

SAFETY DATA SHEET

Valagro EDTA Mix 5

Date of Issue: December 2016

1. IDENTIFICATION

Product Identifier: Valagro EDTA Mix 5

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)

2. HAZARD(S) IDENTIFICATION

EC regulation criteria 1272/2008 (CLP):

This mixture is not classified as dangerous according to EC Regulation 1272/2008 (CLP).

Adverse physiological, human health and environmental effects:

No other hazards.

Label elements:

Symbols : none

Hazard statements: none

Precautionary statements: none

No other hazards.

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: Schedule 5

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Boric acid is listed in the Hazardous Chemical Information System on the Safe Work Australia website.

Component:	CAS Number:	Proportion (%):
Copper EDTA	14025-15-1	≥7-<10
Boric acid	10043-35-3	≥1-<3
Sodium molybdate	10102-40-6	0.3-<0.5

SAFETY DATA SHEET

Valagro EDTA Mix 5

Date of Issue: December 2016

4. FIRST AID MEASURES

Description of Necessary First Aid Measures:

- Inhalation:** Remove casualty to fresh air and keep warm and at rest.
- Skin Contact:** Take off all contaminated clothing immediately. Areas of the body that have or are suspected of having come into contact with the product must be rinsed immediately with plenty of running water and soap. Wash the body thoroughly in a shower or bath. Dispose of contaminated clothing safely.
- Eye Contact:** Rinse with plenty of water with the eyelids held open for a sufficient length of time, then consult an ophthalmologist immediately. Protect uninjured eye.
- Ingestion:** Never give anything by mouth to an unconscious person. Do not induce vomiting unless instructed to do so by medical personnel. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.
- First Aid Facilities:** Ensure washing facilities, including an eyewash, are available and maintained.
- Advice:** Persons providing first aid must use personal protection equipment (latex gloves and safety glasses).

Symptoms caused by Exposure:

- Inhalation:** Possible irritation of respiratory tract.
- Skin Contact:** Possible irritation according to the contact time with the product.
- Eye Contact:** Possible irritation according to the contact time with the product.
- Ingestion:** Possible irritation of mouth and digestive tract.

Medical Attention and Special Treatment:

If exposed, concerned or if symptoms persist, get medical attention/advice. If medical advice is needed, have product container or label at hand.

5. FIRE FIGHTING MEASURES

- Suitable Extinguishing Equipment:** Water, carbon dioxide (CO₂)
- Specific Hazards arising from the Chemical:** Do not inhale explosion and combustion gases. Burning produces smoke containing boron oxide, carbon oxides and nitrogen oxides.
- Special Protective Equipment and Precautions for Fire Fighters:** Use suitable personal protective equipment and self-contained 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.

SAFETY DATA SHEET

Valagro EDTA Mix 5

Date of Issue: December 2016

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:	<p>For non-emergency personnel:</p> <ul style="list-style-type: none"> - 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 <p>For emergency responders:</p> <ul style="list-style-type: none"> -Wear protective clothes giving total skin protection, gloves and safety glasses. -Move people to a safe place. -Avoid dust generation -See protective measures in section 8
Environmental Precautions:	<p>Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Retain contaminated wash water and dispose of it in an approved landfill. If possible, collect in clean plastic labelled containers and reuse as fertilizer. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. Suitable material for collection includes absorbing material, soil, sand</p>
Methods and Materials for Containment and Clean Up	<p>Collect the product for example using a shovel and broom. Wash with plenty of water, contain the spill with absorbent material.</p>

7. HANDLING AND STORAGE

Precautions for Safe Handling:	<p>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.</p>
Conditions for Safe Storage including any Incompatibilities:	<p>Keep away from food, drink and feed. Incompatible materials: bases, acids, oxidizing and reducing agents. Adequately ventilate premises. Avoid dust generation. Dusts at sufficient concentrations can form explosive mixtures with air.</p>

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards:	<p>Boric acid OSHA PEL (permissible exposure levels): 15 mg/m³ total dust; 5 mg/m³ respirable dust</p>
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SAFETY DATA SHEET

Valagro EDTA Mix 5

Date of Issue: December 2016

DNELs (Derived No Effects Level) - Workers:

Inhalation systemic effects long-term exposure

DNEL: 8.3 mg/m³ or 1.45 mg B/m³

Cutaneous systemic effects long term exposure

DNEL 27460 mg/day or 4800 mg B/day

DNELs (Derived No Effects Level) - General population (consumers):

