

---

**1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

---

**1.1 Product identifier**

**Product name** AMMONIUM THIOCYANATE  
**Synonyms** AMMONIUM RHODANIDE • AMMONIUM SULFOCYANATE • AMMONIUM SULFOCYANIDE • THIOCYANIC ACID AMMONIUM SALT

**1.2 Uses and uses advised against**

**Uses** INDUSTRIAL APPLICATIONS • SPECIALTY CHEMICAL • SURFACE FINISHING

**1.3 Details of the supplier of the product**

**Supplier name** DUBOIS CHEMICALS AUSTRALIA PTY LIMITED  
**Address** 305 Frankston Dandenong Rd, Dandenong South, VIC, 3175, AUSTRALIA  
**Telephone** (03) 9768 3860  
**Email** [sales@duboischchemicals.com.au](mailto:sales@duboischchemicals.com.au)  
**Website** <http://duboischchemicals.com.au/>

**1.4 Emergency telephone numbers**

**Emergency** 13 11 26 (Poisons Information Centre)

---

**2. HAZARDS IDENTIFICATION**

---

**2.1 Classification of the substance or mixture**

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

**Physical Hazards**

Not classified as a Physical Hazard

**Health Hazards**

Acute Toxicity: Oral: Category 4  
Acute Toxicity: Skin: Category 4  
Serious Eye Damage / Eye Irritation: Category 2A  
Acute Toxicity: Inhalation: Category 4  
Contact with acids liberates very toxic gas.

**Environmental Hazards**

Not classified as an Environmental Hazard

**2.2 GHS Label elements**

**Signal word** WARNING

**Pictograms****Hazard statements**

AUH032 Contact with acids liberates very toxic gas.  
H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.

## PRODUCT NAME AMMONIUM THIOCYANATE

### Prevention statements

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/hearing protection.

### Response statements

P301 + P312	IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321	Specific treatment is advised - see first aid instructions.
P330	Rinse mouth.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.

### Storage statements

None allocated.

### Disposal statements

None allocated.

### 2.3 Other hazards

No information provided.

---

## 3. COMPOSITION/ INFORMATION ON INGREDIENTS

---

### 3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
AMMONIUM THIOCYANATE	1762-95-4	217-175-6	100%

---

## 4. FIRST AID MEASURES

---

### 4.1 Description of first aid measures

<b>Eye</b>	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
<b>Inhalation</b>	If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.
<b>Skin</b>	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
<b>Ingestion</b>	For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting. Rinse mouth with water.
<b>First aid facilities</b>	Eye wash facilities and safety shower are recommended.

### 4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

### 4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

---

## 5. FIRE FIGHTING MEASURES

---

### 5.1 Extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

### 5.2 Special hazards arising from the substance or mixture

Non flammable. May evolve toxic gases (carbon/ nitrogen/ sulphur oxides, cyanides, hydrocarbons) when heated to decomposition. May evolve ammonia when heated to decomposition.

## PRODUCT NAME AMMONIUM THIOCYANATE

### **5.3 Advice for firefighters**

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

### **5.4 Hazchem code**

None allocated.

---

## 6. ACCIDENTAL RELEASE MEASURES

---

### **6.1 Personal precautions, protective equipment and emergency procedures**

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.

### **6.2 Environmental precautions**

Prevent product from entering drains and waterways.

### **6.3 Methods of cleaning up**

Contain spillage, then collect and place in suitable containers for disposal.

### **6.4 Reference to other sections**

See Sections 8 and 13 for exposure controls and disposal.

---

## 7. HANDLING AND STORAGE

---

### **7.1 Precautions for safe handling**

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

### **7.2 Conditions for safe storage, including any incompatibilities**

Store in a cool, dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Large storage areas should have appropriate ventilation systems.

### **7.3 Specific end uses**

No information provided.

---

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

---

### **8.1 Control parameters**

#### **Exposure standards**

No exposure standards have been entered for this product.

#### **Biological limits**

No biological limit values have been entered for this product.

### **8.2 Exposure controls**

**Engineering controls** Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended.

#### **PPE**

<b>Eye / Face</b>	Wear dust-proof goggles.
<b>Hands</b>	Wear PVC or rubber gloves.
<b>Body</b>	Wear coveralls.
<b>Respiratory</b>	Where an inhalation risk exists, wear a Class P1 (Particulate) respirator. At high dust levels, wear a Powered Air Purifying Respirator (PAPR) with Class P3 (Particulate) filter or a Full-face Class P3 (Particulate) respirator.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	COLOURLESS CRYSTALLINE SOLID
Odour	ODOURLESS
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	170°C
Melting point	149.6°C
Evaporation rate	NOT RELEVANT
pH	4.8 to 5.8 (5% solution)
Vapour density	NOT AVAILABLE
Relative density	1.31
Solubility (water)	SOLUBLE
Vapour pressure	NOT RELEVANT
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	170°C
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Contact with acids liberates very toxic gas. Thiocyanates have the potential to release hydrogen sulfide (CAS No. 7783-06-4) (Liler, 1979) and hydrogen cyanate (CAS No. 74-90-8) under acidic conditions. Highly corrosive to metals including iron, copper, and brass.

### 10.2 Chemical stability

Stable under recommended conditions of storage.

### 10.3 Possibility of hazardous reactions

Polymerization will not occur.

### 10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

### 10.5 Incompatible materials

Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), alkalis (e.g. sodium hydroxide), heat and ignition sources. Incompatible with nitrates (e.g. sodium nitrate), nitric acid, peroxides, potassium chlorate, sodium chlorate and lead nitrate. Contact with acids may result in the liberation of highly toxic hydrogen cyanide. Mixtures with lead nitrate may explode.

