


# Safety Data Sheet

Grocal MGB™ SDS revision 02 8<sup>th</sup> March 2022

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name</b>	Grocal MGB™
<b>Other Names</b>	None
<b>Uses:</b>	Plant food, activator and catalyst for professional applicators
<b>Chemical family</b>	Inorganic mineral Plant / crop nutrition
<b>Chemical formula</b>	Compounded product refer to chapter 3
<b>Chemical name</b>	Compounded product refer to chapter 3
<b>Molecular weight</b>	Compounded product refer to chapter 3
<b>Product description</b>	Liquid fertiliser, for the correction and prevention of plant nutrient deficiencies
<b>Contact details of the supplier of this Safety Data Sheet</b>	
<b>Company Name</b>	Agrichem
<b>Company address</b>	2 Hovey Rd Yatala QLD 4207 Australia
<b>Phone number</b>	+ 61 7 3451 0000
<b>Emergency contact</b>	Poison Information Centre Australia – <b>13 11 26</b>

## 2. HAZARD IDENTIFICATION

<b>Poisons Schedule (Australian)</b>	Not listed in SUSMP
<b>Globally Harmonised System (GHS) Hazard classification</b>	<b>Hazardous</b> according to the criteria of the GHS Classification and Labelling of Chemicals (GHS)
<b>Hazard Category</b>	Toxic to Reproduction: category 1B Serious eye damage: category 1 Acute toxicity (oral): category 4 Skin irritation: category 3
<b>Pictograms</b>	
<b>Signal word</b>	Danger
<b>Hazard Statements</b>	H302 Harmful if swallowed H360 May damage fertility or the unborn child H318 Causes serious eye damage H316 Causes mild skin irritation
<b>Prevention</b>	P203 Obtain, read and follow all safety instructions before use. P264+P265 Wash hands thoroughly after handling. Do not touch eyes P280 Wear protective gloves / protective clothing / eye protection / face protection
<b>Response</b>	P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. P318 IF exposed or concerned, get medical advice P332+P317 If skin irritation occurs: Get medical help
<b>Storage</b>	P405 Store locked up

<b>Disposal</b>	P501 Dispose of contents/container in accordance with local, state and federal regulations
<b>National Transport Commission (Australian)</b>	
Australian Code for the transport of Dangerous Goods by Road and Rail (ADG Code)	
<b>Is Not a</b> Dangerous Goods according to the criteria of the ADG Code for road or rail transport ref ADG Code, ref to chapter 14 of this SDS.	

### 3. INFORMATION ON INGREDIENTS

Ingredient	CAS Registry number	Proportion %w/w
Calcium nitrate	13477-34-4	≥30 – <60
Magnesium chloride	7786-30-3	≥10 – <30
Water	7732-18-5	To balance
Calcium chloride hydrate	22691-02-7	≥10 – <30
Urea	57-13-6	>10
Boric acid	10043-35-3	<10

No other ingredients present which to the current knowledge of Agrichem & in the concentrations present are classified as hazardous to health and thereby require reporting in this chapter.

### 4. FIRST AID MEASURES

#### Description of necessary measures according to routes of exposure

<b>Swallowed</b>	Rinse mouth with water. Drink plenty of water/milk if possible. Do not induce vomiting, seek medical advice immediately. Take this SDS with you to the medical examination.
<b>Eye</b>	Immediately wash in and around the eye area with plenty of water for 15 minutes. Eyelids to be held apart. Check for contact lenses, remove if easy to do. Seek ophthalmological / medical attention immediately.
<b>Inhalation</b>	Avoid breathing mist, spray or vapour. If inhaled, remove to fresh air. Should breathing become irregular or stop, apply artificial respiration. Consult a medical doctor immediately.
<b>Skin</b>	Take off contaminated clothing. Rinse skin / hair immediately with plenty of soap and water. Seek medical advice if irritation persists. Wash clothing prior to reuse.
<b>Advice to Doctor</b>	Treat symptomatically based on judgement of doctor and individual reactions of patient.
<b>Medical Conditions Aggravated by Exposure</b>	No data available

Have the product container or label with you when calling the Poison Information Centre or a doctor or going for treatment.

### 5. FIRE FIGHTING MEASURES

<b>General measures</b>	Clear area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk.
<b>Flammability conditions</b>	Non-flammable, aqueous solution.
<b>Extinguishing Media</b>	Use any means suitable for extinguishing surrounding fire.
<b>Fire and Explosion Hazard</b>	Containers if heated, resultant increase in pressure may cause container to burst. Do not inhale fumes and or gases of combustion.
<b>Hazardous Products of Combustion</b>	Toxic fumes such as nitrogen oxides, ammonia and chlorine gas may evolve
<b>Special Fire Fighting Instructions</b>	Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.
<b>Personal Protective Equipment</b>	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves).