Inhalation systemic effects long-term exposure

DNEL: 4.15 mg/m³ or 0.73 mg B/m³

Oral systemic effects long-term exposure

DNEL 0.98 mg/kg or 0.17 mg B/kg bw/day

Oral acute effects long-term exposure

DNEL 0.98 mg/kg or 2.52 mg B/m³

PNEC (Predicted No Effect Concentrations):

PNEC add, water = 2.02 mg B/L (freshwater 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

Copper EDTA

DNELs - Workers:

Inhalation systemic effects long-term exposure

DNEL: 1.8 mg/m³

Skin systemic effects long term exposure

DNEL 3750 mg/kg body weight/day

DNELs - General population (consumers):

Inhalation systemic effects long-term exposure

DNEL: 0.45 mg/m³

Skin systemic effects long term exposure

DNEL 1875 mg/kg body weight/day

Oral systemic effects long-term exposure

DNEL 0.375 mg/kg body weight/day

PNEC:

PNEC (freshwater) = 2.95 mg/L

PNEC aqua (sea water) = 0.3 mg/L

PNEC aqua (intermittent releases) – 1.09 mg/L

PNEC STP = 65.4 mg /L

PNEC soil Risk to terrestrial organisms = 0.21 mg/kg dw soil

Sodium molybdate

Exposure limit Molybdenum (Mo) TWA 0.5 mg/m³ soluble compounds

Critical effect: respiratory tract irritation

Long term systemic effects (inhalation): DNEL = 11.17 mg Mo/m³
(28 mg Na₂MoO₄·2H₂O/m³)

Long term chronic effects (fresh water): PNEC = 12.7 mg Mo/L
(32 mg Na₂MoO₄·2H₂O/L)

Long term chronic effects (sea water): PNEC = 1.9 mg Mo/L

SAFETY DATA SHEET

Valagro EDTA Mix 5

Date of Issue: December 2016

(4.8 mg Na₂MoO₄.2H₂O/L)
 Long term chronic effects (fresh water - sediments): PNEC = 22.6 g Mo/kg dw (57 g Na₂MoO₄.2H₂O/kg dw)
 Long term chronic effects (sea water - sediments): PNEC = 1.98 g Mo/kg dw (4.99 g Na₂MoO₄.2H₂O/kg dw)
 Long term chronic effects (soil): PNEC = 11.8-188 mg Mo/kg dw (29.8-474 mg Na₂MoO₄.2H₂O/kg dw)
 Long term chronic effects (STP): PNEC = 21.7 mg Mo/L (54.7 mg Na₂MoO₄.2H₂O/L)

Biological Monitoring:	Not available
Control Banding:	Not available
Engineering Controls:	Not available
Individual Protection Measures e.g. Personal Protective Equipment (PPE):	<p><i>Eye and Face Protection:</i> Use close fitting safety goggles according to the standard EN166. Do not use contact lenses.</p> <p><i>Skin Protection:</i> Use protective gloves that provide comprehensive protection, e.g. nitrile. Use clothing that provides comprehensive skin protection, e.g. cotton, rubber, PVC according to EN14605.</p> <p><i>Respiratory Protection:</i> Not needed for normal use.</p> <p><i>Thermal Hazards:</i> None known.</p>

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellow-green microgranules
Odour:	No data available
Vapour Pressure (mm Hg):	No data available
Density:	1 kg/dm ³ at 20 ⁰ C
Boiling Point:	>100 ⁰ C
Freezing/Melting Point:	No data available
Solubility (aqueous solution):	100 g/L at 20 ⁰ C
pH 1%:	4.5 at 20 ⁰ C
Flash Point:	No data available
Flammability (explosive) Limits:	No data available
Auto-Ignition Temperature:	No data available
Octanol/Water Partition Coefficient:	No data available

SAFETY DATA SHEET

Valagro EDTA Mix 5

Date of Issue: December 2016

10. STABILITY AND REACTIVITY

Reactivity:	Stable under normal conditions of storage and handling
Chemical Stability:	Stable under normal conditions of storage and handling
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 (CO _x), nitrogen oxides (NO _x) and zinc oxide

11. TOXICOLOGICAL INFORMATION

Toxicological Effects:

Toxicological information of the mixture: No data available

Toxicological information of the main substances found in the mixture:

Acute Toxicity:

