



Material Safety Data Sheet

Product Name **QMAG CAUSTIC CALCINED MAGNESIA**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name QUEENSLAND MAGNESIA PTY LTD
Address 246 Boundary Road, Parkhurst, QLD, AUSTRALIA, 4702
Telephone (07) 4920 0200
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Web Site <http://www.qmag.com.au/>
Synonym(s) EMAG45 • EMAG120 • EMAG125 • EMAG300 • EMAG500 • EMAG523 • EMAG525 • EMAG1000 • EMAG2210 • EMAG3220
Use(s) Animal Feed • FERTILISER • HYDROMETALLURGY • SEWAGE TREATMENT • STEEL MANUFACTURE
MSDS Date 19th January 2011

2. HAZARDS IDENTIFICATION

NOT DANGEROUS ACCORDING TO DIRECTIVE 1999/45/EC
NOT CLASSIFIED AS HAZARDOUS ACCORDING TO ASCC CRITERIA

UN No None Allocated **DG Class** None Allocated **Subsidiary Risk(s)** None Allocated
Pkg Group None Allocated **Hazchem Code** None Allocated **EPG** None Allocated

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	EINECS	CAS No.	Content	Classification
CALCIUM OXIDE	215-138-9	1305-78-8	<15%	Not Available
MANGANESE DIOXIDE	215-202-6	1313-13-9	<1%	Xn;R20/22
MAGNESIUM OXIDE	215-171-9	1309-48-4	>80%	Not Available
SILICON DIOXIDE	231-545-4	7631-86-9	<5%	Not Available
ALUMINIUM OXIDE	215-691-6	1344-28-1	<1%	Not Available
IRON (III) OXIDE	215-168-2	1309-37-1	<1%	Not Available

Composition reported in the oxide form but these do not necessarily exist within the magnesia as free uncombined oxides but as complex mineralogical phases

4. FIRST AID MEASURES

Eyes If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the PIC or 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 the PIC or a doctor.

Ingestion For advice, contact a Poison Information Centre on +61 2 9845 3111 (Sydney-Australia) or a doctor (at once). If swallowed, do not induce vomiting.

Advice to Doctor Treat symptomatically.

First Aid Facilities Eye wash facilities should be available.

5. FIRE FIGHTING MEASURES

Flammability	Non flammable.
Fire and Explosion	Non Flammable
Extinguishing	Non Flammable
Hazchem Code	None Allocated

6. ACCIDENTAL RELEASE MEASURES

Spillage	If spilt (bulk), wear dust-proof goggles, PVC/rubber gloves and a Class P1 (Particulate) respirator (where a dust inhalation risk exists). Ventilate spillage area. Collect and place in sealable containers for disposal. Avoid generating dust.
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7. STORAGE AND HANDLING

Storage	Store in cool, dry, well ventilated area, remove from interhalogens, phosphorous pentachloride and foodstuffs. Ensure product is adequately labelled, protected from physical damage and sealed when not in use.
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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Stds	Ingredient	Reference	TWA		STEL	
			ppm	mg/m3	ppm	mg/m3
	Aluminum oxide (a)	NOHSC (AUS)	-	10.0	-	-
	Calcium oxide	NOHSC (AUS)	-	2.0	-	-
	Iron oxide fume (Fe2O3) (as Fe)	NOHSC (AUS)	-	5.0	-	-
	Magnesium oxide (fume)	NOHSC (AUS)	-	10.0	-	-
	Manganese, dust & compounds (as Mn)	NOHSC (AUS)	-	1.0	-	-