<b>Flash point</b>	No data available
<b>Lower Explosion Limit</b>	No data available
<b>Upper Explosion Limit</b>	No data available
<b>Auto ignition Temperature</b>	No data available
<b>Hazchem Code</b>	None allocated


## 6. ACCIDENTAL RELEASE MEASURES

<b>General Response Procedures</b>	Avoid accidents, clean up immediately. Slippery when spilt. Increase ventilation. Avoid generating dust from dried product. Stop leak if safe to do so. Isolate the danger area.
<b>Clean up Procedures</b>	<p>Land spill: Dike spill with absorbent or impervious materials such as earth, sand or clay. Vacuum, shovel, pump or sweep up the product and place in containers for disposal in accordance with applicable local regulations. Avoid contamination of water bodies during clean up and disposal. See containment section below.</p> <p>Spillage into water. Where possible, remove any intact containers from the water. Advise local water authority that none of the affected water should be used for irrigation or for the abstraction of potable water until natural dilution returns water to normal environmental background levels.</p>
<b>Containment</b>	Stop Leak if safe to do so. Isolate the danger area. Dike and absorb spill using inert absorbent materials such as earth, sand, clay, zeolite, or diatomaceous earth.
<b>Environmental Precautionary Measures</b>	DO NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority and local Waste Management. The product is soluble in water (see section 12)
<b>Evacuation Criteria</b>	Evacuate all unnecessary personnel from immediate area
<b>Personnel Precautionary Measures</b>	Personnel involved in the clean-up should wear protective clothing as listed in section 8.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Prevent against physical damage. Wash hands after handling this material. Good housekeeping, splash and dust (when product dries) prevention procedures should be followed to minimize exposure and accumulation. Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Avoid contact with eyes, skin and clothing. Do not inhale product mist, spray or fumes
<b>Storage</b>	Store in a cool, dry, well-ventilated area. Keep containers tightly closed if not in use. Inspect regularly for hazards such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Do not store with food stuffs. Use good housekeeping practices to prevent accumulation of product and follow sound cleaning techniques that will prevent contamination. Dry indoor storage is recommended. Provide appropriate ventilation and store containers such as to prevent any accidental damage.
<b>Container / tankage</b>	Store in original packaging as approved by manufacturer

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General</b>	No specific exposure standards have been established for this product by Safe Work Australia.
<b>Exposure Limits</b>	No data available. However, all atmospheric contamination should be kept to as low a level as is workable
<b>Biological limits</b>	No information on biological limit values available for this product.
<b>Engineering Measures</b>	A system of local and or general exhaust is recommended to keep employee exposure as low as possible. Local exhaust extraction / ventilation is preferred as it controls emissions at the source preventing dispersion of the general work area. Adequate ventilation should be provided so that exposure limits are not exceeded.
<b>Personal Protection Equipment PPE</b>	
	RESPIRATOR: Respirators should be used for conditions of use where exposure to spray or mist is apparent and engineering controls are not feasible.
	EYES: Use chemical safety goggles. Maintain eye wash fountain and quick drench facilities in work area (AS1336/1337). An emergency eyewash or water supply should be readily accessible to the work area.
	HANDS: Gloves, chemical resistant (AS2161).
	CLOTHING: Lab coat, apron or coveralls and safety footwear (AS3765/2210).
<b>Work Hygienic practices</b>	Thoroughly wash hands, forearms and face after using product, prior to eating, smoking using toilet or at end of work period. Contaminated clothing to be laundered prior to re-use

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state</b>	Liquid
<b>Appearance</b>	Solution
<b>Odour</b>	Slight, characteristic
<b>Colour</b>	Dark green
<b>pH</b>	2.0 – 2.5
<b>Vapour pressure</b>	No data available
<b>Relative Vapour Density</b>	No data available
<b>Boiling point</b>	>100 degrees Celsius
<b>Melting point</b>	No data available
<b>Freezing point</b>	No data available
<b>Solubility in water</b>	Soluble in water (aqueous solution)
<b>Specific gravity (kg/l)</b>	1.50 – 1.52
<b>Flash point</b>	No data available
<b>Auto Ignition Temp</b>	No data available
<b>Decomposition temp</b>	No data available
<b>Molecular weight</b>	No data available
<b>Particle size</b>	No data available
<b>Particle size distribution</b>	Solution product, no significant particles present
<b>Viscosity</b>	< 100 centipoise
<b>Note:</b> Physical data are typical values but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.	