Boric acid

Oral: Low acute oral toxicity

LD50 (male rat) >2600 mg/kg body weight (test material: boron trioxide, OECD Guideline 401 (Acute oral toxicity))

Inhalation: Low acute toxicity by inhalation

LD50 (4 h) (male/female rat) >2.03 mg/L air (test material: disodium octoborate tetrahydrate, OECD Guideline 403 (Acute inhalation toxicity))

Dermal: No acute dermal toxicity

LD50 (male/female rabbit) >2000 mg/kg body weight (test material: boron acid, according to FIFRA 40 CFR 163)

Copper EDTA

Oral: LD50 = 890 mg/kg (test similar to OECD 403)

Inhalation: LC50 (4 h) >5.32 g/m³ (OECD 436)

Dermal: LD50 (rat) >2000 mg/kg body weight (OECD 402 read-across from Ethylenediaminetetraacetic acid ferric sodium salt)

Sodium molybdate

Inhalation: LC50 (4 h) (male/female rat) 1.93 mg/L

Dermal: LD50 (rat) >2000 mg/kg body weight

Skin

Corrosion/Irritation:

Boric acid. Based on the available data, the classification criteria are not met as a skin irritant.

Copper EDTA. Slightly irritating (test on rabbit: 50% aqueous solution, OECD 404)

Sodium molybdate. Not irritant. Not corrosive

SAFETY DATA SHEET

Valagro EDTA Mix 5

Date of Issue: December 2016

Serious Eye Damage/Irritation:	<p><u>Boric acid.</u> Based on the available data, the classification criteria are not met as an eye irritant.</p> <p><u>Copper EDTA.</u> Irritating (test on rabbit, OECD 405)</p> <p><u>Sodium molybdate.</u> Not irritant. Not corrosive</p>
Respiratory or Skin Sensitisation:	<p><u>Boric acid.</u> Not skin sensitizer for guinea pigs, OECD Guideline 406 (Skin Sensitization). Based on the available data, the classification criteria are not met as a sensitizer.</p> <p><u>Copper EDTA.</u> Not sensitizing (test on rat, OECD 429 Local Lymph Node Assay)</p> <p><u>Sodium molybdate.</u> Skin – not sensitizing. Respiratory system – No data available</p>
Germ Cell Mutagenicity:	<p><u>Boric acid.</u> The bacterial reverse mutation test (Ames test) was performed on <i>S. typhimurium</i> TA 1535, TA 1537, 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> <p><u>Copper EDTA.</u> Not classified as mutagenic</p> <p><u>Sodium molybdate.</u> Not classified as mutagenic</p>
Carcinogenicity:	<p><u>Boric acid.</u> The test performed according to 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> <p><u>Copper EDTA.</u> Non-carcinogenic (read-across from hydrogen 2,2', 2'', 2''' – (ethane-1,2-diylidinitrilo) tetraacetate)</p> <p><u>Sodium molybdate.</u> Not classified as carcinogenic</p>
Reproductive Toxicity:	<p><u>Boric acid.</u> LOAEL for fertility (male/female rat): 58.5 mg B/kg NOAEL 17.5 mg B/kg body weight/day. The disodium octoborate tetrahydrate is autoclassified as toxic for reproduction, Repro 1B, H360FD according to the new classification criteria of the EC Regulation 1272/2008 (CLP)</p> <p><u>Copper EDTA.</u> NOEL reproduction and development ≥500 mg/kg bw/day</p> <p><u>Sodium molybdate.</u> The classification criteria are not met</p>
Specific Target Organ Toxicity (STOT) – Single Exposure:	<p><u>Boric acid.</u> Based on the available data, the classification criteria are not met for STOT-single exposure.</p> <p><u>Copper EDTA.</u> The classification criteria are not met.</p> <p><u>Sodium molybdate.</u> The classification criteria are not met.</p>
Specific Target Organ Toxicity (STOT) – Repeated Exposure:	<p><u>Boric acid.</u> There were no adverse effects in the group exposed to a minimum and medium level.</p> <p><u>Copper EDTA.</u> The classification criteria are not met.</p> <p><u>Sodium molybdate.</u> The classification criteria are not met.</p>
Aspiration Hazard:	<p><u>Boric acid.</u> Based on the available data, the classification criteria are not met.</p> <p><u>Copper EDTA.</u> Unlikely event (solid).</p> <p><u>Sodium molybdate.</u> Not applicable. Not an aerosol/mist.</p>
<u>Possible Routes Of Exposure:</u>	
Inhalation:	Possible irritation of respiratory tract.
Skin:	Possible irritation according to the contact time with the product.
Eye:	Possible irritation according to the contact time with the product.

