

## SAFETY DATA SHEET

Creation Date 24-Nov-2010

Revision Date 19-Jan-2018

Revision Number 4

### 1. Identification

**Product Name** Sodium chlorate

**Cat No. :** AC223220000; AC223220010; AC223220050; AC223220051;  
AC223222500

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

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Not for food, drug, pesticide or biocidal product use

#### Details of the supplier of the safety data sheet

##### Company

Fisher Scientific	Acros Organics
One Reagent Lane	One Reagent Lane
Fair Lawn, NJ 07410	Fair Lawn, NJ 07410
Tel: (201) 796-7100	

##### **Emergency Telephone Number**

For information **US** call: 001-800-ACROS-01 / **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

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Oxidizing solids	Category 1
Acute oral toxicity	Category 4
Specific target organ toxicity - (repeated exposure)	Category 2
Target Organs - Kidney, Blood.	

#### Label Elements

##### **Signal Word**

Danger

##### **Hazard Statements**

May cause fire or explosion; strong oxidizer  
Harmful if swallowed  
May cause damage to organs through prolonged or repeated exposure



### Precautionary Statements

#### Prevention

Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
 Keep/Store away from clothing/ other combustible materials  
 Take any precaution to avoid mixing with combustibles  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Wear fire/ flame resistant/retardant clothing

#### Response

Get medical attention/advice if you feel unwell

#### Skin

IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes

#### Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

#### Fire

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

#### Disposal

Dispose of contents/container to an approved waste disposal plant

#### Hazards not otherwise classified (HNOC)

Toxic to aquatic life with long lasting effects

## 3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Sodium chlorate	7775-09-9	>95

## 4. First-aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
<b>Inhalation</b>	Move to fresh air. If not breathing, give artificial respiration. Get medical attention immediately if symptoms occur.
<b>Ingestion</b>	Do not induce vomiting. Call a physician or Poison Control Center immediately.
<b>Most important symptoms and effects</b>	. May cause methemoglobinemia
<b>Notes to Physician</b>	Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Water spray. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Chemical foam.

**Unsuitable Extinguishing Media** No information available

**Flash Point** No information available  
**Method -** No information available

#### Autoignition Temperature

#### 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

Hydrogen chloride gas, Chlorine.

Chlorine 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.

#### NFPA

**Health**  
2

**Flammability**  
0

**Instability**  
1

**Physical hazards**  
OX

## 6. Accidental release measures

**Personal Precautions** Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation.

**Environmental Precautions** Do not flush into surface water or sanitary sewer system.

**Methods for Containment and Clean Up** Avoid dust formation. Sweep up and shovel into suitable containers for disposal. Keep container tightly closed in a dry and well-ventilated place. Keep combustibles (wood, paper, oil, etc) away from spilled material. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

## 7. Handling and storage

**Handling** Wear personal protective equipment. Ensure adequate ventilation. Keep away from clothing and other combustible materials. Avoid dust formation. Do not breathe dust. Wash hands before breaks and immediately after handling the product.

**Storage** Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Do not store near combustible materials.

## 8. Exposure controls / personal protection

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established 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.

#### Personal Protective Equipment

<b>Eye/face Protection</b>	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
<b>Skin and body protection</b>	Wear appropriate protective gloves and clothing to prevent skin exposure.
<b>Respiratory Protection</b>	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.
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

<b>Physical State</b>	Solid
<b>Appearance</b>	White
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH</b>	No information available
<b>Melting Point/Range</b>	248 - 261 °C / 478.4 - 501.8 °F
<b>Boiling Point/Range</b>	No information available
<b>Flash Point</b>	No information available
<b>Evaporation Rate</b>	Not applicable
<b>Flammability (solid,gas)</b>	No information available
<b>Flammability or explosive limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Vapor Pressure</b>	No information available
<b>Vapor Density</b>	Not applicable
<b>Specific Gravity</b>	2.490
<b>Solubility</b>	1000 g/L (20°C)
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	
<b>Decomposition Temperature</b>	No information available
<b>Viscosity</b>	Not applicable
<b>Molecular Formula</b>	Cl Na O3
<b>Molecular Weight</b>	106.44

## 10. Stability and reactivity

<b>Reactive Hazard</b>	Yes
<b>Stability</b>	Stable under normal conditions. Oxidizer: Contact with combustible/organic material may cause fire.
<b>Conditions to Avoid</b>	Incompatible products. Combustible material. Avoid shock and friction. Heat, flames and sparks. Excess heat.
<b>Incompatible Materials</b>	Organic materials, Powdered metals, Ammonia, Acids, Strong reducing agents, Alcohols, Combustible material
<b>Hazardous Decomposition Products</b>	Chlorine, Sodium oxides
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	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 ) LD50 = 6250 mg/kg ( Rat )	LD50 > 2000 mg/kg ( Rabbit ) LD50 > 10 g/kg ( Rabbit )	LC50 > 5.59 mg/L ( Rat ) 4.5 h LC50 > 28 g/m <sup>3</sup> ( Rat ) 1 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 eye, skin, 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** Kidney Blood

**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: = 7090 mg/L, 96h (Cyprinus carpio) LC50: = 4200 mg/L, 24h (Oncorhynchus mykiss) LC50: = 1750 mg/L, 96h (Oncorhynchus mykiss) LC50: = 13500 mg/L, 96h (Pimephales promelas)	Not listed	EC50: = 1093 mg/L, 24h (Daphnia magna)

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

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

## 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 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	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Sodium chlorate	X	X	-	231-887-4	-		X	X	X	X	X

**Legend:**

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

TSCA 12(b) Not applicable

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration  
 Not applicable

**CERCLA** Not applicable

**California Proposition 65** This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Sodium chlorate	X	X	X	-	X

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product contains the following DHS chemicals:

Component	DHS Chemical Facility Anti-Terrorism Standard
Sodium chlorate	2000 lb STQ

**Other International Regulations**

**Mexico - Grade** No information available

## 16. Other information

**Prepared By** Regulatory Affairs  
 Thermo Fisher Scientific  
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**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**