

## Safety Data Sheet SODIUM THIOCYANATE

SDS no. B40RZG5M • Version 1.0 • Date of issue: 2023-09-06

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### SECTION 1: Identification

#### GHS Product identifier

Product name SODIUM THIOCYANATE

#### Recommended use of the chemical and restrictions on use

Analytical reagent, dyeing and printing textiles, black nickel plating, manufacture of other thiocyanate salts and artificial mustard oil, solvent for polyacrylates, medicine (antihypertensive) and laboratory reagent.

#### 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](http://www.chemsupply.com.au)

#### Emergency phone number

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

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### SECTION 2: Hazard identification

#### General hazard statement

Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

#### Classification of the substance or mixture

#### GHS classification in accordance with: UN GHS revision 7

- Acute toxicity, dermal, Cat. 4
- Acute toxicity, inhalation, Cat. 4
- Acute toxicity, oral, Cat. 4
- Serious eye damage/eye irritation, Cat. 1

#### GHS label elements, including precautionary statements

Pictograms



Signal word

Danger

Hazard statement(s)

H302 Harmful if swallowed  
H312 Harmful in contact with skin  
H318 Causes serious eye damage  
H332 Harmful if inhaled

Precautionary statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell,  
P302+P352 IF ON SKIN: Wash with plenty of water/soap  
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/physician  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P501 Dispose of contents/container to an approved waste disposal facility

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 81.07

Components

Component	CAS no.	Concentration
Sodium thiocyanate (EC no.: 208-754-4)	540-72-7	100 % (weight)
CLASSIFICATIONS: Acute toxicity, dermal, Cat. 4; Acute toxicity, inhalation, Cat. 4; Acute toxicity, oral, Cat. 4; Serious eye damage/eye irritation, Cat. 1. HAZARDS: H302 - Harmful if swallowed; H312 - Harmful in contact with skin; H318 - Causes serious eye damage; H332 - Harmful if inhaled.		

SECTION 4: First-aid measures

Description of necessary first-aid measures

If inhaled If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately obtain medical aid if cough or other symptoms appear.

In case of skin contact Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes. Ensure contaminated clothing is washed before re-use. Seek medical advice /attention depending on the severity.

In case of eye contact If contact with the eye(s) occurs, wash with copious amounts of water for approximately 15 minutes holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. Seek medical attention.

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.

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**SECTION 5: Fire-fighting measures**

**Suitable extinguishing media**

Use measures suitable for extinguishing surrounding fire.

**Specific hazards arising from the chemical**

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

**Special protective actions for fire-fighters**

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

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**SECTION 6: Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.

**Environmental precautions**

Do not discharge into drains, surface water or ground water. Do not discharge to subsoil/soil.

**Methods and materials for containment and cleaning up**

Sweep up (avoid generating dust) and using clean non-sparking tools transfer to a clean, suitable, clearly labelled container for disposal in accordance with local regulations.

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**SECTION 7: Handling and storage**

**Precautions for safe handling**

Do not breathe (dust, vapor or spray mist) Do not use in areas without adequate ventilation. Keep container closed when not in use. Wear suitable protective clothing, including gloves.

Avoid generation and inhalation of dusts.

**Conditions for safe storage, including any incompatibilities**

Store away from acids. Store in cool place and out of direct sunlight. Keep containers closed at all times.

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**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. If the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure standards, suitable respiratory protection must be worn.

**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**

Hand Protection: Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.

**Body protection**

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.

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**SECTION 9: Physical and chemical properties**

**Basic physical and chemical properties**

Physical state	Solid
Appearance	Colourless, deliquescent crystals or white powder.
Color	No data available.
Odor	Odourless
Odor threshold	No data available.
Melting point/freezing point	287 °C
Boiling point or initial boiling point and boiling range	No data available.
Flammability	Not combustible, but will give off highly toxic cyanide fumes if involved in a fire or exposed to heat.
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	> 368 °C
Oxidizing properties	No data available.
pH	~ 6.5 - 8.5 (100 g/l, H2O, 20 °C)
Kinematic viscosity	No data available.
Solubility	Solubility in Water: 1250 g/L (20 °C) Solubility in Organic Solvents: Soluble in alcohol.
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	< 1 hPa (20 °C)
Evaporation rate	No data available.
Density and/or relative density	Specific Gravity: 1.74
Relative vapor density	No data available.
Particle characteristics	No data available.

**Supplemental information regarding physical hazard classes**

No data available.

**Further safety characteristics (supplemental)**

Other Information: Hygroscopic and affected by light.

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**SECTION 10: Stability and reactivity**

**Reactivity**

Stable under normal conditions of storage and handling.

**Chemical stability**

Stable. Sensitive to strong heating.

**Possibility of hazardous reactions**

Contact with acid may liberate hydrogen cyanide, a very toxic gas.

Hazardous Polymerization: Will not occur.

**Conditions to avoid**

Avoid moisture.

**Incompatible materials**

Strong oxidising agents, strong acids, strong bases, chlorates, nitrates, nitrites, peroxides and mineral acids.

**Hazardous decomposition products**

Nitrogen oxides, sulfur compounds and hydrogen cyanide.

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**SECTION 11: Toxicological information**

**Information on toxicological effects**

**Acute toxicity**

LD50 oral (rat): 764 mg/kg.

Ingestion: Harmful if swallowed. May cause vomiting, disorientation, weakness, low blood pressure convulsions and death which may be delayed.

Inhalation: Harmful by inhalation. May cause irritation to the respiratory tract. Symptoms may include coughing and shortness of breath.

