

CYAN

1.0 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product Identifier

Product name CYAN
Synonym(s) SUMITOMO CHEMICAL AUSTRALIA CYAN • SUMITOMO CYAN

1.2 Uses and uses advised against

Use(s) PLANT GROWTH REGULATOR

1.3 Details of the supplier of the product

Supplier name GROCHEM AUSTRALIA PTY LTD
Address Suite 1, Level 3, 262 Lorimer St, Port Melbourne, VIC, 3207, AUSTRALIA
Telephone 1800 777 068
Email grochem@grochem.com
Website <http://www.grochem.com>

1.4 Emergency telephone number(s)

Emergency 1800 127 406

1.7 Details of alternative supplier(s) of the product

Supplier name SUMITOMO CHEMICAL AUSTRALIA PTY LTD
Address Level 5, 51 Rawson St, Epping, NSW, 2121, AUSTRALIA
Telephone (02) 8752 9000
Fax (02) 8752 9099
Email reception@sumitomo-chem.com.au
Website www.sumitomo-chem.com.au

SECTION 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO AUSTRALIAN WHS REGULATIONS

GHS classification(s) Acute Toxicity: Oral: Category 3
Acute Toxicity: Skin: Category 4
Skin Corrosion/Irritation: Category 2
Skin Sensitisation: Category 1
Serious Eye Damage / Eye Irritation: Category 2A

2.2 Label elements

Signal word DANGER

Pictogram(s)



Hazard statement(s) H301 Toxic if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

Prevention statement(s) 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.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response statement(s) P301 + P310 IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P312 Call a POISON CENTER or doctor/physician if you feel unwell.
 P321 Specific treatment is advised - see first aid instructions.
 P330 Rinse mouth.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P337 + P313 If eye irritation persists: Get medical advice/attention.
 P362 Take off contaminated clothing and wash before re-use.

Storage statement(s) P405 Store locked up.

Disposal statement(s) P501 Dispose of contents/container in accordance with relevant regulations.

2.3 Other hazards

No information provided.

3.0 COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
CYANAMIDE	420-04-2	206-992-3	<60%
PHOSPHORIC ACID	7664-38-2	231-633-2	<1%
NON HAZARDOUS INGREDIENTS	Not Available	Not Available	Remainder

4.0 FIRST AID MEASURES

4.1 Description of first aid measures

Eye 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. Seek medical attention if symptoms persist.

Inhalation If inhaled, remove from contaminated area. Apply artificial respiration if not breathing. Seek medical attention immediately.

Skin 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.

Ingestion For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

First aid facilities Eye wash facilities and safety shower should be available.

4.2 Most important symptoms and effects, both acute and delayed

Irritating to the eyes, skin and respiratory system. Ingestion may cause irritation of mucous membranes, severe dermatitis on moist skin, skin flushing (cyanamide flush), headache, dizziness, shortness of breath and rapid pulse.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically. If small amounts have been taken, administer activated charcoal, sodium sulphate and large amounts of liquid orally. If large amounts have been taken, monitor circulatory functions and, if necessary, irrigate the stomach preventing aspiration and taking into account possible irritation to mucous membranes. In case of skin irritation, use Corticoid containing external preparations.

5.0 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 oxides, ammonia, hydrocarbons) when heated to decomposition.

5.3 Advice for firefighters

Treat as per requirements for surrounding fires. Evacuate area and contact emergency services. 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

2X 2 Fine Water Spray.
 X Wear liquid-tight chemical protective clothing and breathing apparatus. Contain spill and run-off.

6.0 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 cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7.0 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. Do not drink alcohol for 24 hours before, and up to seven days after using Cyan.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, dark, 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. Check regularly for leaks or spills. Large storage areas should have appropriate ventilation systems. Store below 40°C.

7.3 Specific end use(s)

No information provided.

8.0 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredients	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Cyanamide	SWA (AUS)	-	2	-	-
Phosphoric acid	SWA (AUS)	-	1	-	3

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. Maintain vapour levels below the recommended exposure standard.

PPE

Eye / Face Wear splash-proof goggles.
 Hands Wear PVC or rubber gloves.
 Body Wear coveralls. In a laboratory situation, wear a laboratory coat.
 Respiratory Where an inhalation risk exists, wear a Type A (Organic vapour) respirator.



9.0 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	BLUE LIQUID
Odour	OFFENSIVE ODOUR
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	NOT AVAILABLE
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	4 to 6
Vapour density	NOT AVAILABLE
Specific gravity	1.07
Solubility (water)	SOLUBLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

9.2 Other information

Freezing point	-16°C
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10.0 STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability

Stable under recommended conditions of storage. Will gradually dimerize under ordinary conditions. Gradually hydrolyze to form urea at pH < 2 or pH > 12.