Biological Limits	No Biological Limit Value allocated.
Engineering Controls	Do not inhale dust / powder. Use with adequate natural ventilation. Where a dust inhalation hazard exists, mechanical extraction ventilation is recommended.
PPE	Wear dust-proof goggles and rubber or PVC gloves. Where an inhalation risk exists, wear a Class P1 (Particulate) Respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	WHITE TO PINK SOLID	Solubility (water)	PRACTICALLY INSOLUBLE
Odour	SLIGHT ODOUR	Specific Gravity	>1.0
pH	NOT AVAILABLE	% Volatiles	NOT AVAILABLE
Vapour Pressure	NOT AVAILABLE	Flammability	NOT FLAMMABLE
Vapour Density	NOT AVAILABLE	Flash Point	NOT RELEVANT
Boiling Point	3600°C	Upper Explosion Limit	NOT RELEVANT
Melting Point	2600°C to 2800°C	Lower Explosion Limit	NOT RELEVANT
Evaporation Rate	NOT AVAILABLE	Autoignition Temperature	NOT AVAILABLE

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended conditions of storage.
Conditions to Avoid	No known conditions to avoid.
Material to Avoid	Incompatible (violently or explosively) with interhalogens (e.g. bromine pentafluoride, chlorine trifluoride) and phosphorus pentachloride. This product will hydrate slowly when exposed to water.
Hazardous Reactions	Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Low toxicity – Irritant. This product may present a hazard with eye contact, prolonged or repeated skin contact, or with dust inhalation at high levels. Use safe work practices to avoid eye or skin contact and dust inhalation.
Eye	Irritant. Contact may result in irritation, lacrimation, pain and redness.
Inhalation	Irritant. Over exposure may result in mucous membrane irritation of the nose and throat with coughing.
Skin	Irritant. Contact may result in irritation, redness, rash and dermatitis.
Ingestion	Low toxicity. Ingestion may result in gastrointestinal irritation, nausea, vomiting, abdominal pain and diarrhoea.
Toxicity Data	MANGANESE DIOXIDE (1313-13-9) LD50 (Ingestion): >3478 mg/kg (rat)

12. ECOLOGICAL INFORMATION

Environment	Limited ecotoxicity data was available for this product at the time this report was prepared. Ensure appropriate measures are taken to prevent this product from entering the environment.
Ecotoxicity	Not classified as dangerous to the aquatic environment.
Persistence/ Degradability	Limited information was available at the time of this review.
Mobility	Limited information was available at the time of this review.

13. DISPOSAL CONSIDERATIONS

Waste Disposal	Disposal of in accordance with national and local authority regulations. Disposal to authorised landfill may be acceptable.
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

Shipping Name	None Allocated	DG Class	None Allocated	Subsidiary Risk(s)	None Allocated
UN No	None Allocated	Hazchem Code	None Allocated	EPG	None Allocated
Pkg Group	None Allocated				

15. REGULATORY INFORMATION

AUSTRALIA: AICS (Australian Inventory of Chemical Substances)

All components are listed on AICS.

EUROPE: EINECS (European Inventory of Existing Chemical Substances)

All components are listed on EINECS.

16. 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).

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.

Product Name **QMAG Caustic Calcined Magnesia**

ABBREVIATIONS:

ADB – Air Dry Basis
BEI – Biological Exposure Indice(s)
CAS# - Chemical Abstract Service number – used to uniquely identify chemical compounds
CNS – Central Nervous System
EINECS- European INventory of Existing Commercial chemical Substances
IARC – International Agency for Research on Cancer
M – moles per litre, a unit of concentration
mg/m³ – Milligrams per cubic metre
NOS – Not Otherwise Specified
NTP – National Toxicology Program
OSHA – Occupational Safety and Health Administration
pH – relates to hydrogen ion concentration using a scale of 0 (highly acidic) to 14 (highly alkaline)
ppm – Parts Per Million
RTECS – Registry of Toxic Effects of Chemical Substance
TWA/ES – Time Weighted Average or Exposure Standard

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 Chem Alert report which would encompass all possible scenarios, it is anticipated that users will assess the risk and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this Chem Alert 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.

Report Status

This document has been compiled by RMT on behalf of the manufacturer of the product and serves as the manufacturer's Material Safety Data Sheet ('MSDS').

It is based on information concerning the product which has been provided to RMT by the manufacture 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.

While RMT has taken all due care to include accurate and up-to-date information in this MSDS, 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 MSDS.

MSDS Date: 19th January 2011

End of Report