



SAFETY DATA SHEET

VALAGRO MC SET

Date of Issue: December 2016

1. IDENTIFICATION

Product Identifier: VALAGRO MC SET

Other Means of Identification: None

Recommended Use of the Chemical and Restrictions on Use: Fertiliser

Details of Manufacturer or Importer: Campbells Fertilisers Australasia
18 Raymond Road, Laverton North, Victoria, 3026
Phone: (03) 9931 2211
Fax: (03) 9931 2201
www.campbellsfert.com.au

Emergency Telephone Number: (03) 9931 2211 (business hours only 8.30 am to 5.00 pm)
0418 350 726 (after business hours)
Poisons Information Centre 131126

2. HAZARD(S) IDENTIFICATION

GHS Classification: Not classified as hazardous according to Safe Work Australia (HCIS)
Classification EC 67/548 or EC 1999/45: not classified
Regulation (EC) No 1272/2008 (CLP); not classified

ADG Classification: Based on available information, not classified as a Dangerous Good under the Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th Edition

SUSMP Classification: Exempt from Poison Scheduling

3. COMPOSITION AND INFORMATION ON INGREDIENTS

This product is not hazardous but contains hazardous components.

Component:	CAS Number:	Proportion (%):
Disodium octaborate	12280-03-4	2-3

4. FIRST AID MEASURES

Description of Necessary First Aid Measures:

Inhalation: Remove casualty to fresh air and keep warm and at rest.

Skin Contact: Wash with plenty of soap and water.

Eye Contact: Rinse immediately with plenty of water and seek medical advice.

SAFETY DATA SHEET

VALAGRO MC SET

Date of Issue: December 2016

Ingestion: Do not induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

First Aid Facilities: Ensure washing facilities, including an eyewash, are available and maintained.

Symptoms caused by Exposure: There are no known health effects of the mixture as a whole. Based on the components present:

Inhalation: Unlikely route of exposure.

Skin: Not irritant in normal use of the product. May cause irritation to skin according to the contact time with the product.

Eye: No data available. May cause irritation to eyes according to the contact time with the product.

Ingestion: Gastrointestinal symptoms such as nausea, vomiting, diarrhoea.

Medical Attention and Special Treatment: See section 4.1

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Equipment: Water, carbon dioxide (CO₂)

Specific Hazards arising from the Chemical: Do not inhale explosion or combustion gases. Burning produces smoke containing boron oxide, carbon oxides, nitrogen oxides and zinc oxide

Special Protective Equipment and Precautions for Fire Fighters: Use suitable breathing apparatus. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Move undamaged containers from immediate hazard area if it can be done safely.

6. ACCIDENTAL RELEASE MEASURES

SAFETY DATA SHEET

VALAGRO MC SET

Date of Issue: December 2016

Personal Precautions, Protective Equipment and Emergency Procedures:

For non-emergency personnel:

- No action shall be taken involving any personal risk or without suitable training.
- Wear protective clothes giving total skin protection, gloves and safety glasses
- Keep people not involved in the emergency intervention away from the affected area.
- Ensure adequate ventilation.
- Alert the internal emergency team

For emergency responders:

- Wear protective clothes giving total skin protection, latex gloves and safety glasses.
- See protective measures in section 8
- Move people into a safe place

Environmental Precautions: Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Retain contaminated wash water and dispose in approved landfill. If possible, collect in clean plastic labeled containers and reuse as fertilizer. In case of gas escape or entry into waterways, soil or drains, inform the responsible authorities. Suitable material for taking up: absorbing material, soil, sand.

Methods and Materials for Containment and Cleaning Up: Wash with plenty of water. Contain the spillage with absorbent material. Collect the product for example using shovel and broom.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid contact with skin and eyes, inhalation of vapours and mists. Do not drink or eat in work areas. See section 8 for recommended protective equipment.

Conditions for Safe Storage, including any Incompatibilities: Keep away from food, drink and feed. Incompatible materials: bases, acids, oxidizing and reducing agents. Adequately ventilate premises.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards: No occupational exposure limit available for the mixture.

Disodium octaborate:
DNELs (Derived No Effects Level) for Workers:
 Worker DNEL long term, inhalation, systemic = 6.92 mg/m³ or 1.45 mg B/m³

SAFETY DATA SHEET

VALAGRO MC SET

Date of Issue: December 2016

Worker DNEL long term, cutaneous, systemic = 22901 mg/day or 4800 mg B/day

DNELs (Derived No Effects Level) for the Population (Consumers):

DNEL long term, oral, systemic = 0.81 mg/kg or 0.17 mg B/kg bw/day

DNEL long term, inhalation, systemic = 3.48 mg/m³ or 0.73 mg B/m³

DNEL long term, cutaneous, systemic = 164 mg/kg bw/day or 34.3 mg B/kg bw/day

DNEL long term, oral, local = 12 mg/m³ or 2.52 mg B/m³

PNECs (Predicted No Effect Concentrations):

PNEC add, water = 2.02 mg B/L (fresh water and sea water) and 13.7 mg B/L (water with intermittent releases)

PNEC add, sediment = No exposure expected

PNEC soil = 5.4 mg B/kg soil weight daily

PNEC STP (sewage treatment plant – industrial waste water) = 10 mg B/L

Biological Monitoring: Not specified

Control Banding: Not specified

Engineering Controls: Not specified

Individual Protection Measures e.g. Personal Protective Equipment (PPE): *Respiratory Protection:* Not needed for normal use.

