Safety Data Sheet SODIUM IODIDE

SDS no. FZ7CD8QV • Version 1.0 • Date of issue: 2024-07-09

SECTION 1: Identification

GHS Product identifier

Product name	SODIUM IODIDE
Product number	SA073

Recommended use of the chemical and restrictions on use

Photography, solvent for iodine, organic chemicals, laboratory reagent, medicine, feed additive, cloud seeding, scintillation (thallium-activated form) and expectorant.

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

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Serious eye damage/eye irritation, Cat. 2A
- Skin corrosion/irritation, Cat. 2
- Hazardous to the aquatic environment, short-term (acute), Cat. 1

GHS label elements, including precautionary statements

Pictograms

Signal word	**Warning**
Hazard statement(s)	
H315	Causes skin irritation
H319	Causes serious eye irritation
H400	Very toxic to aquatic life
Precautionary statement(s)	
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water/soap
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P273	Avoid release to the environment.
P391	Collect spillage.
P501	Dispose of contents/container to an approved waste disposal facility

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 149.89

Components

Component	CAS no.	Concentration
Sodium iodide (EC no.: 231-679-3)	**7681-82-5**	**100 % (weight)**
CLASSIFICATIONS: Hazardous to the aquatic environment, short-term (acute), Cat. 1; Serious eye damage/eye irritation, Cat. 2A; Skin corrosion/irritation, Cat. 2. HAZARDS: H315 - Causes skin irritation; H319 - Causes serious eye irritation; H400 - Very toxic to aquatic life.		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	First Aid Facilities: Maintain eyewash fountain in work area.
If inhaled	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
In case of skin contact	Wash affected areas with copious quantities of water. Remove contaminated clothing and wash before re-use. Seek medical advice if effects persist.
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 effects persist.
If swallowed	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

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, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media
Small fire: Use dry chemical, CO2, water spray or foam.
Large fire: Use water spray, fog or foam.

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

Material does not burn. Fire or heat will produce irritating, poisonous and/or corrosive gases. Runoff may pollute waterways.

Special protective actions for fire-fighters
Wear SCBA and structural firefighter's uniform.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Evacuate the area of all non-essential personnel. Avoid inhalation, contact with skin, eyes and clothing.
Wear protective clothing specified for normal operations (see Section 8)

Methods and materials for containment and cleaning up
Do NOT touch or walk through this product. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Prevent dust cloud. Use clean non-sparking tools to collect material and place it into loosely-covered plastic containers for later disposal.

SECTION 7: Handling and storage

Precautions for safe handling
Avoid generation or accumulation of dusts. Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Wash hands and face thoroughly after working with material.

Conditions for safe storage, including any incompatibilities
Corrosive when in presence of steel, aluminium, zinc and copper.
Keep container tightly closed Store in a cool, dry, well-ventilated area, out of direct sunlight. Store away from incompatible substances.

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 dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Solid
Appearance	White powder or colourless to white crystals.
Color	No data available.
Odor	Odourless.
Odor threshold	No data available.
Melting point/freezing point	651-661 °C
Boiling point or initial boiling point and boiling range	1304 °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	No data available.
Oxidizing properties	No data available.
pH	~6 - 9 (50 g/l, H2O, 20 °C)
Kinematic viscosity	No data available.
Solubility	Solubility in Water: Soluble. Solubility in Organic Solvents: Soluble in alcohol, acetone and glycerol.
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	1.3 hPa (767 °C)
Evaporation rate	No data available.
Density and/or relative density	Specific Gravity: 3.67
Relative vapor density	> 1 g/l
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes
No data available.

Further safety characteristics (supplemental)
Other Information: Slowly becomes brown in air. Deliquescent.
Taste: Saline, somewhat bitter taste.

SECTION 10: Stability and reactivity

Reactivity
Stable under normal conditions of storage and handling.

Chemical stability
Absorbs up to 5% moisture on exposure to air and becomes brown due to liberation of iodine.

Possibility of hazardous reactions
Reacts violently with bromide trifluoride, perchloric acid and oxidisers.

