Safety Data Sheet SODIUM CHLORITE Solution

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SECTION 1: Identification

GHS Product identifier

Product name	SODIUM CHLORITE Solution

Other means of identification

SODIUM CHLORITE 31% Solution	ST208

Recommended use of the chemical and restrictions on use

In the preparation of chlorine dioxide for immediate use; water purification; disinfectant formulations and sterilization; metallurgical and ore processing; biocide in drilling muds; bleaching agent for textiles, paper pulp, edible and inedible oils, shellacs, varnishes, waxes and straw products and oxidising agent.

Supplier's details

Name	ChemSupply Australia Pty Ltd
Address	38-50 Bedford Street 5013 Gillman South Australia Australia
Telephone	08 8440 2000
email	www.chemsupply.com.au

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

Dangerous goods of Class 8 (Corrosive) are incompatible in a placard load with any of the following:
Class 1, Class 4.3, Class 5, Class 6, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids, Class 7; and are incompatible with food and food packaging in any quantity.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Acute toxicity, dermal, Cat. 3
- Acute toxicity, oral, Cat. 4
- Hazardous to the aquatic environment, short-term (acute), Cat. 1
- Serious eye damage/eye irritation, Cat. 1

- Skin corrosion/irritation, Cat. 1B
- Specific target organ toxicity following repeated exposure, Cat. 2

GHS label elements, including precautionary statements

Pictograms

Signal word **Danger**

Hazard statement(s)

H302	Harmful if swallowed
H310	Fatal in contact with skin
H314	Causes severe skin burns and eye damage
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H311	Toxic in contact with skin

Precautionary statement(s)

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P262	Do not get in eyes, on skin, or on clothing.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physcian if you feel unwell,
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/physcian
P314	Get medical advice/attention if you feel unwell.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P391	Collect spillage.
P501	Dispose of contents/container to an approved waste disposal facility
P321	Specific treatment (see … on this label).
P405	Store locked up.

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 90.44

Components

Component	CAS no.	Concentration
Water (EC no.: 231-791-2)	**7732-18-5**	**68 - 69.5 % (weight)**
CLASSIFICATIONS: No data available. HAZARDS: No data available.		
Sodium chlorite (EC no.: 231-836-6)	**7758-19-2**	**30.5 - 32 % (weight)**
CLASSIFICATIONS: Acute toxicity, dermal, Cat. 2; Acute toxicity, oral, Cat. 3; Skin corrosion/irritation, Cat. 1B; Specific target organ toxicity following repeated		

exposure, Cat. 2. HAZARDS: H301 - Toxic if swallowed; H310 - Fatal in contact with skin; H314 - Causes severe skin burns and eye damage; H373 - May cause damage to organs [organs] through prolonged or repeated exposure [route].

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	Advice to Doctor: Chlorine dioxide vapors are emitted when this product contacts acids or chlorine. If these vapors are inhaled, monitor patient closely for delayed development of pulmonary edema which may occur up to 48-72 hours post-inhalation.
If inhaled	If inhaled, remove from contaminated area to fresh air immediately, avoid becoming a casualty. Make patient comfortable, keep warm and at rest until fully recovered. If breathing is difficult (or develops a bluish skin discolouration), supply oxygen by a qualified person. Apply artificial respiration with a respiratory medical device if not breathing. Do not use mouth to mouth resuscitation. Immediately medical attention is required.
In case of skin contact	Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. Seek medical advice.
In case of eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek medical advice.
If swallowed	Rinse mouth thoroughly with water immediately. DO NOT INDUCE VOMITING. Seek immediate medical advice.

Most important symptoms/effects, acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary
For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

SECTION 5: Fire-fighting measures

Suitable extinguishing media
Use extinguishing media most appropriate for the surrounding fire. No limitations to the type of extinguishing media.

Specific hazards arising from the chemical
Hazards from Combustion Products: May librate toxic fumes in fire (chlorine).

Material does not burn. Fire or heat will produce irritating, poisonous and/or corrosive gases. Containers may explode when heated.

Special protective actions for fire-fighters
Wear SCBA and chemical splash suit. Fully encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for these materials.

Further information
Combustibles wetted with this solution and then dried are easily ignited and will burn vigorously.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Do NOT touch or walk through this product. Do NOT touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if safe to do so. Prevent entry into waterways,drains, confined areas. Cover with DRY earth, sand or other non-combustible material.
Evacuate the area of all non-essential personnel. Avoid inhalation, contact with skin, eyes and clothing.

Methods and materials for containment and cleaning up
Do NOT touch or walk through this product. Do NOT touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Cover with DRY earth, sand or other non-combustible material.

SECTION 7: Handling and storage

Precautions for safe handling
Do not breathe vapour. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Wash hands and face thoroughly after working with material. Use in well ventilated areas away from all ignition sources. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities
Corrosiveness: Mildly corrosive to most metals.

Store in well ventilated area. Store in cool place and out of direct sunlight. Store away from combustible materials. Store away from organic materials. Store away from acids. Keep containers closed at all times.

Store at room temperature (15 to 25 °C recommended).

