Infosafe No™ 1CH7H Issue Date :November 2021 RE-ISSUED by CHEMSUPP

Product Name **ZINC NITRATE**

Classified as hazardous

1. Identification

GHS Product Identifier	ZINC NITRATE
Company Name	CHEMSUPPLY AUSTRALIA 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	Acidic catalyst, latex coagulant, laboratory reagent, intermediate and mordant.

Other Names

Name	Product Code
ZINC NITRATE HEXAHYDRATE LR	ZL008
ZINC NITRATE HEXAHYDRATE AR	ZA008

Other Information

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.

2. Hazard Identification

GHS classification of the substance/mixture	Hazardous to the Aquatic Environment - Long-Term Hazard: Category 2 Eye Damage/Irritation: Category 2A Oxidizing Solids: Category 2 Skin Corrosion/Irritation: Category 2 Specific target organ toxicity - Single Exposure Category 3 (respiratory tract irritation)
Signal Word (s)	DANGER
Hazard Statement (s)	H272 May intensify fire; oxidiser. H302 Harmful if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H411 Toxic to aquatic life with long lasting effects.
Pictogram (s)	Flame over circle, Exclamation mark, Environment



Precautionary statement – Prevention	P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P220 Keep/Store away from clothing/.../combustible materials. P221 Take any precaution to avoid mixing with combustibles ... P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product.

	P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection. P273 Avoid release to the environment.
Precautionary statement – Response	P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330 Rinse mouth. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P332+P313 If skin irritation occurs: Get medical advice/attention. P362 Take off contaminated clothing and wash before reuse. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P312 Call a POISON CENTER or doctor/physician if you feel unwell. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention. P370+P378 In case of fire: Use flooding quantities of water for extinction.
Precautionary statement – Storage	P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.
Precautionary statement – Disposal	P501 Dispose of contents/container to an approved waste disposal plant.

3. Composition/information on ingredients

Ingredients	Name	CAS	Proportion
	Zinc nitrate hexahydrate	10196-18-6	100 %

4. First-aid measures

Inhalation	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Consult a physician.
Ingestion	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.
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. In all cases of eye contamination it is a sensible precaution to seek medical advice.
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.

5. Fire-fighting measures

Hazards from Combustion Products	Toxic oxides of nitrogen, toxic fumes of zinc oxide, nitrous gases, nitric oxides, nitric acid, nitrogen and zinc.
Specific Methods	Small fire: USE FLOODING QUANTITIES OF WATER. Do not use dry chemicals, CO2 or foam. If safe to do so, move undamaged containers from fire area. Do not move cargo if cargo has been exposed to heat. Large fire: Flood fire area with water from a protected position. Cool containers with flooding quantities of water until well after fire is out - If impossible, withdraw from area and let fire burn. Avoid getting water inside containers: a violent reaction may occur. Dam fire control water for later disposal.
Specific hazards arising from the chemical	Will accelerate burning when involved in a fire. May explode from heating, shock, friction or contamination. Some will react explosively with hydrocarbons (fuels). May ignite combustibles (wood, paper, clothing, etc). Fire may produce irritating, poisonous, and/or corrosive gases. Containers may

	explode when heated. Runoff may create fire or explosion hazard. Mixtures with combustible material are readily ignited and may burn fiercely.
Hazchem Code	1Y
Decomposition Temp.	105-131 °C (loses water of crystallization)
Precautions in connection with Fire	Wear SCBA and chemical splash suit. Structural firefighter's uniform will provide limited protection.

6. Accidental release measures

Spills & Disposal	Do not contaminate. Keep combustibles (wood, paper, clothing, oil, etc.) away from spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use water spray to knock down vapours or divert vapour clouds. Prevent entry into waterways, drains or confined areas. Prevent exposure to heat. Dry Spill Use clean non-sparking tools to transfer material to a clean, dry plastic container and cover loosely. Move container from spill area. Small Liquid Spill Use a non-combustible material like vermiculite, sand or earth to soak up the product and place in a loosely-covered container for later disposal. Large Liquid Spill SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.
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 ingestion and inhalation of vapour or dust. Avoid contact with eyes, skin, or clothing. Avoid prolonged or repeated exposure. Keep closed. Minimize dust generation and accumulation. Operations should be carried out in an efficient fume hood or equivalent system. Use with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Wear suitable protective clothing. Rubber gloves, eye protection and protective clothing should be worn. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Discard contaminated shoes. Keep away from heat and all sources of ignition. Ground all equipment containing material. Keep away from combustible material. Empty containers pose a fire risk, evaporate the residue under a fume hood. Chemicals should be used only by those trained in handling potentially hazardous materials.
Conditions for safe storage, including any incompatibilities	Store in tightly sealed containers, in a cool, dry, well-ventilated place away from incompatible materials. Product is hygroscopic. Take precautions to avoid contact with atmospheric moisture. Protect against physical damage, direct sunlight and moisture. Keep away from heat and sources of ignition (sparks and open flame). Oxidizing materials should be stored in a separate safety storage cabinet or room. Avoid storage on wood floors. Separate from incompatibles, strong bases, combustibles, organic or other readily oxidizable materials. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.
Corrosiveness	Solutions in water are slightly corrosive. - ADGC
Storage Regulations	Refer Australian Standard AS 4326-1995 'The storage and handling of oxidizing agents'.
Storage Temperatures	Store at room temperature (15 to 25 °C recommended).
Unsuitable Materials	Organic material.