**Skin corrosion/irritation**

Harmful in contact with skin. Causes redness, itching and pain. May cause sensitization.

**Serious eye damage/irritation**

Causes serious eye damage.

**Respiratory or skin sensitization**

No data available.

**Germ cell mutagenicity**

No data available.

**Carcinogenicity**

No data available.

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### 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: Repeated or prolonged skin contact may cause chronic dermatitis. Symptoms of chronic poisoning include weakness, confusion, diarrhoea and skin rashes. Repeated ingestion of small amounts may cause hives, abnormal bleeding, enlarged thyroid, weakness, confusion, diarrhea, psychosis and collapse.

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Sodium thiocyanate: dog LDLo intravenous 100mg/kg (100mg/kg) GASTROINTESTINAL: NAUSEA OR VOMITING Naunyn-Schmiedeberg's Archiv fuer Experimentelle Pathologie und Pharmakologie. Vol. 169, Pg. 429, 1933.

guinea pig LDLo intraperitoneal 500mg/kg (500mg/kg) BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD

BEHAVIORAL: MUSCLE CONTRACTION OR SPASTICITY)

BEHAVIORAL: EXCITEMENT Naunyn-Schmiedeberg's Archiv fuer Experimentelle Pathologie und Pharmakologie. Vol. 169, Pg. 429, 1933.  
guinea pig LDLo oral 600mg/kg (600mg/kg) Journal of the American Pharmaceutical Association, Scientific Edition. Vol. 29, Pg. 152, 1940.

guinea pig LDLo subcutaneous 500mg/kg (500mg/kg) Journal of the American Pharmaceutical Association, Scientific Edition. Vol. 29, Pg. 152, 1940.

mouse LD50 intraperitoneal 500mg/kg (500mg/kg) PERIPHERAL NERVE AND SENSATION: FLACCID PARALYSIS WITHOUT ANESTHESIA (USUALLY NEUROMUSCULAR BLOCKAGE)

BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD

LUNGS, THORAX, OR RESPIRATION: RESPIRATORY STIMULATION Japanese Journal of Pharmacology. Vol. 3, Pg. 99, 1954.

[Link to PubMed](#)

mouse LD50 intravenous 484mg/kg (484mg/kg) BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD

LUNGS, THORAX, OR RESPIRATION: DYSPNEA Journal of the American Pharmaceutical Association, Scientific Edition. Vol. 29, Pg. 152, 1940.

mouse LD50 oral 362mg/kg (362mg/kg) "Toxicometric Parameters of Industrial Toxic Chemicals Under Single Exposure," Izmerov, N.F., et al., Moscow, Centre of International Projects, GKNT, 1982Vol. -, Pg. 106, 1982.

mouse LDLo subcutaneous 400mg/kg (400mg/kg) Journal of the American Pharmaceutical Association, Scientific Edition. Vol. 29, Pg. 152, 1940.

rabbit LDLo intravenous 100mg/kg (100mg/kg) Naunyn-Schmiedeberg's Archiv fuer Experimentelle Pathologie und Pharmakologie. Vol. 169, Pg. 429, 1933.

rabbit LDLo oral 750mg/kg (750mg/kg) Naunyn-Schmiedeberg's Archiv fuer Experimentelle Pathologie und Pharmakologie. Vol. 169, Pg. 429, 1933.

rabbit LDLo subcutaneous 200mg/kg (200mg/kg) AUTONOMIC NERVOUS SYSTEM: OTHER (DIRECT) PARASYMPATHOMIMETIC

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BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD

BEHAVIORAL: FOOD INTAKE (ANIMAL) Naunyn-Schmiedeberg's Archiv fuer Experimentelle Pathologie und Pharmakologie. Vol. 152, Pg. 250, 1930.

rat LD50 intraperitoneal 540mg/kg (540mg/kg) BEHAVIORAL: TREMOR

BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD

BEHAVIORAL: EXCITEMENT Journal of Pharmacology and Experimental Therapeutics. Vol. 96, Pg. 416, 1949.

rat LD50 intratracheal 232mg/kg (232mg/kg) "Toxicometric Parameters of Industrial Toxic Chemicals Under Single Exposure," Izmerov, N.F., et al., Moscow, Centre of International Projects, GKNT, 1982Vol. -, Pg. 106, 1982.

rat LD50 oral 764mg/kg (764mg/kg) BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD

LUNGS, THORAX, OR RESPIRATION: DYSPNEA Journal of the American Pharmaceutical Association, Scientific Edition. Vol. 29, Pg. 152, 1940.

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## SECTION 12: Ecological information

### Toxicity

Information on Ecological Effects: Ecotoxic effects:

Biological effects:

Fish toxicity: *P. promelas* LC50: > 100 mg/l/96 h.

Daphnia toxicity: *Daphnia magna* EC50: 11 mg/l/48 h.

Algal toxicity: *Selenastrum capricornutum* IC0: > 100 mg/l.

Bacterial toxicity: *Ps. putida* EC10: 8000 mg/l.

Biodegradable.

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## 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.

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## SECTION 14: Transport information

### ADG (Road and Rail)

Not dangerous goods

### IMDG

Not dangerous goods

### IATA

Not dangerous goods

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## SECTION 15: Regulatory information

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

**Australia SUSMP**

Poison Schedule: NS

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## **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.

### **Preparation information**

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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 for 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 Airborne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), [hcis.safeworkaustralia.gov.au](http://hcis.safeworkaustralia.gov.au)

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)