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls
Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection
Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hand Protection: Ensure hand protection complies with AS 2161, Occupational protective gloves - Selection, use and maintenance.

Body protection
Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection
Where ventilation is not adequate, respiratory protection may be required. Avoid breathing vapours or mists. Select and use respirators in accordance with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. When mists or vapours exceed the exposure standards then the use of the following is recommended: Approved respirator with organic vapour and dust/mist filters. Filter capacity and respirator type depends on exposure levels.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Clear yellow liquid.
Color	No data available.
Odor	Slight chlorine odour.
Odor threshold	No data available.
Melting point/freezing point	No data available.
Boiling point or initial boiling point and boiling range	~100 °C
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Flash point	No data available.
Explosive properties	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	~150 °C (exothermic).
Oxidizing properties	No data available.
pH	> 12
Kinematic viscosity	No data available.
Solubility	Solubility in Water: Soluble.
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	Specific Gravity: 1.21
Relative vapor density	No data available.
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes
No data available.

Further safety characteristics (supplemental)
No data available.

SECTION 10: Stability and reactivity

Reactivity
Stable under normal conditions of storage and handling.

Reacts with incompatible materials

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Evolves very irritating, toxic and corrosive gases on contact with acid.

Conditions to avoid
Heat and UV light.

Incompatible materials

Acids, reducing agents, organic material, combustible material, sulfur and metals (in powder form), cyanides, ammonium compounds, phosphorus, reducing substances, oxidizable substances, chlorine containing materials.

Hazardous decomposition products
Chlorine.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Ingestion: Harmful if swallowed. Ingestion of the material may cause chemical burns to the gastrointestinal tract. Symptoms include nausea, vomiting, diarrhoea, cramps, pain and headache. Chlorites can damage blood cells and might cause liver and kidney damage. May cause severe injury or death if swallowed.

Inhalation: Harmful if inhaled. Irritating to respiratory tract, nose and throat. May cause coughing, dyspnoea, severe injury or death if inhaled. Chlorite will react with the acids forming toxic chlorine dioxide gases.

Skin corrosion/irritation
Toxic in contact with skin. Strong irritant to skin and tissue. May cause severe injury, burns or death if absorbed through skin.

Serious eye damage/irritation
Harmful if in contact with eyes. Strong irritant to eyes. Causes burns. May cause corneal burns and permanent eye damage. Risk of serious damage to eyes.

Respiratory or skin sensitization
No data available.

Germ cell mutagenicity
No data available.

Carcinogenicity
No data available.

Reproductive toxicity
No data available.

Summary of evaluation of the CMR properties
No data available.

Specific target organ toxicity (STOT) - single exposure
No data available.

Specific target organ toxicity (STOT) - repeated exposure
H373 May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard
No data available.

Additional information
Chronic Effects: Repeated or prolonged skin contact may cause chronic dermatitis. Repeated or prolonged exposure to chlorites may cause anaemia and kidney or liver damage. Repeated or prolonged eye contact may result in permanent eye damage.

Sodium chlorite: guinea pig LD50 oral 300mg/kg (300mg/kg) Gigiena i Sanitariya. For English translation, see HYSAAV. Vol. 45(4), Pg. 6, 1980.
man TDLo oral 143mg/kg (143mg/kg) LUNGS, THORAX, OR RESPIRATION: CYANOSIS

GASTROINTESTINAL: NAUSEA OR VOMITING

KIDNEY, URETER, AND BLADDER: "CHANGES IN TUBULES (INCLUDING ACUTE RENAL FAILURE, ACUTE TUBULAR NECROSIS)" Renal Failure. Vol. 15, Pg. 645, 1993.
Link to PubMed
mouse LD50 oral 350mg/kg (350mg/kg) Gigiena i Sanitariya. For English translation, see HYSAAV. Vol. 45(4), Pg. 6, 1980.
rat LC50 inhalation 230mg/m3/4H (230mg/m3) National Technical Information Service. Vol. OTS0534543,
rat LD50 oral 165mg/kg (165mg/kg) LIVER: "JAUNDICE, OTHER OR UNCLASSIFIED"

KIDNEY, URETER, AND BLADDER: INTERSTITIAL NEPHRITIS Yakkyoku. Pharmacy. Vol. 31, Pg. 959, 1980.

SECTION 12: Ecological information

Toxicity
Very toxic to aquatic life.

Avoid release into the environment.

Persistence and degradability
Biodegradable.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Other disposal recommendations
Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)
UN Number: 1908
Class: 8
Packing Group: II
Proper Shipping Name: CHLORITE SOLUTION

Hazchem emergency action code (EAC)
2X

IMDG
UN Number: 1908
Class: 8
Packing Group: II
EMS Number:

Proper Shipping Name: CHLORITE SOLUTION

IATA
UN Number: 1908
Class: 8
Packing Group: II
Proper Shipping Name: CHLORITE SOLUTION

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP
Poison Schedule: S5

SECTION 16: Other information

Further information/disclaimer
ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'
Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.
Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.
Safe Work Australia, Workplace Exposure Standards for Airbourne Contaminants, December 2019
Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au
IATA, Dangerous Goods Regulations (DGR)
IMO, International Maritime Dangerous Goods Code (IMDG)