



chem-supply

Safety Data Sheet

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Infosafe No™	1CH20	Issue Date : January 2019	RE-ISSUED by CHEMSUPP
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Product Name : **COBALT NITRATE Hexahydrate**

Classified as hazardous

1. Identification

GHS Product Identifier	COBALT NITRATE Hexahydrate	
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 Fax: (08) 8440-2001	
Emergency phone number	CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)	
Recommended use of the chemical and restrictions on use	Cobalt pigments, sympathetic inks, hair dyes, decorating stoneware and porcelain, preparation of catalysts, production of vitamin B12 supplements, additive to soils and animal feeds, oxidising agent and laboratory reagent.	
Other Names	<u>Name</u>	<u>Product Code</u>

COBALT NITRATE Hexahydrate LR
 COBALT NITRATE Hexahydrate AR
 Cobalt (II) nitrate hexahydrate, Cobaltous nitrate hexahydrate,
 Cobaltous nitrate

CL091
 CA091

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	Hazardous to the Aquatic Environment - Acute Hazard: Category 1 Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1 Carcinogenicity: Category 1 Sensitization - Respiratory: Category 1 Sensitization - Skin: Category 1 Toxic to Reproduction: Category 1B Skin Corrosion/Irritation: Category 1B Specific Target Organ Toxicity - Repeated Exposure Category 1 Acute Toxicity - Oral: Category 4
Signal Word (s)	DANGER
Hazard Statement (s)	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H350 May cause cancer by inhalation. H360 May damage fertility. H372 Causes damage to organs through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects.
Pictogram (s)	Health hazard, Corrosion, Exclamation mark, Environment



Precautionary statement – Prevention

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P270 Do not eat, drink or smoke when using this product.



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Precautionary statement – Response

P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Use personal protective equipment as required.
P285 In case of inadequate ventilation wear respiratory protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
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.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.

Precautionary statement – Storage**Precautionary statement – Disposal**

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

3. Composition/information on ingredients

Chemical Solid

Characterization**Ingredients**

<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	<u>Hazard Symbol</u>	<u>Risk Phrase</u>
Cobalt (II) nitrate	10026-22-9	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 drench facilities 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

Suitable extinguishing media Use appropriate fire extinguisher for surrounding environment.

Hazards from Combustion Products May evolve toxic fumes in fire (nitrogen oxides).

Specific Methods Small fire: Use flooding quantities of water. Do NOT use dry chemical, CO2 or foam. If safe to do so, move undamaged containers from the 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 the fire is out. If possible, withdraw from area and let it burn. Avoid getting water inside the 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 on 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 on heating. Runoff may create fire or explosion hazard.



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Product Name : **COBALT NITRATE Hexahydrate**

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Hazchem Code 1Y**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 the spilled material. Do NOT touch damaged containers or spilled material unless wearing appropriate protective clothing. 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****Personal Protection** Use personal protective equipment listed in Section 8.**Environmental****Precautions**

Prevent from entering into drains, ditches, rivers or the sea.

7. Handling and storage**Precautions for Safe Handling** Avoid generation or accumulation of dusts. Avoid prolonged or repeated contact with skin, eyes and clothing. Wash hands and face thoroughly after working with material. Only use in well-ventilated areas.**Conditions for safe storage, including any incompatibilities** Store in a cool, dry place. Keep containers securely sealed and protected against physical damage. Do not store on wooden floors. Store away from combustible materials. Store away from sources of heat or ignition. Hygroscopic.**Storage Regulations**

Refer Australian Standard AS 4326 - 1995 'The storage and handling of oxidizing agents'.

