

Safety Data Sheet SODIUM METAL

SDS no. UZ73A0P1 • Version 1.0 • Date of issue: 2025-11-17

SECTION 1: Identification

GHS Product identifier

Product name SODIUM METAL

Other means of identification

Product Product Code

Sodium Metal LR (in liquid paraffin) SL074

Sodium Metal TG (in liquid paraffin) ST074

Recommended use of the chemical and restrictions on use

Tetraethyl and tetramethyl lead, titanium reduction, sodium peroxide, sodium hydride, polymerisation catalyst for synthetic rubber, analytical chemistry, to make sodium salts, reducing agent (ketones), laboratory reagent, coolant in nuclear reactors, electric power cable (encased in polyethylene), non-glare lighting for highways and heat transfer agent in solar powered electric generators.

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 4.3 (Dangerous When Wet) are incompatible in a placard load with any of the following: Class 1, Class 2.1, Class 5, Class 7, Class 8.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Skin corrosion/irritation, Cat. 1B
- Substances and mixtures, which in contact with water, emit flammable gases, Cat. 1

GHS label elements, including precautionary statements

Pictograms

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Signal word

Danger

Hazard statement(s)

H260

H314

AUH014

In contact with water releases flammable gases which may ignite spontaneously
Causes severe skin burns and eye damage
Reacts violently with water

Precautionary statement(s)

P223

P231+P232

P260

P264

P280

P301+P330+P331

P302+P335+P334

P303+P361+P353

P304+P340

P305+P351+P338

P310

P363

P370+P378

P402+P404

P405

P501

Do not allow contact with water.
Handle and store contents under inert gas/.... Protect from moisture.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash hands thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN: Brush off loose particles from skin. Immerse in cool water [or wrap in wet bandages].
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor/physician
Wash contaminated clothing before reuse.
In case of fire: Use agents recommended in Section 5 of SDS for extinction
Store in a dry place. Store in a closed container.
Store locked up.
Dispose of contents/container to an approved waste disposal facility

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight	22.99
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Component	Identification	Weight %	Classifications
Sodium in mineral oil	CAS no.: 7440-23-5 EC no.: 231-132-9 Index no.: 011-001-00-0	100 %	CLASSIFICATIONS: Substances and mixtures, which in contact with water, emit flammable gases, Cat. 1; Skin corrosion/irritation, Cat. 1B. HAZARDS: H260 - In contact with water releases flammable gases which may ignite spontaneously; H314 - Causes severe skin burns and eye damage.

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice

For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor (at once).

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If inhaled	If inhaled, remove from contaminated area to fresh air immediately. If breathing is difficult, give oxygen. 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	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	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.
If swallowed	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. Give water to drink. DO NOT INDUCE VOMITING. Seek 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, 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

DO NOT USE WATER OR FOAM.

Small fire: Use dry chemical, soda ash, lime or sand. If safe to do so, move undamaged containers from fire area.

Large fire: Use DRY sand, dry chemical, soda ash or lime or withdraw and let fire burn.

Cool containers with flooding quantities of water until well after fire is out. Avoid getting water inside containers.

Specific hazards arising from the chemical

Hazards from Combustion Products: Sodium oxides.

Will produce flammable substance on contact with water. Will ignite on contact with water or moist air and react vigorously or explosively on contact with water. Will be ignited by heat, sparks or flame and may re-ignite after fire is extinguished. Will produce irritating, poisonous and/or corrosive gases. Containers may explode when heated. Runoff may create multiple fire or explosion hazard.

Special protective actions for fire-fighters

Wear SCBA. Structural firefighter's uniform will provide limited protection.

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

ELIMINATE all ignition sources (no smoking, flares, sparks or flames) within at least 25m.

Do not touch or walk through spilled material.

Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas.

Water spray may be used to knock down vapours or divert vapour clouds.

DO NOT GET WATER inside containers or in contact with substance.

Small spill

Cover with DRY earth, sand or other non-combustible material followed by plastic sheet to minimize spreading or contact with rain.

Large Spill

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SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

SECTION 7: Handling and storage

Precautions for safe handling

Avoid substance contact and generation and inhalation of dust. Prevent all contact with water and with moist atmosphere.

Conditions for safe storage, including any incompatibilities

Keep containers securely sealed and protected against physical damage. Store away from sources of heat or ignition. Keep dry - reacts with water; may lead to drum rupture. Prevent all contact with water and with moist atmosphere.

Keep away from direct sunlight Store at room temperature (15 - 25 °C).

Store under nitrogen, mineral oil (paraffin oil or kerosene) - NEVER under halogenated hydrocarbons.

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.

Body protection

Footwear: Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

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

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/ NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Solid
Appearance	Soft, silver-white or grey solid. Lustrous when cut, becomes dull on exposure to air. Wax-like at room temperature, brittle at low temperatures.
Color	Silver-white or grey
Odor	Odourless.

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Odor threshold	
Melting point/freezing point	97.6 °C
Boiling point or initial boiling point and boiling range	892 °C
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Flash point	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
pH	No data available.
Kinematic viscosity	No data available.
Solubility	[12] Solubility in Water: Decomposes water on contact, violently with evolution of hydrogen to form sodium hydroxide. [13] Solubility in Organic Solvents: Insoluble in kerosene, benzene and naphtha.
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	1.2 hPa @ 400 °C
Density and/or relative density	Specific Gravity: 0.968 @ 25 °C
Relative vapor density	No data available.
Particle characteristics	No data available.

