

# Safety Data Sheet



## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name:** **COBALT SULPHATE SOLUTION**

**Recommended Use of the Chemical and Restrictions on Use** Reagent in zinc smelter.

**Supplier:** Ixom Operations Pty Ltd  
**ABN:** 51 600 546 512  
**Street Address:** Level 8, 1 Nicholson Street  
East Melbourne Victoria 3002  
Australia

**Telephone Number:** +61 3 9906 3000  
**Emergency Telephone:** **1 800 033 111 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## 2. HAZARDS IDENTIFICATION

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the provisions of the Australian Code for the Transport of Dangerous Goods by Road and Rail when transported by road or rail in: packagings that do not incorporate a receptacle exceeding 500 kg(L); or IBCs.

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

### Classification of the chemical:

Acute Oral Toxicity - Category 4  
Skin Sensitisation - Category 1  
Eye Irritation - Category 2A  
Respiratory Sensitisation - Category 1  
Mutagenicity - Category 2  
Carcinogenicity - Category 1B  
Toxic to Reproduction - Category 1B  
Specific target organ toxicity (repeated exposure) - Category 1  
Acute Aquatic Toxicity - Category 1  
Chronic Aquatic Toxicity - Category 1

**SIGNAL WORD:** DANGER



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## Hazard Statement(s):

H302 Harmful if swallowed.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H341 Suspected of causing genetic defects.  
H350 May cause cancer.  
H360 May damage fertility or the unborn child.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H410 Very toxic to aquatic life with long lasting effects.

## Precautionary Statement(s):

### Prevention:

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe mist, vapours, spray.  
P264 Wash hands thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P273 Avoid release to the environment.  
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.

### Response:

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P330 Rinse mouth.  
P304+P341 IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.  
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P321 Specific treatment (see First Aid Measures on Safety Data Sheet).  
P363 Wash contaminated clothing before re-use.  
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.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P314 Get medical advice/attention if you feel unwell.  
P391 Collect spillage.

### Storage:

P405 Store locked up.

### Disposal:

P501 Dispose of contents and container in accordance with local, regional, national, international regulations.

**Poisons Schedule (SUSMP):** None allocated.

## 3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Cobalt sulfate	10124-43-3	30-60%	H350i H341 H360F H372 H302 H334 H317 H319 H410
Water	7732-18-5	to 100%	-

## 4. FIRST AID MEASURES

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Substance No: 00000004143

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For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

## **Inhalation:**

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

## **Skin Contact:**

If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water and soap. If swelling, redness, blistering or irritation occurs seek medical assistance.

## **Eye Contact:**

If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.

## **Ingestion:**

Rinse mouth with water. If swallowed, give a glass of water to drink. If vomiting occurs give further water. Seek immediate medical assistance.

## **Indication of immediate medical attention and special treatment needed:**

Treat symptomatically.

## **5. FIRE FIGHTING MEASURES**

### **Suitable Extinguishing Media:**

Not combustible, however, if material is involved in a fire use: Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal protein foam can be used.

**Hazchem or Emergency Action Code:** · 3Z

### **Specific hazards arising from the chemical:**

Non-combustible material. Environmentally hazardous.

### **Special protective equipment and precautions for fire-fighters:**

Decomposes on heating emitting toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

## **6. ACCIDENTAL RELEASE MEASURES**

### **Emergency procedures/Environmental precautions:**

Clear area of all unprotected personnel. Do not allow container or product to get into drains, sewers, streams or ponds. If contamination of sewers or waterways has occurred advise local emergency services.

### **Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:**

Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. Wash area down with excess water. Recover the cleaning water for subsequent disposal.

## **7. HANDLING AND STORAGE**

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## Precautions for safe handling:

Avoid skin and eye contact and breathing in vapour, mists and aerosols. When using do not eat, drink or smoke. Wash hands thoroughly after handling.

## Conditions for safe storage, including any incompatibilities:

Store in a cool, dry, well ventilated place. Keep containers closed when not in use - check regularly for leaks.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control Parameters:** No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Cobalt, metal dust & fume (as Co): 8hr TWA = 0.05 mg/m<sup>3</sup>, Sen

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

'Sen' Notice - sensitiser. The substance can cause a specific immune response in some people. An affected individual may subsequently react to exposure to minute levels of that substance and should not be further exposed to the substance.

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:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

## Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, SAFETY SHOES, FACE SHIELD OR AIR MASK, GLOVES (Long).

