

PENTAMAX

1.0 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product Identifier

Product name PENTAMAX
Synonym(s) PENTAMAX

1.2 Uses and uses advised against

Use(s) AGRICULTURAL APPLICATIONS • FERTILISER

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.au
Website <http://www.grochem.com>

1.4 Emergency telephone number(s)

Emergency 1800 127 406

2.0 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

GHS classification(s) Skin Sensitisation: Category 1
Respiratory Sensitisation: Category 1
Carcinogenicity: Category 1B
Toxic to Reproduction: Category 1B
Specific Target Organ Systemic Toxicity (Repeated Exposure): Category 2
Aquatic Toxicity (Acute): Category 1

Signal word DANGER



Hazard statement(s) H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.

Prevention statement(s) 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.
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.
P284 Wear respiratory protection.

Response statement(s)	<p>P302 + P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P304 + P341 IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.</p> <p>P308 + P313 IF exposed or concerned: Get medical advice/ attention.</p> <p>P321 Specific treatment is advised - see first aid instructions.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P391 Collect spillage.</p> <p>P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTRE/doctor.</p>
Storage statement(s)	P405 Store locked up.
Disposal statement(s)	P501 Dispose of contents/container in accordance with relevant regulations.

2.2 Label elements

No signal word, pictograms, hazard or precautionary statements have been allocated.

2.3 Other hazards

No information provided.

3.0 COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
ADDITIVE(S)	-	-	Remainder
MANGANESE SULPHATE MONOHYDRATE	10034-96-5	600-072-9	2 to 3%
PROPRIETARY INGREDIENT(S)	-	-	1 to 2%
COBALT (II) CHLORIDE HEXAHYDRATE	7791-13-1	231-589-4	0.3 to 0.5%

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.
Inhalation	If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.
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 Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once).
First aid facilities	Eye wash facilities and safety shower should be available.

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.

5.0 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 carbon, nitrogen and sulphur oxides when heated to decomposition.

5.3 Advice for firefighters

No fire or explosion hazard exists..

5.4 Hazchem code

•3Z

•3 Alcohol Resistant Foam is the preferred firefighting medium but, if it is not available, normal foam can be used.

Z Wear full fire kit 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.

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.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area, removed from incompatible substances.

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
Cobalt (as Co)	SWA (AUS)	-	0.5	-	-
Manganese, dust & compounds (as Mn)	SWA (AUS)	-	1	-	-
Manganese, fume (as Mn)	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.

PPE

Eye / Face	Wear splash-proof goggles.
Hands	Wear PVC or rubber gloves.
Body	When using large quantities or where heavy contamination is likely, wear coveralls.
Respiratory	Not required under normal conditions of use.



9.0 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	DARK BLUE LIQUID
Odour	ODOURLESS
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	NOT AVAILABLE
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	8 to 9 (1% solution)
Vapour density	NOT AVAILABLE
Specific gravity	NOT AVAILABLE
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

Relative density	1.32 to 1.33 @ 20°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.

10.3 Possibility of hazardous reactions

Polymerization is not expected to occur.

10.4 Conditions to avoid

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

10.5 Incompatible materials

Incompatible with combustible materials, and reducing agents (e.g. sulphites). Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid) and alkalis (e.g. sodium hydroxide).

10.6 Hazardous decomposition products

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

11.0 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

Information available for the ingredient(s):

Ingredient	Oral Toxicity (LD50)	Dermal Toxicity (LD50)	Inhalation Toxicity (LC50)
COBALT (II) CHLORIDE HEXAHYDRATE	766 mg/kg (rat)	> 2000 mg/kg (rat)	-

Skin	Contact may result in irritation, redness, rash and dermatitis.
Eye	Contact may result in irritation, lacrimation, pain and redness.
Sensitisation	May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Mutagenicity	Not classified as a mutagen.
Carcinogenicity	May cause cancer.
Reproductive	May damage fertility or the unborn child.
STOT – single exposure	Over exposure may result in irritation of the nose and throat, with coughing.
STOT – repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration	Not classified as causing aspiration.

12.0 ECOLOGICAL INFORMATION

12.1 Toxicity

Very toxic to aquatic organisms.

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

Plant nutrients may be beneficial to plants at low levels, however high levels may cause reduced growth or burns in sensitive species. Excess may be washed through soil to waterways. Nutrients released to waterways may cause algal blooms, with potential for toxic effects on aquatic organisms.

13.0 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal Dispose of to an approved landfill or waste processing site. Contact the manufacturer/supplier for additional information (if required).

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	3082	3082	3082
14.2 Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
14.3 Transport Hazard Class	9	9	9
14.4 Packing Group	III	III	III

14.5 Environmental hazards

No information provided.

14.6 Special precautions for user

Hazchem code	•3Z
GTEPG	9C1
EMS	F-A, S-F

15.0 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).
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	None allocated.
Risk phrases	None allocated.
Safety phrases	None allocated.
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).

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.

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.	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

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.