Further safety characteristics (supplemental)

Other Information: Ductile and malleable. Excellent electrical conductivity and high heat-absorbing capacity. Soluble in ammonia and mercury. Burns with a yellow flame.

SECTION 10: Stability and reactivity

Reactivity

Reacts with incompatible materials

Chemical stability

Oxidises rapidly in air. Flammable on contact with water. Forms carbonate/hydroxide layer on exposure to moist air.

Possibility of hazardous reactions

May react explosively with water; liberates flammable hydrogen gas.

Reacts exothermally with halogens, acids and halogenated hydrocarbons. Reacts explosively or forms explosive compounds with ice; aqueous solutions of hydrogen chloride, hydrogen fluoride or sulfuric acid; chlorobenzene and phosphorous trichloride dispersed in toluene or xylene; 1-chlorobutane with a dispersion of sodium in light petroleum (if the temperature is too low); chloroform and methanol (if inadequately cooled); diazomethane; ethanol with sodium finely dispersed in hydrocarbons (unless air is excluded); fluorinated compounds; carbon tetrachloride; chloroform; dichloromethane; chloromethane; tetrachloroethane; hexachlorocyclopentadiene; perfluorohexyl iodide; iodomethane and iodine pentafluoride.

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A light explosion occurs with iodine; phosphorus tribromide (if drops of water are added); carbon monoxide; ammonium nitrate; sodium nitrate and phosphoryl chloride (on heating).

Anhydrous hydrazine and sodium in ether react to form sodium hydrazide which explodes on contact in air, and molten sodium explodes with phosphorus tri- or pentachloride. The exothermic reaction of sodium wire and chlorobenzene in benzene under nitrogen is explosive if finely divided sodium is used, and the product of reduction of naphthalene in liquid ammonia detonates as crystallisation begins.

Mixtures of sodium and metal halides are sensitive to mechanical shock and other shock sensitive explosives are formed with liquid bromine, iodine bromide, iodine chloride; silver iodate or sodium iodate; phosphorus pentachloride; phosphorus tribromide; sulfur dichloride; boron tribromide; sulfur dibromide; sulfinyl fluoride; silicon tetrachloride; silicon tetrafluoride; inorganic oxygenated compounds (halide oxides or oxide sulfides) or oxygen-rich organic compound (alkyl oxalates).

Sodium may ignite in nitric acid (of density above 1.056); diethyl ether; fluorine gas, moist chlorine; sulfinyl chloride vapour at 300 °C; dinitrogen pentoxide; 2,2,3,3-tetrafluoropropanol; or on admixture with fine lead oxide.

Sodium reacts vigorously with dimethylformamide (on heating); diselenium dichloride (on heating); sodium peroxide (at 500 °C) and, when molten, with coarse lead oxide. Molten tellurium reacts vigorously when poured on to solid sodium. Ground or heated mixtures of sodium and sulfur interact violently. Reacts violently in ether with bromobenzene and 1-bromobutane (above 30 °C). Reacts violently with mercury and vanalyl chloride (above 180 °C). Reacts incandescently with iodine heptafluoride; phosphorous pentoxide; nitrosyl fluoride and nitryl fluoride. Reduces with incandescence bismuth (III) oxide, chromium trioxide, copper (II) oxide, tin (IV) oxide (on heating), mercury (I) oxide and molybdenum trioxide (molten sodium). Finely divided sodium luminesces in bromine vapour.

Conditions to avoid

Moisture.

Incompatible materials

Oxidising agents.

Hazardous decomposition products

Other decomposition products - No data available In the event of fire: see section 5

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Ingestion: Cause severe burns to the mouth and gastrointestinal tract, abdominal pain and vomiting.

Inhalation: Causes burns, severe irritation, sore throat, coughing, shortness of breath and delayed lung edema. Fumes from burning sodium are highly irritating to the nose, throat and upper tract. May be harmful if inhaled. Extremely destructive to tissue.

Skin corrosion/irritation

Causes burns. May cause deep, penetrating ulcers of the skin.

Skin corrosion/irritation: H314 Causes severe skin burns and eye damage.

Serious eye damage/irritation

Contact may cause severe burns or blindness. Fumes from burning sodium are highly irritating.

Serious eye damage/irritation: H314 Causes severe skin burns and eye damage.

Respiratory or skin sensitization

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

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Not classified based on available information.

Specific target organ toxicity (STOT) - single exposure

Not classified based on available information.

Specific target organ toxicity (STOT) - repeated exposure

Not classified based on available information.

Aspiration hazard

Not classified based on available information.

SECTION 12: Ecological information

Toxicity

Ecological Information: Product reacts with water.

Environmental Protection: (Risk of explosion!)

Acute Toxicity - Daphnia: Daphnia magna (water flea) EC50: 1640 mg/l/48 h.

Bioaccumulative potential

Concentration in organisms is not to be expected.

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.

Sewage disposal

Concentration in organisms is not to be expected.

Other disposal recommendations

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

SECTION 14: Transport information

ADG (Road and Rail)

UN Number: 1428

Class: 4.3

Packing Group: I

Proper Shipping Name: SODIUM

Hazchem emergency action code (EAC)

4W

IMDG

UN Number: 1428

Class: 4.3

Packing Group: I

EMS Number:

Proper Shipping Name: SODIUM

IATA

UN Number: 1428

Class: 4.3

Packing Group: I

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Proper Shipping Name: SODIUM

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

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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

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)