### 10.6 Hazardous decomposition products

May evolve toxic gases (carbon/ nitrogen/ sulphur oxides, cyanides, hydrocarbons) when heated to decomposition.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity** Harmful if swallowed, in contact with skin or if inhaled.

**Information available for the ingredients:**

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
AMMONIUM THIOCYANATE	500 mg/kg (mouse)	--	--

**Skin** Contact may result in irritation, redness, rash and dermatitis.

**Eye** Contact may result in irritation, lacrimation, pain and redness.

**Sensitisation** Not classified as causing skin or respiratory sensitisation.

**Mutagenicity** Not classified as a mutagen.

**PRODUCT NAME AMMONIUM THIOCYANATE**

<b>Carcinogenicity</b>	Not classified as a carcinogen.
<b>Reproductive</b>	Not classified as a reproductive toxin.
<b>STOT - single exposure</b>	Over exposure to dust may result in respiratory irritation, coughing, nausea, vomiting, headache and weakness. High level exposure may result in breathing difficulties, convulsions and unconsciousness.
<b>STOT - repeated exposure</b>	Thiocyanates used in drug therapy have caused nervous system effects such as fine motor weakness of the arms and legs. Elevated levels of thiocyanate in the blood will inhibit the uptake of iodine by the thyroid gland resulting in thyroid effects. Repeated exposure may result in runny nose, dizziness, fatigue, cramps, delirium, nervous system disturbances and convulsions.
<b>Aspiration</b>	Not classified as causing aspiration.

---

**12. ECOLOGICAL INFORMATION**

---

**12.1 Toxicity**

LC50 (Oncorhynchus mykiss (Rainbow Trout)) is 65 mg/L/96 hours; EC50 (Daphnia magna (Water flea)) is 3.65 mg/L/48 hours; EC50 (Selenastrum capricornutum (Green Algae)) is 116 mg/L/72 hours.

**12.2 Persistence and degradability**

Thiocyanates (ammonium, potassium and sodium) are classified as readily biodegradable on the basis of the results of an OECD 310D (ECHA).

**12.3 Bioaccumulative potential**

Thiocyanates (ammonium, potassium and sodium) have no bioaccumulative potential.

**12.4 Mobility in soil**

No information provided.

**12.5 Other adverse effects**

No information provided.

---

**13. DISPOSAL CONSIDERATIONS**

---

**13.1 Waste treatment methods**

**Waste disposal** Solutions: Cover with sodium carbonate (soda ash), lime or similar alkali to ensure pH greater than 8.5. Collect precipitated solids in sealable containers and label accordingly. Solids: Dampen if necessary and avoid dust generation. Collect solids and store in sealable labelled containers. Absorb with soil and contact the manufacturer for disposal instructions.

**Legislation** Dispose of in accordance with relevant local legislation.

---

**14. TRANSPORT INFORMATION**

---

**NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA**

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
<b>14.1 UN Number</b>	None allocated.	None allocated.	None allocated.
<b>14.2 Proper Shipping Name</b>	None allocated.	None allocated.	None allocated.
<b>14.3 Transport hazard class</b>	None allocated.	None allocated.	None allocated.
<b>14.4 Packing Group</b>	None allocated.	None allocated.	None allocated.

**14.5 Environmental hazards**

Not a Marine Pollutant.

**14.6 Special precautions for user**

**Hazchem code** None allocated.

---

**15. REGULATORY INFORMATION**

---

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Poison schedule** Classified as a Schedule 5 (S5) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

**PRODUCT NAME AMMONIUM THIOCYANATE**

<b>Classifications</b>	Safe Work Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals (GHS Revision 7).
<b>Inventory listings</b>	<b>AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals)</b> All components are listed on AIIC, or are exempt.

---

**16. OTHER INFORMATION**

---

**Additional information** THIOCYANATES: Should not be used therapeutically. The probable lethal dose in man lies between 15-30 grams (acute - when ingested at one time). Several acute fatalities have been reported with death in 10-48 hours. Large overdoses have been reported to have induced vomiting, extreme cerebral excitement, delirium, spasticity of the extensor muscles. Gastric lavage or vomiting is recommended in an emergency and haemodialysis or peritoneal dialysis if necessary. Caution: Relapse is possible. Phenobarbitol is reported to protect poisoned animals from death.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:  
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:  
It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

<b>Abbreviations</b>	ACGIH	American Conference of Governmental Industrial Hygienists
	CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
	CNS	Central Nervous System
	EC No.	EC No - European Community Number
	EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
	GHS	Globally Harmonized System
	GTEPG	Group Text Emergency Procedure Guide
	IARC	International Agency for Research on Cancer
	LC50	Lethal Concentration, 50% / Median Lethal Concentration
	LD50	Lethal Dose, 50% / Median Lethal Dose
	mg/m <sup>3</sup>	Milligrams per Cubic Metre
	OEL	Occupational Exposure Limit
	pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
	ppm	Parts Per Million
	STEL	Short-Term Exposure Limit
	STOT-RE	Specific target organ toxicity (repeated exposure)
	STOT-SE	Specific target organ toxicity (single exposure)
	SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
	SWA	Safe Work Australia
	TLV	Threshold Limit Value
	TWA	Time Weighted Average

**PRODUCT NAME    AMMONIUM THIOCYANATE**

**Report status**

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

**Prepared by**

Risk Management Technologies  
5 Ventnor Ave, West Perth  
Western Australia 6005  
Phone: +61 8 9322 1711  
Fax: +61 8 9322 1794  
Email: [info@rmt.com.au](mailto:info@rmt.com.au)  
Web: [www.rmtglobal.com](http://www.rmtglobal.com)

**[ End of SDS ]**