



SAFETY DATA SHEET

Creation Date 24-Nov-2010

Revision Date 19-May-23

Revision Number 1

1. Identification

Product Name Sodium chlorate
Cat No. : NC-2554, C7322, C7323
Synonyms No information available
Recommended Use Laboratory chemicals. No
Uses advised against Information available
Details of the supplier of the safety data sheet

Company

The Science Company
7625 W Hampden Ave #14
Lakewood CO 80227
Tel: 303-777-37770

Emergency Telephone Number

CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 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 CO₂, 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

Other hazards

May cause pulmonary edema.

3. Composition / information on ingredients

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

4. First-aid measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

Inhalation

Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Get medical attention immediately if symptoms occur.

Ingestion

Do not induce vomiting. Call a physician or Poison Control Center immediately.

**Most important symptoms/effects
Notes to Physician**

No information available. May cause methemoglobinemia
 Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Water spray. Carbon dioxide (CO₂). 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

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.

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

Should not be released into the environment. Prevent product from entering drains. Keep out of waterways. See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

Methods for Containment and Clean Up

Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep container tightly closed in a dry and well-ventilated place. Keep combustibles (wood, paper, oil, etc) away from spilled material.

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

| | |
|---------------------------------|---|
| Eye/face Protection | 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. |
| Skin and body protection | Wear appropriate protective gloves and clothing to prevent skin exposure. |
| Respiratory Protection | 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. |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice. |

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 | No information available |
| 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 | No information available |
| Relative Density | 2.490 |
| Solubility | No information available |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | No information available |
| Decomposition temperature | No information available |
| Viscosity | No information available |
| Molecular Formula | Cl Na O3 |
| Molecular Weight | 106.44 |

10. Stability and reactivity

| | |
|---|---|
| Reactive Hazard | No |
| Stability | Stable under normal conditions. |
| Conditions to Avoid | Incompatible products. Combustible material. Avoid shock and friction. Heat, flames and sparks. |
| Incompatible Materials | Organic materials, Powdered metals, Ammonia, Acids, Strong reducing agents, Alcohols |
| Hazardous Decomposition Products | Chlorine, Sodium oxides |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information

Acute Toxicity

Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|-----------------|--------------------|-------------|---------------------------------|
| Sodium chlorate | 1200 mg/kg (Rat) | Not listed | 28 g/m ³ (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 Mutagenic effects have occurred in experimental animals.

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 See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not empty into drains.

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|-----------------|------------------|--|------------|------------|
| Sodium chlorate | Not listed | 7090 mg/L LC50 96 h 1750 mg/L LC50 96 h 13500 mg/L LC50 96 h | Not listed | Not listed |

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available.

Mobility No information available.

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 Hazardous Categorization

| | |
|-----------------------------------|-----|
| Acute Health Hazard | Yes |
| Chronic Health Hazard | Yes |
| Fire Hazard | No |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

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

State Right-to-Know

| 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

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class C Oxidizing materials
 D1B Toxic materials



16. Other information

Prepared By Regulatory Affairs
 The Science Company
 Email: info@sciencecompany.com

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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 on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of SDS