\* Not required if wearing air supplied mask.



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Wear overalls, chemical goggles, full face shield, elbow-length impervious gloves, splash apron or equivalent chemical impervious outer garment, and rubber boots. Use with adequate ventilation. If determined by a risk assessment an inhalation risk exists, wear an air-supplied mask meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Liquid
<b>Colour:</b>	Reddish - Brown
<b>Odour:</b>	Not specified
<b>Solubility:</b>	Miscible in water.
<b>Specific Gravity:</b>	1.197 @20°C
<b>Relative Vapour Density (air=1):</b>	Not available
<b>Vapour Pressure (20 °C):</b>	Not available
<b>Flash Point (°C):</b>	Not applicable
<b>Flammability Limits (%):</b>	Not applicable
<b>Autoignition Temperature (°C):</b>	Not applicable
<b>Boiling Point/Range (°C):</b>	Not available
<b>pH:</b>	Not available

## 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	No information available.
<b>Chemical stability:</b>	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerisation will not occur.
<b>Conditions to avoid:</b>	None known.
<b>Incompatible materials:</b>	None known.
<b>Hazardous decomposition products:</b>	Oxides of sulfur.

## 11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

<b>Ingestion:</b>	Swallowing can result in nausea, vomiting, diarrhoea, and abdominal pain.
<b>Eye contact:</b>	An eye irritant.
<b>Skin contact:</b>	Contact with skin may result in irritation. A skin sensitizer. Repeated or prolonged skin contact may lead to allergic contact dermatitis.
<b>Inhalation:</b>	Breathing in mists or aerosols may produce respiratory irritation. A respiratory sensitizer. Can cause possible allergic reactions, producing asthma-like symptoms.

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**Acute toxicity:** No LD50 data available for the product.

**Respiratory or skin sensitisation:** A respiratory sensitiser. A skin sensitiser.

**Chronic effects:** Cobalt and cobalt compounds (evaluated as a group) have been classified by the International Agency for Research on Cancer (IARC) as a Group 2B carcinogen. Group 2B - The agent is possibly carcinogenic to humans.

**Mutagenicity:** Suspected of causing genetic defects.  
**Carcinogenicity:** May cause cancer by inhalation.  
**Reproductive toxicity:** May damage fertility.  
**Specific Target Organ Toxicity (STOT) - single exposure:** No information available.  
**Specific Target Organ Toxicity (STOT) - repeated exposure:** Causes damage to organs through prolonged or repeated exposure.  
**Aspiration hazard:** No information available.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity:** Avoid contaminating waterways.  
**Persistence/degradability:** Biodegradation is not an applicable endpoint since the product is an inorganic chemical.  
**Bioaccumulative potential:** No information available.  
**Mobility in soil:** No information available.  
**Aquatic toxicity:** Very toxic to aquatic organisms. May cause long lasting harmful effects to aquatic life.

## 13. DISPOSAL CONSIDERATIONS

**Disposal methods:**  
Refer to Waste Management Authority. Dispose of material through a licensed waste contractor.

## 14. TRANSPORT INFORMATION

### Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

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**UN No:** 3082  
**Transport Hazard Class:** 9 Miscellaneous Dangerous Goods  
**Packing Group:** III

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**Proper Shipping Name or Technical Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS COBALT SULPHATE)  
**Hazchem or Emergency Action Code:** - 3Z

## Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

**UN No:** 3082  
**Transport Hazard Class:** 9 Miscellaneous Dangerous Goods  
**Packing Group:** III  
**Proper Shipping Name or Technical Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS COBALT SULPHATE)  
**IMDG EMS Fire:** F-A  
**IMDG EMS Spill:** S-F

## Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

**UN No:** 3082  
**Transport Hazard Class:** 9 Miscellaneous Dangerous Goods  
**Packing Group:** III  
**Proper Shipping Name or Technical Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS COBALT SULPHATE)

## 15. REGULATORY INFORMATION

### **Classification:**

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

### **Classification of the chemical:**

Acute Oral Toxicity - Category 4  
Skin Sensitisation - Category 1  
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### **Hazard Statement(s):**

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**Poisons Schedule (SUSMP):** None allocated.

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

## 16. OTHER INFORMATION

This safety data sheet has been prepared by Ixom Operations Pty Ltd (Toxicology & SDS Services).

**Reason(s) for Issue:**

Revised Primary SDS

Change in Hazardous Chemical Classification

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.