Skin Protection:

Use clothing that provides comprehensive protection to the skin e.g. cotton, rubber, PVC according to EN14605. Use protective gloves that provide comprehensive protection e.g. latex, NBR, PVC, neoprene, rubber.

Eye Protection:

Use close-fitting safety goggles according to the standard EN166. Do not use contact lenses.

Thermal Hazards:

None known.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Black liquid
Odour:	No data available
Vapour Pressure:	No data available
Density:	1.1 kg/dm ³ at 20°C
Vapour Density:	No data available
Boiling Point:	>100°C
Melting Point:	No data available
Solubility (in water):	Soluble
pH:	8.2 at 20°C
Flash Point:	No data available

SAFETY DATA SHEET

VALAGRO MC SET

Date of Issue: December 2016

Flammability (explosive) Limits:	No data available
Auto-Ignition Temperature:	No data available
Octanol/Water Partition Coefficient:	No data available
Thermal decomposition:	No data available

10. STABILITY AND REACTIVITY

Reactivity:	Product is stable under normal conditions of storage, handling and use.
Chemical Stability:	Product is stable under normal conditions of storage, handling and use.
Possibility of Hazardous Reactions:	None known.
Conditions to Avoid:	Avoid heating the product.
Incompatible Materials:	Bases, acids, oxidizing and reducing agents.
Hazardous Decomposition Products:	In case of fire and high temperatures, can develop boron oxide, carbon oxides, nitrogen oxides and zinc oxide.

11. TOXICOLOGICAL INFORMATION

Toxicological Information of the Mixture: No data available

Toxicological Information of the Main Substances found in the Mixture:

Acute Toxicity:	<p><i>Disodium octaborate:</i> Low acute oral toxicity LD50 (male rat) 2.55 g/kg bw (test material octaborate disodium tetrahydrate according to guidelines FIFRA 40 CFR) LD50 (male rat) >2600 mg/kg bw (test material boron trioxide, OECD Guideline 401)</p> <p>Low acute toxicity by inhalation LC50 (4h) (rat male/female) >2.01 mg/L air (test material disodium octaborate tetrahydrate, OECD Guideline 403)</p> <p>No acute dermal toxicity LD50 (rabbit male/female) >2000 mg/kg bw (test material octaborate disodium tetrahydrate according to guidelines FIFRA 40 CFR 158, 162; TSCA (40 CFR 798) and OECD Guideline 402) No acute dermal toxicity clinical signs or pathological symptoms were observed. The octaborate disodium tetrahydrate has a low absorption through intact skin.</p>
Skin Corrosion/Irritation:	<p><i>Disodium octaborate:</i> Studies on rabbits did not show any irritation. (Test material disodium octaborate tetrahydrate according to guidelines FIFRA 40 CFR 158,</p>

SAFETY DATA SHEET

VALAGRO MC SET

Date of Issue: December 2016

	<p>162, 163) and Toxic Substances Control Act (40 CFR 798). Based on the available data, the classification criteria are not met as a skin irritant.</p>
Serious Eye Damage/Irritation:	<p><i>Disodium octaborate:</i> No evidence of corrosion (FIFRA guidelines (40 CFR 162) and TSCA (40 CFR 798)). The test material was applied by washing every 24 hours on the eyes of New Zealand white rabbits causing irritation of the conjunctiva and iris. Years of occupational exposure to disodium octaborate tetrahydrate showed no adverse effects on the human eye. Consequently the product is not irritating to eyes in normal use. Based on the available data, the classification criteria are not met as an eye irritant.</p>
Respiratory or Skin Sensitisation:	<p><i>Disodium octaborate:</i> Not a skin sensitizer for guinea pigs, OECD Guideline 406. Based on the available data, the classification criteria are not met as a sensitizer.</p>
Germ Cell Mutagenicity:	<p><i>Disodium octaborate:</i> The bacterial reverse mutation test (Ames test) was performed on <i>S. typhimurium</i> TA1535, TA1537, TA98 and TA100. There was no mutagenic activity (test material boric acid). Based on the available data, the classification criteria are not met as a mutagen.</p>
Carcinogenicity:	<p><i>Disodium octaborate:</i> The test performed according to the OECD Guideline 451 B6C3F1 (mice treated in the diet for 103 weeks with Boric acid 0, 2500 or 5000 ppm) showed no evidence of carcinogenicity. Based on the available data, the classification criteria are not met as a carcinogen.</p>
Reproductive Toxicity:	<p><i>Disodium octaborate:</i> The exposure tests at 50 and 155 mg Borax Deca Hydrate/kg body weight (equivalent to 5.9 and 17.5 mg B/kg body weight) made of three generations of Sprague-Dawley rats showed no adverse effects on fertility, lactation, litter size, weight or other abnormalities of the unborn. NOAEL (No Observed Adverse Effect Level) for fertility (male rats: 17.5 mg B/kg/day. Rats exposed to doses of 518 mg Borax decahydrate/kg body weight (equivalent to 58.5 mg B/kg body weight) were infertile. Microscopic examination of the testes atrophied of all the males in this group showed no viable sperm. Furthermore the examination of the ovaries in the female rats exposed to 58.5 mg B/kg body weight detected decreased ovulation in most of the ovaries examined. None of the females exposed to high doses generated pups as a result of mating with males in the control group. LOAEL (Lowest Observed Adverse Effect Level) for fertility (rat female/male): 58.5 mg B/kg bw/day. The group of male and female rats at high dose (58.5 mg B/kg bw) showed clinical signs of toxicity such as sleeping rough, scaly tail, respiratory distress and inflamed eyelids. Based on the data obtained from this study, it was concluded that the exposure of rats at levels up to 17.5 mg B/kg bw does not cause adverse reproductive effects. Animal feeding studies in rat, mouse and dog, at high doses, have demonstrated negative effects on fertility and testes, effects on the</p>