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/m3. 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	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 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.
Body Protection	Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Solid
Appearance	Colourless or white crystals or flakes or white powder.
Odour	Slightly pungent nitric acid odour.
Decomposition Temperature	105-131 °C (loses water of crystallization)
Melting Point	~36 °C
Boiling Point	Decomposes @ 105 - 131 °C (loses water of crystallization).
Solubility in Water	Easily soluble in cold water (1843 g/l @ 20 °C).
Solubility in Organic Solvents	Very soluble in alcohol.
Specific Gravity	2.067
pH	5.1 (5% H2O).
Vapour Pressure	Negligible (mm Hg).
Vapour Density (Air=1)	8.4; 10.3.
Volatile Component	0 %vol @ 21 °C

Partition Coefficient: n-octanol/water	log Pow = -0.51.
Flammability	Not combustible but assists combustion of other substances. Strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.
Explosion Properties	May act as initiation source for dust or vapour explosions.
Molecular Weight	297.47
Oxidising Properties	Strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Increases flammability of any combustible substance in contact with it.

10. Stability and reactivity

Chemical Stability	Stable under ordinary conditions of use and storage. Hygroscopic
Conditions to Avoid	Incompatible materials, heat, sparks, flames, or other sources of ignition, dust generation, combustible materials, reducing agents and moisture.
Incompatible Materials	Reducing agents, combustible materials, organic materials, metal powders, metals, cyanides, sodium hypophosphite, stannous chloride, thiocyanates, carbon, sulfur, copper, sulfides, metallic sulfides, phosphorus, alkalies, acids, amines.
Hazardous Decomposition Products	Toxic metal fumes of zinc and toxic fumes of nitrogen oxides, nitrous gases, nitric oxides, zinc oxide and nitric acid.
Possibility of hazardous reactions	Explodes when sprinkled on hot carbon. Can react violently with carbon, copper, metal sulfides, organic matter, phosphorus, sulfur. Extremely reactive with reducing agents. Capable of reacting rapidly with reducing agents at elevated temperatures. Contact with combustible material may cause fire. Capable of reacting rapidly with combustible materials at elevated temperatures. Highly reactive with alkalis. Slightly reactive to reactive with organic materials, metals. Very slightly to slightly reactive with acids.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat): 20000 mg/kg;
Ingestion	Harmful if swallowed. Causes irritation of the gastrointestinal tract with abdominal pain, nausea, vomiting and diarrhoea. If appreciable amounts are ingested, abdominal pain, cramps, nausea, collapse and drop in blood pressure may result together with faintness and bluish lips and skin (methaemoglobinaemia).
Inhalation	Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. May cause methaemoglobinaemia, cyanosis (bluish discolouration of skin due to deficient oxygenation of the blood), convulsions, tachycardia, dyspnoea (laboured breathing), and death. Effect of the decomposition products: Inhalation may lead to the formation of oedemas in the respiratory tract.
Skin	Causes skin irritation. Symptoms include redness, itching, and pain.
Eye	Causes serious eye irritation. Causes redness, tears and pain, possibly blurred vision.
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	No evidence of carcinogenic properties. Not classified based on available information.

Reproductive Toxicity	Not classified based on available information.
STOT-single exposure	Specific target organ toxicity - Single Exposure Category 3 (respiratory tract irritation) H335 May cause respiratory irritation.
STOT-repeated exposure	Not classified based on available information.
Chronic Effects	Zinc salts are eliminated fairly promptly, making chronic effects less than acute.
Serious eye damage/irritation	Eye Damage/Irritation: Category 2A H319 Causes serious eye irritation. .
Skin corrosion/irritation	Skin Corrosion/Irritation: Category 2 H315 Causes skin irritation.

12. Ecological information

Ecotoxicity	Highly toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment. Hazard for drinking water supplies. Bactericidal effect. Depending on the concentration, nitrogen compounds may contribute to the eutrophication of drinking-water supplies.
Mobility	Likely to be mobile in the environment due to it's solubility.
Bioaccumulative Potential	No bioaccumulation is to be expected (log Pow <1). Distribution: log Pow = -0.51.
Information on Ecological Effects	The following applies to soluble zinc compounds in general: Inorganic zinc salts have a bactericidal effect. From >10 mg/Zn/l on, the bacteriological self-purification of water is inhibited or suppressed. Contamination of ground water involves risks for drinking water catchment. The following applies to nitrates in general: Hazard for drinking water.
Environmental Protection	Do not allow to enter waters, waste water, or soil!

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.

14. Transport information

Transport Information	Dangerous Goods of Class 5.1 Oxidising Agents are incompatible in a placard load with any of the following: - Class 1, Class 2.1, Class 2.3, Class 3, Class 4, Class 5.2, Class 7, Class 8, Fire risk substances and combustible liquids.
U.N. Number	1514
UN proper shipping name	ZINC NITRATE
Transport hazard class(es)	5.1
Hazchem Code	1Y
Packing Group	II
EPG Number	5A1
IERG Number	31
Environmental Hazards	Bactericidal effect. Hazard for drinking water supplies.

15. Regulatory information

Regulatory Information	All the constituents of this product are listed on the Australian Inventory of Chemical Substances (AICS), or exempted. 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'.

Contact Person/Point

Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT:
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Empirical Formula & Structural Formula

Empirical Formula: $N_2O_6Zn \cdot 6H_2O$.
Structural Formula: $Zn(NO_3)_2 \cdot 6H_2O$.

...End Of MSDS...