## 10. STABILITY AND REACTIVITY

<b>General Information</b>	This product is stable under normal handling and storage conditions.
<b>Chemical Stability</b>	Stable under ordinary conditions.
<b>Conditions to Avoid</b>	Excessive heat, do not store near heat or flames or temperatures below 5 deg C.

<b>Materials to Avoid</b>	1. Strong bases – may release ammonia
<b>Hazardous Products of Decomposition</b>	On heating may evolve toxic fumes / gasses of ammonia, chlorine and nitrogen oxides
<b>Hazardous Polymerisation</b>	No Data Available

11. TOXICOLOGICAL INFORMATION	
<b>General Information</b>	No Data Available Exposure by all routes should be minimised under good product stewardship.
<b>Eye Irritant</b>	Causes serious eye damage
<b>Ingestion</b>	May cause diarrhoea, nausea, vomiting, cramps, weakness and tiredness
<b>Inhalation</b>	No data available
<b>Skin Irritant</b>	Causes mild skin irritation
<b>Reproduction</b>	No data available
<b>Carcinogen Category</b>	No data available
<b>Mutagenicity</b>	No data available
Information on toxicological effects by ingredients where available	
Calcium nitrate	Oral LD <sub>50</sub> 302 mg/kg in the Rat - NIOSH
Magnesium chloride	Oral LD <sub>50</sub> 2800 mg/kg in the Rat
Calcium chloride	Oral LD <sub>50</sub> 3988 mg/kg in the Rat
Urea	Oral LD <sub>50</sub> 8472mg/kg in the Rat
Boric acid	Oral LD <sub>50</sub> >3500 mg/kg in the Rat

12. ECOLOGICAL INFORMATION	
<b>General Ecotoxicity</b>	Adopt good working practices and procedures to restrict environmental release.
<b>Persistence/ Degradability</b>	No Data Available
<b>Mobility</b>	Highly soluble in water
<b>Environmental Fate</b>	Do NOT let product reach waterways, drains and sewers
<b>Bioaccumulation</b>	Low as all elements are essential to plant life
<b>Environmental impact</b>	No Data Available
<b>Ecological hazard by ingredient, where available</b>	
Calcium nitrate	Short-term laboratorial tests resulted in estimated EC <sub>50</sub> 76.72 mg/l for <i>Ceriodaphnia silvestrii</i>
Magnesium chloride	Magnesium is approx 2% of the earth's crust, eighth in elemental abundance, and widely distributed in the environment as a variety of compounds
Calcium chloride	Acute toxicity EC <sub>50</sub> 2900 mg/L for algae ( <i>Selenastrum capricornutum</i> ) 72 hour. Acute toxicity EC <sub>50</sub> 1062 mg/L for daphnids ( <i>Daphnia magna</i> ) 48-hour. Acute toxicity EC <sub>50</sub> 2900 mg/L for algae ( <i>Selenastrum</i> 96-hour.
Urea	Toxicity threshold: <i>Scenedesmus quadricauda</i> (green algae) >10,000 mg/l, toxic effect: multiplication inhibition of cell
Boric acid	EC <sub>50</sub> 40 mg/l in the Green algae 72 hour exposure LC <sub>50</sub> 760mg/l in the <i>Daphnia magna</i> 48 hour exposure

13. DISPOSAL CONSIDERATIONS	
<b>General Information</b>	Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.
<b>Special Precautions for Landfill</b>	Small quantities of this product can usually be disposed of at Liquid Waste Disposal sites. No special disposal treatment is required, but local authorities should be consulted about any specific local requirements. Larger volumes of this product are not recommended to be sent to Liquid Waste Disposal sites. Such product should, if possible, be used for an appropriate application.