SAFETY DATA SHEET

VALAGRO MC SET

Date of Issue: December 2016

	fetus, including fetal weight loss and minor skeletal variations. Studies of workers exposed to high boron have not shown any adverse effects on the developing fetus. The disodium octaborate tetrahydrate is classified as toxic for reproduction, category 1B, H360FD according to the classification criteria of the EC Regulation 1272/2008 (CLP)
Specific Target Organ Toxicity (STOT) - Single Exposure:	<i>Disodium octaborate:</i> Based on the available data, the classification criteria are not met as STOT – single exposure.
Specific Target Organ Toxicity (STOT) - Repeated Exposure:	<i>Disodium octaborate:</i> Repeated dose toxicity: 2 year feeding studies of Sprague-Dawley rats (male/female) exposed to different concentrations of boric acid (0, 33 (5.9), 100 (17.5), 334 (58.5) mg boric acid (B)/kg/bw/day) showed adverse effects such as rough coat, hunched posture, fingers swollen, eyes inflamed and bleeding, testicular atrophy, degeneration of the seminiferous tubules, effects observed in animals exposed to the highest levels of boric acid. NOAEL 17.5 mg B/kg bw/day LOAEL 58.5 mg B/kg bw/day There were no adverse effects in the group exposed to a minimum and medium level.
Aspiration Hazard:	<i>Disodium octaborate:</i> Based on the available data, the classification criteria are not met as an aspiration hazard.

Likely Routes Of Exposure

There are no known health effects of the mixture as a whole. Based on the components present:

Inhalation:	Unlikely route of exposure.
Skin:	Not irritant in normal use of the product. May cause irritation to skin according to the contact time with the product.
Eye:	No data available. May cause irritation to eyes according to the contact time with the product.
Ingestion:	Gastrointestinal symptoms such as nausea, vomiting, diarrhoea.

12. ECOLOGICAL INFORMATION

Ecotoxicity:	Low toxicity to aquatic life. No data available.
Persistence and Degradability:	No data available
Bioaccumulative Potential:	The product does not show any bio-accumulation phenomena.
Mobility in Soil:	No data available
Other Adverse Effects:	Prevent entry to sewers and public waters. As this fertilizer contains nitrate, heavy spillage may cause adverse environmental impact such as eutrophication in confined surface waters or nitrate contamination of

SAFETY DATA SHEET

VALAGRO MC SET

Date of Issue: December 2016

ground or surface water.

13. DISPOSAL CONSIDERATIONS

Product Disposal: Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.

Container Disposal: Dispose in a safe manner in accordance with local/national regulations.

14. TRANSPORT INFORMATION

Classification: Based on available information, not classified as Dangerous Goods for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th Edition.

UN Number: Not applicable

Proper Shipping Name or Technical Name: Not applicable

Transport Hazard Class: Not applicable

Packing Group: Not applicable

Environmental Hazards for Transport Purposes: Not applicable

Special Precautions for User: Not applicable

HAZCHEM Code: Not applicable

15. REGULATORY INFORMATION

SUSMP: Exempt from Poison Scheduling

APVMA: Exempt from registration

State Departments of Agriculture / Primary Industries: Registration not required

Australian Inventory of Chemical Substances (AICS): All components listed

16. OTHER INFORMATION

Edition: Initial edition

Revision Due: July 2021



SAFETY DATA SHEET

VALAGRO MC SET

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Reason for Revision: Initial version

Preparation Information: Prepared by Campbells Fertilisers Australasia

Data Sources: Supplier SDS

Glossary:

- APVMA** Australian Pesticides and Veterinary Medicines Authority
- CAS** Chemical Abstract Services number, used to uniquely identify chemical compounds
- PPE** Personal protective equipment
- SUSMP** Standard for the Uniform Scheduling of Medicines and Poisons
- SWA** Safe Work Australia
- HCIS** Hazardous Chemical Information System

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 Campbell's Fertilisers, it is the user's responsibility to determine conditions of safe use of the product.

END OF SDS