8. Exposure controls/personal protection**Other Exposure Information** 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. A time weighted average (TWA) has been established for Cobalt, metal dust & fume (as Co) (Safe Work Australia) of 0.05 mg/m³. The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. NOTE: Sensitiser.**Appropriate engineering controls** In industrial situations 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. These methods should be used in preference to personal protective equipment.**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** Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.**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 clothing or protective clothing should be worn, preferably with an apron. Clothing for protection



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Product Name : **COBALT NITRATE Hexahydrate**

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Hygiene Measures against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals. 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	Red crystals.
Odour	Odourless.
Melting Point	55 - 57 °C
Boiling Point	74 - 75 °C (decomposes)
Solubility in Water	Soluble (2170 g/L @ 100 °C).
Solubility in Organic Solvents	Soluble in most organic solvents.
Specific Gravity	1.87
pH	pH ~ 4.0 (100 g/L, H ₂ O, 20 °C)
Flammability	Non combustible. This material is an oxidising agent and may assist combustion. The possibility of toxic fumes in the event of a fire should be considered.
Molecular Weight	291.03
Other Information	Red liquid becomes green and decomposes to the oxide above 74 °C.

10. Stability and reactivity

Chemical Stability	Deliquescent in moist air.
Conditions to Avoid	Exposure to moisture. Heat, sources of ignition. Incompatibles.
Incompatible Materials	Readily oxidisable materials, sodium hypophosphite, stannous chloride, reducing agents, aluminium powder, alkyl esters, phosphorous, tin (II) chloride, phosphinates, organic materials, strong acids, heavy metals, cyanides, thicyanates, isothiocyanates and hypophosphites.
Hazardous Decomposition Products	Nitrous gases released during decomposition.
Possibility of hazardous reactions	Mixtures with combustible material are readily ignited and may burn fiercely.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat): 691 mg/kg.
Ingestion	Toxic. Symptoms include of abdominal pain, nausea, vomiting, diarrhoea, flushing of the face and ears, mild hypotension, rash and ringing in the ears. Causing systemic effects such as lack of appetite, drop in blood pressure, agitation and spasms.
Inhalation	May be harmful if inhaled. Irritating to respiratory system as may cause shortness of breath, coughing and pneumonitis. Respiratory hypersensitivity, asthma may appear. Inhalation of cobalt dust and fume is associated with an increased incidence of lung disease.
Skin	Causes severe skin burns. Contact causes irritating via redness, itching and pain to skin with symptoms including of dermatitis, nausea and vomiting. Risk of sensitisation.
Eye	Cause eye irritations/burns.
Respiratory sensitisation	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sensitisation	H317 May cause an allergic skin reaction.
Carcinogenicity	The International Agency for Research on Cancer (IARC) indicates there is limited evidence for carcinogenicity of cobalt (II) chloride in experimental animals, and has assigned cobalt and cobalt compounds as possibly carcinogenic to humans (group 2B). H350 May cause cancer by inhalation. H360 May damage fertility.
Reproductive Toxicity	
STOT-repeated exposure	H372 Causes damage to organs through prolonged or repeated exposure.



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Product Name : **COBALT NITRATE Hexahydrate**

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Chronic Effects Intoxication: Target organs: kidneys, heart and pancreas.
Prolonged or over exposure of cobalt dust/fumes inhalation is associated with an increased incidence of lung disease. Prolonged or over exposure by ingestion depresses blood cell production. Also may experience diarrhoea, loss of appetite, decrease in blood pressure and body temperature.

12. Ecological information

Ecotoxicity No ecological data available for this product.**Environmental Protection** Do not allow product to enter drains, waterways or sewers.

13. Disposal considerations

Disposal Considerations Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and disposed of according to relevant local, state and federal government regulations.

14. Transport information

Transport Information Dangerous goods of Class 5.1 (Oxidizing Agent) 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** 1477**UN proper shipping name** NITRATES, INORGANIC, N.O.S.**Transport hazard class(es)** 5.1**Hazchem Code** 1Y**Packing Group** II**EPG Number** 5A1**IERG Number** 31

15. Regulatory information

Regulatory Information Listed in the Australian Inventory of Chemical Substances (AICS). 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.
Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997.
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007.
Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011.
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010.
Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.
Safe Work Australia, 'Hazardous Chemical Information System, 2005'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.
Contact Person/Point Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**

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Empirical Formula & $\text{Co}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$

Structural Formula

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