Conditions to avoid
Exposure to moisture. Light. Incompatibles.

Incompatible materials
Acids, alkali metals, ammonia, bromide trigluoride, chloral hydrate, hydrogen peroxide, iodide, perchloric acid, potassium chlorate, and oxidising agents.

Hazardous decomposition products
Hydrogen iodide vapours, sodium and sodium oxides.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Acute Toxicity - Oral: LD50 (rat): 4340 mg/kg.

Ingestion: May be harmful by ingestion. Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. Ingestion of the material in large amounts may lead to a decrease in blood pressure, vomiting and a fever.

Inhalation: May be harmful if inhaled. Dust causes irritation to the respiratory tract and mucous membranes. Inhalation of dust may cause coughing, choking, headaches, dizziness and weakness. May cause lung edema.

Skin corrosion/irritation
May cause sensitisation by skin contact. Causes irritation, redness, itching and pain to skin.

Serious eye damage/irritation
Irritating to eyes. Causes redness and pain.

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
No data available.

Aspiration hazard
No data available.

Additional information
Chronic Effects: Prolonged or over exposure to iodine compounds may possibly lead to Iodism; a toxic, chronic poisoning of iodine or iodides which causes coryza, ptyalism, emaciation weakness and skin eruptions (pimples, boils, hives, blisters as well as black and blue spots). Symptoms of iodism includes of skin rash, running nose, headache and irritation of the mucous membrane. Iodides are readily diffused across the placenta. Neonatal deaths from respiratory distress secondary to goiter have been reported. Iodides have been known to cause drug-induced fevers, which are usually of short duration.

Target organs: Thyroid, blood, bone marrow.

Sodium iodide: dog LDLo intravenous 760mg/kg (760mg/kg) "Abdernalden's Handbuch der Biologischen Arbeitsmethoden." Vol. 4, Pg. 1289, 1935.
man TDLo oral 100uL/kg/14D- (0.1mL/kg) ENDOCRINE: OTHER CHANGES

BLOOD: "CHANGES IN SERUM COMPOSITION (E.G., TP, BILIRUBIN, CHOLESTEROL)" Clinical Endocrinology Vol. 28, Pg. 283, 1988.
mouse LD50 intraperitoneal 430mg/kg (430mg/kg) Proceedings of the Society for Experimental Biology and Medicine. Vol. 115, Pg. 551, 1964.
Link to PubMed
mouse LD50 oral 1gm/kg (1000mg/kg) "Toxicometric Parameters of Industrial Toxic Chemicals Under Single Exposure," Izmerov, N.F., et al., Moscow, Centre of International Projects, GKNT, 1982Vol. -, Pg. 105, 1982.
rabbit LDLo oral 2362mg/kg (2362mg/kg) Journal of Pharmacology and Experimental Therapeutics. Vol. 30, Pg. 407, 1927.
rat LD50 intravenous 1060mg/kg (1060mg/kg) Naunyn-Schmiedeberg's Archiv fuer Experimentelle Pathologie und Pharmakologie. Vol. 222, Pg. 584, 1954.
Link to PubMed
rat LD50 oral 4340mg/kg (4340mg/kg) "Sbornik Vysledku Toxixologickeho Vysetreni Latek A Pripravku," Marhold, J.V., Institut Pro Vychovu Vedoucicn Pracovniku Chemickeho Prumyclu Praha, Czechoslovakia, 1972Vol. -, Pg. 21, 1972.

SECTION 12: Ecological information

Toxicity
Ecological Information: Very toxic to aquatic life.

Acute Toxicity - Daphnia: EC0 (Daphina magna): 0.17 mg/l/48h

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: 3077
Class: 9
Packing Group: III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains SODIUM IODIDE)

Hazchem emergency action code (EAC)
2X

IMDG
UN Number: 3077
Class: 9
Packing Group: III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains SODIUM IODIDE)

IATA
UN Number: 3077
Class: 9
Packing Group: III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains SODIUM IODIDE)

SECTION 15: Regulatory information

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

Australia SUSMP
Poison Schedule: NS

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)