

Infosafe No™ 1CH6J Issue Date : November 2020 RE-ISSUED by CHEMSUPP

Product Name **SODIUM METAL**

Classified as hazardous

1. Identification

GHS Product Identifier	SODIUM METAL	
Company Name	CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)	
Address	38 - 50 Bedford Street GILLMAN SA 5013 Australia	
Telephone/Fax Number	Tel: (08) 8440-2000	
Emergency phone number	CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)	
E-mail Address	www.chemsupply.com.au	
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.	
Other Names	Name	Product Code
	Natrium SODIUM METAL LR	SL074

Other Information

Chem-Supply 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 Chem-Supply 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 Chem-Supply 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.

2. Hazard Identification

GHS classification of the substance/mixture	Substances and Mixtures which, in contact with water, emit flammable gases: Category 1 Skin Corrosion/Irritation: Category 1A
Signal Word (s)	DANGER
Hazard Statement (s)	H260 In contact with water releases flammable gases which may ignite spontaneously. H314 Causes severe skin burns and eye damage. AUH014 Reacts violently with water
Pictogram (s)	Flame, Corrosion



Precautionary statement – Prevention

P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire.
P231+P232 Handle under inert gas. Protect from moisture.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

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Precautionary

statement – Response P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363 Wash contaminated clothing before reuse.
P335+P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor/physician.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Precautionary

statement – Storage P402+P404 Store in a dry place. Store in a closed container.

Precautionary P404 Store in a closed container.

statement – Disposal P501 Dispose of contents/container to an approved waste disposal plant.

3. Composition/information on ingredients

Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Sodium	7440-23-5	100 %

4. First-aid measures

Inhalation 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.

Ingestion 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 if symptoms persist.

Skin 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.

Eye contact Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.

First Aid Facilities Maintain eyewash fountain and safety shower in work area.

Advice to Doctor Treat symptomatically based on judgement of doctor and individual reactions of the patient.

Other Information For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor at once.

5. Fire-fighting measures

Hazards from Combustion Products Sodium oxides.

Specific Methods 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 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.

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Hazchem Code	4W
Precautions in connection with Fire	Wear SCBA. Structural firefighter's uniform will provide limited protection.

6. Accidental release measures

Spills & Disposal	<p>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 SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.</p>
Personal Precautions	Evacuate the area of all non-essential personnel. Avoid inhalation, contact with skin, eyes and clothing.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)

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.
Storage Regulations	Refer Australian Standard AS/NZS 5026-2012 'The storage and handling of Class 4 dangerous goods'. Refer Australian Standard AS/NZS 2243.10:2004 'Safety in laboratories - Storage of chemicals'.

8. Exposure controls/personal protection

Other Exposure Information	No exposure standards have been established for this product by Safe Work Australia, however, the TWA exposure standard for dusts/mists not otherwise specified is 10 mg/m ³ . All atmospheric contamination should be kept to as low a level as is workable. These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
Appropriate engineering controls	Maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.
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.
Eye Protection	Safety glasses, goggles or faceshield as appropriate. 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.
Hand Protection	Wear gloves of impervious material conforming to AS/NZS 2161: Occupational

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	protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.
Personal Protective Equipment	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.
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	Wear suitable protective clothing to prevent skin contact.

9. Physical and chemical properties

Form	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.
Odour	Odourless.
Melting Point	97.6 °C
Boiling Point	892 °C
Solubility in Water	Decomposes water on contact, violently with evolution of hydrogen to form sodium hydroxide.
Solubility in Organic Solvents	Insoluble in kerosene, benzene and naphtha.
Specific Gravity	0.968 @ 25 °C
Vapour Pressure	1.2 hPa @ 400 °C
Flammability	Contact with moisture or water liberates flammable gases. HIGHLY FLAMMABLE. Keep away from heat, sparks or naked flames. Use flameproof equipment and fittings to prevent flammability risk. Electrically link and ground metal containers for transfer of the product to prevent accumulation of static electricity. Ensure adequate ventilation to prevent an explosive vapour-air mixture. Vapours will travel considerable distances to sources of ignition.
Molecular Weight	22.99
Other Information	Ductile and malleable. Excellent electrical conductivity and high heat-absorbing capacity. Soluble in ammonia and mercury. Burns with a yellow flame.

10. Stability and reactivity

Chemical Stability	Oxidises rapidly in air. Flammable on contact with water. Forms carbonate/hydroxide layer on exposure to moist air.
Conditions to Avoid	Moisture.
Incompatible Materials	Oxidising agents.
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.

11. Toxicological Information

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	Causes burns. May cause deep, penetrating ulcers of the skin.
Eye	Contact may cause severe burns or blindness. Fumes from burning sodium are highly irritating.
Respiratory sensitisation	Not classified based on available information.
Skin Sensitisation	Not classified based on available information.
Germ cell mutagenicity	Not classified based on available information.
Carcinogenicity	Not classified based on available information.
Reproductive Toxicity	Not classified based on available information.
STOT-single exposure	Not classified based on available information.
STOT-repeated exposure	Not classified based on available information.
Serious eye damage/irritation	H314 Causes severe skin burns and eye damage.
Mutagenicity	No evidence of mutagenic properties. Not classified based on available information.
Skin corrosion/irritation	H314 Causes severe skin burns and eye damage.

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12. Ecological information

Ecological Information	Product reacts with water.
Bioaccumulative Potential	Concentration in organisms is not to be expected.
Known Harmful Effects on the Environment	Harmful effect on aquatic organisms. Harmful effect due to pH shift (Sodium hydroxide solution could form).
Environmental Protection	Prevent this material entering waterways, drains and sewers. (Risk of explosion!)
Acute Toxicity - Daphnia	Daphnia magna (water flea) EC50: 1640 mg/l/48 h.

13. Disposal considerations

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.
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14. Transport information

Transport Information	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.
U.N. Number	1428
UN proper shipping name	SODIUM
Transport hazard class(es)	4.3
Hazchem Code	4W
Packing Group	I
EPG Number	4N3
IERG Number	26

15. Regulatory information

Regulatory Information	All of the significant ingredients in this formulation are compliant with Australian Industrial Chemicals Introduction Scheme (AICIS) regulations. Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Poisons Schedule	Not Scheduled

16. Other Information

Literature References	'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'. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand. Safe Work Australia, 'Hazardous Chemical Information System'. Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances'. Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment'.
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Contact Person/Point	Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT: All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change
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**Empirical Formula
& Structural
Formula**

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