10.3 Possibility of hazardous reactions

Polymerisation possible at pH > 5. Decomposes violently (exothermic polymerisation) by excess alkalisation.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources. Temperatures greater than 40°C.

10.5 Incompatible materials

Incompatible with oxidising agents (e.g. hypochlorites) and acids (e.g. nitric acid).

10.6 Hazardous decomposition products

May evolve carbon oxides, nitrogen oxides, ammonia and hydrocarbons when heated to decomposition.

11.0 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Information available for the product:

Toxic if swallowed. Harmful in contact with skin.

Information available for the ingredient(s):

Ingredient	Oral Toxicity (LD50)	Dermal Toxicity (LD50)	Inhalation Toxicity (LC50)
CYANAMIDE	125 mg/kg (rat)	84 mg/kg (rat)	-
PHOSPHORIC ACID	1530 mg/kg (rat)	2740 mg/kg (rabbit)	-

Skin	Causes skin irritation. Contact may result in irritation, redness, pain and rash.
Eye	Causes serious eye irritation. Contact may result in irritation, lacrimation, pain and redness
Sensitisation	May cause an allergic skin reaction. This product is not classified as a respiratory sensitiser.
Mutagenicity	Not classified as a mutagen.
Carcinogenicity	Not classified as a carcinogen.
Reproductive	Not classified as a reproductive toxin.
STOT – single exposure	Not classified as causing organ damage from single exposure. However, over exposure may result in mild irritation of the nose and throat, with coughing. High level exposure may result in dizziness, nausea and headache.
STOT – repeated exposure	Not classified as causing organ damage from repeated exposure.
Aspiration	Not classified as causing aspiration.

12.0 ECOLOGICAL INFORMATION

12.1 Toxicity

No information provided.

12.2 Persistence and degradability

No information provided.

12.3 Bioaccumulative potential

No information provided.

12.4 Mobility in soil

No information provided.

12.5 Other adverse effects

No information provided.

13.0 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal

For small amounts, absorb with sand, vermiculite or similar and dispose of to an approved landfill site. For large quantities, contact the manufacturer/supplier for additional information. Prevent contamination of drains and waterways as aquatic life may be threatened and environmental damage may result.

Legislation

Dispose of in accordance with relevant local legislation.

14.0 TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE



	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	2810	2810	2810
14.2 Proper Shipping Name	TOXIC LIQUID, ORGANIC, N.O.S.	TOXIC LIQUID, ORGANIC, N.O.S.	TOXIC LIQUID, ORGANIC, N.O.S.
14.3 Transport Hazard Class	6.1	6.1	6.1
14.4 Packing Group	III	III	III

14.5 Environmental hazards

No information provided.

14.6 Special precautions for user

Hazchem code	2X
GTEPG	6.1.014
EMS	F-A, S-A

15.0 REGULATORY INFORMATION

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

Poison schedule	Classified as a Schedule 6 (S6) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
APUMA Number	594 86
Classifications	Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals. The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].
Hazard codes	T Toxic Xi Irritant Xn Harmful
Risk phrases	R21 Harmful in contact with skin. R25 Toxic if swallowed. R36/38 Irritating to eyes and skin. R43 May cause sensitisation by skin contact.
Safety Phrases	S1/2 Keep locked up and out of reach of children. S3 Keep in a cool place. S23 Do not breathe spray. S36/37 Wear suitable protective clothing and gloves. S46 If swallowed, contact a doctor or Poisons Information Centre immediately and show container or label.
Inventory listing(s)	AUSTRALIA: AICS (Australian Inventory of Chemical Substances) All components are listed on AICS, or are exempt.

16.0 OTHER INFORMATION

Additional information

EXPOSURE STANDARDS - TIME WEIGHTED AVERAGES:

Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: Strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

WORKPLACE CONTROLS AND PRACTICES:

Unless a less toxic chemical can be substituted for a hazardous substance, ENGINEERING CONTROLS are the most effective way of reducing exposure. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Isolating operations can also reduce exposure. Using respirators or protective equipment is less effective than the controls mentioned above, but is sometimes necessary.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as 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: 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.

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
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 ³	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

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.

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This SDS summarises our best knowledge of the health and safety hazard information available for this product and how to safely handle and use it. Since the use of this information and the conditions of the use of this product are not under the control of Grochem, it is the user's responsibility to determine conditions of safe use of the product.