

SAFETY DATA SHEET (SDS)




Cobalt (II) nitrate, 0.1M

Issue date: 24-11-2025

Section 1: Product Identifier and Chemical Identity

Product Identifier	
Product Name:	Cobalt (II) nitrate, 0.1M
Product Codes:	MC91.05 MC92.05
Other means of identification:	
Chemical formula, alternative names:	Co(NO ₃) ₂ (aq) Cobaltous nitrate Nitric acid, cobalt(2+) salt
Recommended use of the chemical and restrictions on use	
Recommended Use:	For laboratory use only.
Suppliers name, address and phone number	
Supplier's Name:	Southern Biological
Supplier's ABN:	94 630 703 810
Supplier's Address:	168 Fulham Road Alphington Victoria 3078 Australia
Supplier's Phone No.:	1300 138 561
Emergency Phone number (BH)	1300 138 561

Section 2: Hazard Identification

Classification of the Hazardous Chemical	
Hazard Category	Acute toxicity - category 4 Carcinogenicity - category 1B Specific target organ toxicity (repeated exposure) - category 2 Reproductive toxicity - category 1B Respiratory sensitisation - category 1 Skin sensitisation - category 1 Hazardous to the aquatic environment (acute) – category 1 Hazardous to the aquatic environment (chronic) – category 1 Serious eye damage – category 2
Label elements	
Hazard Pictograms:	   exclamation mark health hazard environment
Signal Word:	Danger

Hazard Statements:	Harmful if swallowed May cause cancer if inhaled May cause damage to organs through prolonged or repeated exposure if inhaled May damage fertility May cause allergy or asthma symptoms or breathing difficulties if inhaled May cause an allergic skin reaction Very toxic to aquatic life with long lasting effects Causes serious eye irritation
Precautionary Statements:	Should not be handled by pregnant people. Use personal protective equipment. Do not eat, drink or smoke when using this product Obtain, read and follow all safety instructions before use Keep container tightly closed Do not breathe mists/vapours/spray Wash hands thoroughly after handling Avoid release to the environment
Other Hazards	
Results of PBT and vPvB assessment:	PBT: Not applicable vPvB: Not applicable

Section 3: Composition/information on ingredients

Ingredients		
Name	CAS	Proportion
Water	7732-18-5	97.1%
Cobalt (II) nitrate, hexahydrate	10026-22-9	2.9%

Section 4: First Aid Measures

Necessary first aid measures	
After inhalation:	Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms; call a doctor.
After skin contact:	Wash with water and soap and rinse thoroughly. If skin irritation occurs: Get medical advice/ attention. Launder clothing before reuse.
After eye contact:	Immediately hold eyelids open and flush with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
After swallowing:	Wash out mouth with water. Obtain emergency medical attention. Call a POISON CENTRE or doctor/physician if you feel unwell.
Symptoms caused by exposure	
Acute:	May burn or irritate gastric tissue. Irritating to eye tissue. Harmful if absorbed through skin. Inhalation of vapours may irritate nose and throat. Inhalation of mists into lungs can cause pneumonitis.
Chronic:	Repeated or prolonged skin contact may cause severe irritation or dermatitis.
Medical attention and special treatment	
Indications of any immediate medical attention and special treatment needed	No further relevant information available.

Section 5: Firefighting measures

Extinguishing media	
Suitable extinguishing equipment:	Water spray, carbon dioxide, dry chemical powder or appropriate foam.
Specific hazards arising from the chemical:	Decomposition products include oxides of nitrogen.
Advice for firefighters	
Special protective equipment and precautions:	Do not enter the fire area without proper protective equipment including respiratory equipment.

Section 6: Accidental release measures

General Information	
Personal precautions, protective equipment and emergency procedures:	Restrict access to area. Prevent the spread of any spill to minimise harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum.
Environmental precautions:	Prevent entry to sewers and public waters. Avoid release to the environment. Notify authorities if spill to sewers or public waters.
Methods and material for containment and cleaning up:	Dispose of contaminating material as waste according to item 13. Ensure adequate ventilation.
Reference to other sections:	See Section 7 for information on safe handling. See Section 8 for information on protective equipment. See Section 13 for disposal information.

Section 7: Handling and Storage

General Information	
Precautions for safe handling:	Ensure good ventilation/exhaustion at the workplace. Wash hands after use. Do not eat, drink or smoke when using this product. Wash contaminated clothing and protective equipment prior to entering eating area.
Information about fire – and explosion protection:	No special measures required.
Conditions for safe storage, including any incompatibilities.	
Storage:	Store in cool dry area out of direct sunlight and incompatible materials. Keep containers closed when not in use. Store in suitably labelled containers.
Requirements to be met by storerooms and receptacles:	No special requirements.
Information about storage in one common storage facility:	Not required.
Further information about storage conditions:	Keep container tightly sealed. Keep out of direct sunlight.

Section 8: Exposure controls/personal protection.

