

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product Identifier:

Product name: Sodium Chlorate
CAS number: 7775-09-9
EINECS number: 231-887-4
EU index number: 017-005-00-9
REACH registration number: 01-2119474389-23-XXXX
REACH registration notes: Candidate list of substances of a very high concern for Authorisation-
Neither banned nor restricted.

Relevant identified uses of the substance or mixture and uses advised against:

Identified use(s): For generation of Chlorine Dioxide for bleaching chemical pulp.

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Regulation 1272/2008 (CLP):

Physical: Ox. Sol. 1 – H271
Health: Acute Tox. 4 – H302
Environmental: Aquatic Chronic 2 – H411

EEC Directive 67/548/EEC & Directive 1999/45/EC:

O; R9, Xn; R22, N; R51/53

The full text for all R Phrases and Hazard Statements are listed in Section 16.

Human Health: Harmful if swallowed.

Environment: The product contains a substance which is toxic to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

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Label elements:

According to Regulation (EC) No. 1272/2008 (CLP).



Signal word(s): Danger

Hazard statement(s):
H271: May cause fire or explosion; strong oxidiser.
H302: Harmful if swallowed.
H411: Toxic to aquatic life with long lasting effects.

Precautionary statement(s):
P221: Take any precautionary measures to avoid mixing with combustibles.
P2873: Avoid release to the environment.
P264a: Toxic to aquatic life with long lasting effects.

Supplementary Precautionary Statement(s):

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking.
P220: Keep/store away from clothing/combustible materials.
P280: Wear protective gloves/protective clothing/ eye protection/ face protection.
P283: Wear fire/ flame resistant/ retardant clothing.
P301 + 312: IF SWALLOWED: Call a POISON CENTRE or doctor/ physician if you feel unwell.
P306 + 360: IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P330: Rinse mouth.
P371 + 380 + 375: In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
P391: Collect spillage.
P501: Dispose of contents/container to.

Other hazards: Hazardous components which must be listed on the label: Sodium Chlorate.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances:

REACH Registration Number: 01-2119474389-23XXXX
REACH Registration Notes: Candidate List of Substances of a very High Concern for Authorisation – Neither banned nor restricted.
CAS Number: 7775-09-9
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EC Number: 231-887-4
Gross Formula: 100

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4. FIRST AID MEASURES

Description of first aid measures:

General Advice: Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.

Inhalation: Consult a doctor after significant exposure. If unconscious place in recovery position and seek medical advice. Move into fresh air and keep at rest. Rinse nose and mouth with water.

Skin contact: Immediately remove all contaminated clothing and shoes and soak them in water to prevent risk of fire. Do not allow to dry out until washed.

Eye contact: Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If irritation persists, consult a specialist

Ingestion: Rinse mouth. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Obtain medical attention. Keep respiratory tract clear.

Most important symptoms and effects, both acute and delayed:

General Information: The absorption of this product into the body may lead to the formation of methaemoglobin that, in sufficient concentrations, causes cyanosis.

Indication of any immediate medical attention and special treatment needed:

Risk of methemoglobinemia. Not to be treated with methylthionin.

5. FIRE-FIGHTING MEASURES

Extinguishing Media:

Suitable extinguishing media: Water

Unsuitable extinguishing media: Carbon dioxide (CO₂). Powder. Fire blanket

Special hazards arising from the substance or mixture: Do not allow run off from fire-fighting to enter drains or water courses. Water spray may be ineffective unless used by experienced fire fighters. A fire can cause an explosion when sodium chlorate is present. Risks of ignition followed by flame propagation or secondary explosions shall be prevented by avoiding accumulation of dust, e.g. on floors and ledges.

Advice for fire-fighters:

Protective measures in a fire: Use a water spray to cool fully closed containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Fire-fighters should wear full protective clothing, including breathing equipment.

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of dust. Avoid dust generation. Provide adequate ventilation. Extinguish naked flames and remove all sources of ignition.

Environmental precautions:

Do not discharge into drains, water courses or onto the ground. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or appropriate regulatory body.

Methods and material for containment and cleaning up:

Dam with sand or similar material and collect in plastic or metal container for disposal. Do NOT use sawdust or other combustible material. Do NOT use wooden or cardboard containers. Sweep up without creating dust. Wash contaminated area with water. Keep combustibles away from spilled material. Spontaneous combustion of rags, paper, sawdust etc. contaminated with this material can occur. These should be removed from the workplaces and soaked with a considerable excess of water whilst awaiting disposal. They should not be allowed to dry out.

Reference to other sections:

For personal protection see Section 8.

7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid inhalation of dust. Never return unused material to storage receptacle. Protect from contamination. Avoid shock and friction. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations. Use only inert lubricants and packings for pumps, valves and other equipment. Change lubricants at regular intervals. Keep away from heat, sparks and open flame. No smoking.

