be released into the environment. |
| **Methods for Containment and Clean Up** | Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal. |

## 7. Handling and storage

| | |
|---|---|
| **Handling** | Wear personal protective equipment/face protection. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance. Keep away from clothing and other combustible materials. |
| **Storage.** | Do not store near combustible materials. Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible Materials. Organic materials. Finely powdered metals. Ammonia. Acids. Strong reducing agents. Alcohols. Combustible material. |

## 8. Exposure controls / personal protection

| | |
|---|---|
| **Exposure Guidelines** | This product does not contain any hazardous materials with occupational exposure limitsestablished by the region specific regulatory bodies. |
| **Engineering Measures** | Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.<br>Wherever possible, engineering control measures such as the isolation or enclosure of the |

process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

**Personal protective equipment**

**Eye Protection** Goggles
**Hand Protection** Protective gloves

| Glove material | Breakthrough time | Glove thickness | Glove comments |
|---|---|---|---|
| Natural rubber<br>Nitrile rubber<br>Neoprene<br>PVC | See manufacturers recommendations | - | Splash protection only |

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

**Respiratory Protection**
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly
**Recommended Filter type:** Particulates filter conforming to EN 143

When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls**
Prevent product from entering drains. Do not allow material to contaminate ground water system.

**Hygiene Measures**
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

## 9. Physical and chemical properties

| | |
|---|---|
| **Physical State** | Solid |
| **Appearance** | White |
| **Odor** | Odorless |
| **Odor Threshold** | No information available |
| **pH** | No information available |
| **Melting Point/Range** | 248 - 261 °C / 478.4 - 501.8 °F |
| **Boiling Point/Range** | No information available |
| **Flash Point** | No information available |
| **Evaporation Rate** | Not applicable |
| **Flammability (solid,gas)** | No information available |
| **Flammability or explosive limits** | |
| **Upper** | No data available |
| **Lower** | No data available |
| **Vapor Pressure** | No information available |
| **Vapor Density** | Not applicable |
| **Specific Gravity** | 2.490 |
| **Solubility** | 1000 g/L (20°C) |
| **Partition coefficient; n-octanol/water** | No data available |
| **Autoignition Temperature** | No information available |
| **Decomposition Temperature** | No information available |
| **Viscosity** | Not applicable |

**Molecular Formula** Cl Na O3
**Molecular Weight** 106.44

## 10. Stability and reactivity

**Reactive Hazard** Yes

**Stability** Stable under normal conditions. Oxidizer: Contact with combustible/organic material may cause fire.

**Conditions to Avoid** Incompatible products. Combustible material. Do not subject to grinding/shock/friction. Heat, flames and sparks. Excess heat.

**Incompatible Materials** Organic materials, Finely powdered metals, Ammonia, Acids, Strong reducing agents, Alcohols, Combustible material

**Hazardous Decomposition Products** Chlorine, Hydrogen chloride gas, Sodium oxides

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

**Acute Toxicity**

**Product Information**
**Component Information**

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| Sodium chlorate | LD50 = 4950 mg/kg ( Rat )<br>LD50 = 6250 mg/kg ( Rat ) | LD50 > 2000 mg/kg ( Rabbit ) | LC50 > 5.59 mg/L ( Rat ) 4.5 h |

**Toxicologically Synergistic Products** No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation** May cause skin, eye, and respiratory tract irritation

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|---|---|---|---|---|---|---|
| Sodium chlorate | 7775-09-9 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known
**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects,both acute and delayed** May cause methemoglobinemia

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

**Ecotoxicity**

The product contains following substances which are hazardous for the environment. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|---|---|---|---|---|
| Sodium chlorate | Not listed | LC50: = 13500 mg/L, 96h (Pimephales promelas)<br>LC50: = 1750 mg/L, 96h (Oncorhynchus mykiss)<br>LC50: = 7090 mg/L, 96h (Cyprinus carpio) | Not listed | Not listed |

**Persistence and Degradability** Persistence is unlikely

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

| Component | log Pow |
|---|---|
| Sodium chlorate | -2.9 |

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT**

**UN-No** UN1495
**Proper Shipping Name** consumer commodity SODIUM CHLORATE
**Hazard Class** 5.1
**Packing Group** II

**TDG**

**UN-No** UN1495
**Proper Shipping Name** SODIUM CHLORATE
**Hazard Class** 5.1
**Packing Group** II

**IATA**

**UN-No** UN1495
**Proper Shipping Name** Sodium chlorate
**Hazard Class** 5.1
**Packing Group** II

**IMDG/IMO**

**UN-No** UN1495
**Proper Shipping Name** Sodium chlorate
**Hazard Class** 5.1
**Packing Group** II

## 15. Regulatory information

**International Inventories**

| Component | CAS-No | DSL | NDSL | TSCA | TSCA Inventory notification - Active-Inactive | EINECS | ELINCS | NLP |
|---|---|---|---|---|---|---|---|---|
| Sodium chlorate | 7775-09-9 | X | - | X | ACTIVE | 231-887-4 | - | - |

| Component | CAS-No | IECSC | KECL | ENCS | ISHL | TCSI | AICS | NZIoC | PICCS |
|---|---|---|---|---|---|---|---|---|---|
| Sodium chlorate | 7775-09-9 | X | KE-31386 | X | X | X | X | X | X |

**Legend:**
X - Listed '-' - Not Listed
**KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
**IECSC** - Chinese Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**ENCS** - Japanese Existing and New Chemical Substances
**AICS** - Australian Inventory of Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**Canada**

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

**Other International Regulations**

**Authorisation/Restrictions according to EU REACH** Not applicable

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component | CAS-No | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|---|---|---|---|---|---|
| Sodium chlorate | 7775-09-9 | Listed | Not applicable | Not applicable | Not applicable |

| Component | CAS-No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|---|---|---|---|---|---|
| Sodium chlorate | 7775-09-9 | Not applicable | Not applicable | Not applicable | Not applicable |

## 16. Other information

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Product Safety Department
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www.thermofisher.com

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**Revision Date** 06-May-2025
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**Revision Summary** This document has been updated to comply with the requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

**Disclaimer**
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# End of SDS