General information	
Additional information about design of technical facilities:	No further data: see section 7

Control parameters:				
Ingredients with limit values that require monitoring at the workplace:				
Name		STEL	TWA	
		mg/m³ ppm	mg/m³ ppm	Footnote
Cobalt, metal dust and fume (as Co)		- -	0.05 -	
Nitric acid		10 4	5.2 2	
Additional 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. The STEL is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. 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.		
Exposure Controls:				
General protective and hygienic measures:		Use only in systems, processes and procedures in which effective ventilation has been provided. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Avoid contact with eyes.		
Respiratory protection:		In case of significant exposure use respiratory filter device. Not normally required.		
Clothing / Foot-wear and equipment		No special requirements.		
Protection of hands:		PVC or rubber gloves		
Eye protection:		Tightly sealed goggles		
Skin protection:		Laboratory Coat		

Section 9: Physical and chemical properties

Appearance:	
Form:	Liquid
Colour:	Pink
Odour:	Not determined
Odour Threshold:	Not determined
pH value:	Not determined
Change in Condition:	
Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not determined
Flash point:	Not determined
Flammability (solid / gaseous)	Not determined

Ignition Temperature	
Decomposition temperature:	Not determined
Self-igniting:	Not determined
Danger of explosion:	Not determined
Explosion limits	
Lower:	Not determined
Upper:	Not determined
Vapour pressure:	Not determined
Density:	Not determined
General Info	
Relative density:	Not determined
Vapour density:	Not determined
Evaporation rate:	Not determined
Solubility in/ Miscibility with water:	Miscible
Partition coefficient (n-octanol/water):	Not determined
Viscosity:	Not determined
Other information:	Not determined

Section 10: Stability and reactivity

Reactivity	
General	No further relevant information available.
Chemical Stability	
Thermal decomposition / conditions to be avoided:	No decomposition if used according to specifications.
Possibility of hazardous reactions:	No dangerous reactions known.
Conditions to avoid:	Will corrode metals. Will produce toxic gases on contact with cyanides, sulphides etc
Incompatible materials:	Strong alkalis, powdered metals, water-reactive chemicals
Hazardous decomposition products:	Hazardous polymerisation will not occur.

Section 11: Toxicological information

Information on toxicological effects	
Ingestion:	Harmful if swallowed. May burn or irritate gastric tissue.
Skin corrosion/irritation	Harmful if absorbed through skin. May irritate skin tissue with prolonged contact.
Serious eye damage/irritation:	Irritating to eye tissue.
Inhalation:	Harmful if inhaled. Inhalation of vapours may irritate nose and throat. Inhalation of mists into lungs can cause pneumonitis.
Germ cell mutagenicity:	Suspected of causing genetic defects

Carcinogenicity:	May cause cancer		
Reproductive toxicity:	May damage fertility or the unborn child.		
Specific target organ toxicity (STOT) – single exposure:	No further details		
Specific target organ toxicity (STOT) – repeated exposure:	Repeated or prolonged skin contact may cause severe irritation or dermatitis.		
Toxicology data for the components:			
Component	LD50 oral	LD50 dermal	LC50 inhalation
Cobalt (II) nitrate hexahydrate	691 mg/kg (rat)	-	-
Nitric acid	-	-	> 2.65 mg/L.4h (rat)

Section 12. Ecological information

Ecotoxicity	
Acute	LC50 85.3 mg/L/96h zebrafish (Danio rerio) EC50 5.89 mg/L/48h water flea (Daphnia magna) EC50 24.1 µg/L algae
Chronic	LC50 >949 µg/L/7d fathead minnow (Pimephales promelas) EC50 34 µg/L/7d water flea (Daphnia) NOEC 2.14 mg/L/33d zebrafish (Danio rerio) LOEC 4.21 mg/L/33d zebrafish (Danio rerio)
Persistence and degradability:	No further relevant information available.
Behaviour in environmental systems	
Bio-accumulative potential:	No further relevant information available.
Mobility in soil:	No further relevant information available.
Additional ecological information	
Results of PBT and vPvB assessment	Does not contain a PBT-/vPvB-substance at a concentration of >0.1%
Other adverse effects:	No further relevant information available.

Section 13. Disposal Considerations

Waste treatment methods	
Recommendation	Prevent this material from entering waterways, drains and sewers. Comply with official regulations.
Uncleaned packaging:	
Recommendation:	Disposal must be made according to official regulations.
Recommended cleansing agents:	Water, if necessary, together with cleansing agents.

Section 14. Transport information

General	UN number: 3082 Proper shipping name or technical name: Environmentally hazardous substance, liquid, NOS Transport hazard class: 9 Packing group number: III Limited quantity: 5L
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Section 15. Regulatory Information

Safety health and environmental regulations/legislation specific for the substance or mixture	
Australian Inventory of Chemical Substances:	Substances are listed.
Chemical safety assessment:	A Chemical Safety Assessment has not been carried out.

Section 16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- End of SDS -