Conditions for safe storage, including any incompatibilities:

Store in containers of non-combustible construction. Store in a fireproof area. FIBC's. Store on gravel or crushed stone, avoid storing in an FIBC's. No decomposition if stored and applied as directed. Store in tightly closed original container in a well-ventilated place. Keep containers tightly closed. Keep separate from food, feedstuffs, fertilisers and other sensitive material. Oxidising material – Keep away from flammable and combustible material.

Storage class:

Oxidiser storage. Segregate from combustible materials.

Specific end use(s):

No information available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Ingredient comment:

Contains no substances with occupational exposure limits.

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Exposure controls:

Appropriate engineering controls: Avoid formation of respirable dust particles. Provide appropriate exhaust ventilation at places where dust is formed. Ensure that eye wash stations and safety showers are close to the workstation location.

Respiratory protection: Use respiratory protection with particle filter, type P2.

Hand protection: PVC gloves are recommended. Rubber gloves are recommended.

Gloves material: Neoprene gloves.

Eye protection: Wear tight fitting goggles or face shield.

Skin protection: Protective suit must be worn.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice. When using do not eat, drink or smoke. Wash hands before breaks and at the end of the workday. Work clothes should be washed daily in water based laundry systems.

Protective Measures: General industrial hygiene practice.

Environmental exposure controls: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Appearance: Crystalline powder

Colour: White

Odour: Odourless

pH in water solution: 248 – 250°C

Boiling point/boiling range: Decomposes without melting

Flash point: Neutral

Lower explosion limit: ca. 728 g/l @ 20°C

Upper explosion limit: Not explosive

The product is classified as oxidising with the subcategory 1.

Other information: No further information given.

10. STABILITY AND REACTIVITY

Reactivity: Sodium chlorate is a strong oxidising agent.

Chemical stability: Stable under the prescribed storage conditions.

Possibility of hazardous reactions: Dust may form explosive measures in air.

Conditions to avoid: Do not store open containers at elevated temperatures.

Incompatible materials: Materials to avoid: Strong acids. Organic materials. Combustible materials.

Hazardous decomposition products: Oxygen.

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11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute Oral Toxicity: Toxic Dose 1 – LD50: 1200 mg/kg (oral, rat).

Inhalation: Product dust may be irritating to the respiratory system.

Skin Corrosion/Irritation: Product dust may be irritating.

Serious eye damage/eye irritation: Product dust may be irritating.

Ingestion: Harmful if swallowed.

Further information: No data available.

12. ECOLOGICAL INFORMATION

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment. The product contains substances which are toxic to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

Toxicity: LC50, 96h, Fish: >100
LC50, 72h, Algae: 1 - 10

Persistence and degradability: Aerobic: Not biodegradable. Anaerobic: Biodegradable.

Bio accumulative potential: Chlorate is converted to chlorite in plants, which is then accumulated in cells until toxic concentrations are reached, when plant dies. There is no evidence of accumulation in animals.

Mobility in soil: May be leached from the soil. Stays dissolved in water.

Results of PBT and vPvB assessment: This product is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Other adverse effects: No further information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods: The product should not be allowed to enter drains, water course or the soil. Do not contaminate ponds, waterways or ditches with chemical or used containers. Collect in plastic or metal containers for disposal. Empty remaining contents. Dispose of as unused product.

Waste Class: Empty containers should be transported/ delivered using a registered waste carrier for local recycling or waste disposal.

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14. TRANSPORT INFORMATION

UN number:

ADR/RID/ADN/IMDG/ICAO: 1495

Proper Shipping name: Sodium Chlorate

Transport hazard class:

ADR/RID/AND class: 5.1

ADR/RID/AND class: Class 5.1: Oxidising substances.

ADR Label no.: 5.1

IMDG class: 5.1

ICAO class/division: 5.1



Packing group:

ADR/RID/IMDG/ICAO: II

Environmental:

Environmentally Hazardous Substance/ Marine Pollutant.



Special precautions for users:

EmS: F-H, S-Q

Emergency Action Code: 1Y

Hazard Number (ADR): 50

Tunnel Restriction Code: (E)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: No information given.

15. REGULATORY INFORMATION

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

Health and safety listings: Major Accident Hazard Legislation: 96/82/EC Update 2003 Dangerous for the environment 9b
Quantity 1: 200t. Quantity 2: 500t 96/82/EC Update 2003 Oxidising 3 Quantity 1: 50t Quantity
2: 200t.

Water Hazard Classification: WGK (German) two (2): Hazardous for water.

Chemical safety assessment: A chemical safety assessment has not been carried out.

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Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Abbreviations and acronyms used in the safety data sheet:

PBT: Persistent, bioaccumulative and toxic.
vPvB: Very persistent and bioaccumulative.
OEL: Occupational exposure limit.

Full text of R Phrases: R22: Harmful if swallowed.
R51/53: Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
R9: Explosive when mixed with combustible material.

Full text of H-Statements: H271: May cause fire or explosion; strong oxidiser.
H302: Harmful if swallowed.
H411: Toxic to aquatic life with long lasting effects.

Legal disclaimer: The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.