#### 14. TRANSPORTATION INFORMATION

##### Land Transport, Australian Dangerous Goods Code (ADG Code) for transport by road and rail.

<b>DG classification</b>	<b>Not a</b> Dangerous goods as per ADG Code
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##### ARD/RID

<b>UN number</b>	Not regulated
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<b>UN proper shipping name</b>	Not applicable
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<b>Transport hazard class (es)</b>	Not applicable
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<b>Comments</b>	Not regulated for LAND transport
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##### Regulation: IMDG

<b>UN number</b>	Not regulated
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<b>UN proper shipping name</b>	Not applicable
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<b>Transport hazard class (es)</b>	Not applicable
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<b>Comments</b>	Not regulated for SEA transport
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##### Regulation: IATA

<b>UN number</b>	Not regulated
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<b>UN proper shipping name</b>	Not applicable
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<b>Transport hazard class (es)</b>	Not applicable
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<b>Comments</b>	Not regulated for AIR transport
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#### 15. REGULATORY INFORMATION

<b>General information</b>	<b>Not a</b> Dangerous goods under ADG Code
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<b>Poisons Schedule</b>	Not listed in SUSMP
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<b>Hazardous Chemical Information system (HCIS)</b>	Not listed in HCIS
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#### 16. OTHER INFORMATION

The information contained in this SDS is by way of general comment only. Because conditions of use, suitability of product and application conditions are beyond the control of Agrichem, this SDS does not offer any advice in respect to any product. The authors and Agrichem hereby disclaim any liability to any person, property, or thing in respect of any consequence of anything done or omitted to be done by any person in reliance, whether wholly or in part, upon whole or part of the contents of this SDS.

## KEY

<b>&lt;</b> Less than	<b>LDLo</b> The lowest amount of a solid or liquid material reported to have caused the death of animals or humans
<b>&gt;</b> Greater than	<b>m<sup>3</sup></b> Cubic Metre
<b>a.i.</b> Active ingredient	<b>mbar</b> Millibar
<b>ADG Code</b> Australian dangerous goods code	<b>mg</b> Milligram
<b>AICS</b> Australian Inventory of Chemical Substances	<b>mg/24H</b> Milligrams per 24 hours
<b>ATE</b> Acute toxicity estimation	<b>mg/kg</b> Milligrams per Kilogram
<b>atm</b> Atmosphere	<b>mg/m<sup>3</sup></b> Milligrams per Cubic Metre
<b>CAS</b> Chemical Abstract Service (registry number)	<b>Misc</b> or <b>Miscible</b> Liquids from one homogeneous liquid phase regardless of the amount of either component present
<b>Cm<sup>2</sup></b> Square Centimetres	<b>mm</b> Millimetre
<b>CO<sub>2</sub></b> Carbon Dioxide	<b>mmH<sub>2</sub>O</b> Millimetres of Water
<b>deg C (°C)</b> Degrees Celsius	<b>mPa.s</b> Millipascals per Second
<b>EPA</b> Environmental Protection Agency based in each state of Australia	<b>MSHA</b> Mine safety and health administration
<b>g</b> Grams	<b>N/A</b> Not Applicable
<b>g/cm<sup>3</sup></b> Grams per Cubic Centimetre	<b>NIOSH</b> National Institute for Occupational Safety and Health
<b>g/l</b> Grams per Litre	<b>NOHSC</b> National Occupational Health and Safety Commission
<b>GRAS</b> Generally recognised as safe	<b>OECD</b> Office for Economic Co-operation and Development
<b>HSIS</b> Hazardous substances information system	<b>PEL</b> Permissible Exposure Limit
<b>HSNO</b> Hazardous substances and New Organism	<b>Pa</b> Pascal
<b>HDPE</b> High density polypropylene	<b>ppb</b> Parts per Billion
<b>IDLH</b> Immediately Dangerous to Life and Health	<b>PPE</b> personal protective equipment
<b>Immiscible</b> Liquid are insoluble in each other	<b>ppm</b> Parts per Million
<b>inHg</b> inch of Mercury	<b>ppm/2h</b> Parts per million per 2 hours
<b>InH<sub>2</sub>O</b> Inch of Water	<b>ppm/6h</b> Parts per million per 6 hours
<b>K</b> Kelvin	<b>psi</b> Pounds per square inch
<b>kg</b> Kilogram	<b>R</b> Rankine
<b>kg/m<sup>3</sup></b> Kilogram per Cubic Metre	<b>RCP</b> Reciprocal Calculation Procedure
<b>LC<sub>50</sub></b> LC stands for lethal concentration, LC <sub>50</sub> is the concentration of a product in air that will cause the death of 50% of a population of test animals. Product is normally inhaled for between 1 and more typically 4 hours	<b>SCBA</b> Self Contained Breathing Apparatus
<b>LD<sub>50</sub></b> LD stands for lethal dose. LD <sub>50</sub> is the amount of product given in a single dose, causing death in 50% of a population of test animals.	<b>SWA</b> Safe Work Australia

**End of SDS**