

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Sodium chlorate
 Product Number : 244147
 Brand : Sigma-Aldrich
 Company : Sigma-Aldrich Canada, Ltd
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : ClNaO₃
 Molecular Weight : 106.44 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Sodium chlorate			
7775-09-9	231-887-4	017-005-00-9	-

3. HAZARDS IDENTIFICATION**Emergency Overview****Target Organs**

Blood, Kidney, Liver

WHMIS Classification

C Oxidizing Material Oxidizer

HMIS Classification

Health Hazard: 1
Chronic Health Hazard: *
Flammability: 0
Physical hazards: 2

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Ingestion Harmful if swallowed.

4. FIRST AID MEASURES

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General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES**Flammable properties**

Flash point not applicable
 Ignition temperature no data available

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE**Handling**

Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from combustible material.

Storage

Keep container tightly closed in a dry and well-ventilated place.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment**Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. For prolonged or repeated contact use protective gloves.

Eye protection

Safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form crystalline
 Colour colourless

Safety data

pH no data available
 Melting point 248 - 261 °C (478 - 502 °F)
 Boiling point no data available
 Flash point not applicable
 Ignition temperature no data available
 Lower explosion limit no data available
 Upper explosion limit no data available
 Density 2.490 g/cm³
 Water solubility soluble

10. STABILITY AND REACTIVITY**Storage stability**

Stable under recommended storage conditions.

Materials to avoid

Strong reducing agents, Organic materials, Alcohols

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Sodium oxides

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11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - rat - 1,200 mg/kg
 LD50 Inhalation - rat - 1 h - > 28,000 mg/m³
 LD50 Dermal - rabbit - > 10,000 mg/kg

Irritation and corrosion

Skin - rabbit - Mild skin irritation - 24 h
 Eyes - rabbit - Mild eye irritation

Sensitisation

no data available

Chronic exposure

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Genotoxicity in vivo - rat - Oral

DNA inhibition

Signs and Symptoms of Exposure

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer., Cough, Difficulty in breathing, Dizziness, Symptoms may be delayed., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential Health Effects

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Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Ingestion Harmful if swallowed.
Target Organs Blood, Kidney, Liver.

Additional Information

RTECS: FO0525000

12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)**

no data available

Ecotoxicity effects

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - > 1,000 mg/l - 96 h
 Toxicity to daphnia and other aquatic invertebrates. EC50 - Daphnia magna (Water flea) - > 1,000 mg/l - 48 h
 Toxicity to algae Growth inhibition NOEC - Scenedesmus subspicatus - 3,137 mg/l - 72 h
 Growth inhibition LOEC - Scenedesmus subspicatus - > 3,137 mg/l - 72 h

Further information on ecology

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An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS**Product**

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

UN-Number: 1495 Class: 5.1 Packing group: II
 Proper shipping name: Sodium chlorate
 Marine pollutant: No
 Poison Inhalation Hazard: No

IMDG

UN-Number: 1495 Class: 5.1 Packing group: II EMS-No: F-H, S-Q
 Proper shipping name: SODIUM CHLORATE
 Marine pollutant: No

IATA

UN-Number: 1495 Class: 5.1 Packing group: II
 Proper shipping name: Sodium chlorate

15. REGULATORY INFORMATION**DSL Status**

All components of this product are on the Canadian DSL list.

WHMIS Classification

C Oxidizing Material Oxidizer

16. OTHER INFORMATION**Further information**

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