SAFETY DATA SHEET

Valagro EDTA Mix 5

Date of Issue: December 2016

Ingestion: Possible irritation of mouth and digestive tract.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Aquatic acute toxicity:

Boric acid.

Aquatic compartment

Short-term toxicity to fish:

Fathead minnow (*Pimephales promelas*) 96 hr LC50 = 79.7 mg B/L (mortality)

Long-term toxicity to fish:

Fathead minnow (*Pimephales promelas*)

32 d NOEC (No Observed Effect Concentration) = 11.2 mg B/L

32 d LOEC (Lowest Observed Effect Concentration) = 23 mg B/L

Short-term toxicity to aquatic invertebrates:

Daphnids (*Daphnia magna*) 48 hr LC50 = 133 mg B/L (mortality)

Long-term toxicity to aquatic invertebrates:

Daphnids (*Daphnia magna*) 21 d LOEC = 56 mg B/L

Hyalella azteca 42 d NOEC = 25.9 mg B/L

42 d LOEC = 51.1 mg B/L

Short-term toxicity to algae:

Green algae (*Pseudokirchneriella subcapitata*) 72 hr EC50 – biomass = 40 mg B/L (mortality)

Long-term toxicity to algae:

Blue-green algae (*Agmenellum quadruplicatum*) 10 d NOEC ≥100 mg B/L (growth rate)

Toxicity to microorganisms: The study was performed in accordance with OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test). An inhibitory effect on the respiration rate of microorganisms was found:

3 hr EC50 = 175 mg B/L

3 hr EC20 = 112 mg B/L

3 hr EC10 = 35.4 mg B/L

3 hr NOEC = 17.5 mg B/L

Bodies of sediment:

Chironomus riparius:

28 d NOEC = 180 mg B/kg sediment, daily weights (mortality)

28 d LOEC = 320 mg B/kg sediment, daily weights (mortality and emergency)

28 d LD50 = 278 mg B/kg sediment, daily weight (nominal)

Terrestrial compartment

Toxicity to terrestrial arthropods:

The study was performed in accordance with ISO11267 (Inhibition of

SAFETY DATA SHEET

Valagro EDTA Mix 5

Date of Issue: December 2016

Reproduction of Collembola by Soil Pollutants) on the Collembola, *Folsomia candida*. The results obtained on artificial soil are
 28 d EC10 = 68.1 mg B/kg body weight (mortality)
 28 d EC10 = 13.8 mg B/kg body weight (reproduction)
 28 d EC50 = 26.1 mg B/kg body weight (reproduction)
 28 d LC50 >70 mg B/kg body weight

Toxicity to terrestrial plants:

The studies were performed on different species of plants of the group Monocotyledonae (as *Allium cepa*) and Dicotyledonae (as *Brassica rapa*) with the following results:

Allium cepa, 7 d NOEC = 56 mg B/kg soil, daily weight (growth in length of the bud) – clay soil

Brassica rapa, 5 d NOEC = 28 mg B/kg soil, daily weight (root growth) – artificial soil

Toxicity to soil microorganisms: The study was performed in accordance with OECD Guideline 216 (Soil Microorganisms: Nitrogen Transformation Test) based on the calculation of the rate of nitrification on the basis of the concentration of nitrates in the soil after x days (without taking into account the value of the concentration of nitrates of the day 0) for a number of days. Rate of formation of nitrate:

102 d EC10 = 15.4 mg B/kg soil weight daily (sandy soil)

102 d EC50 >17.5 mg B/kg soil weight daily (sandy soil and sandy loam)

102 d EC10 = 17.2 mg B/kg soil weight daily (sandy loam)

Copper EDTA

Aquatic acute toxicity.

Species: Fish = 555 mg/L. Notes: OECD 203

Species: Daphnia = 109.2 mg/L. Notes: OECD 202

Species: Algae = 662.6 mg/L. Notes: OECD 201

Aquatic chronic toxicity.

Species: Fish = 37.2 mg/L. Notes: OECD 210

Species: Daphnia = 29.5 mg/L. Notes: OECD 211

Species: Algae = 43.7 mg/L. Notes: OECD 201

Bacteria toxicity.

Endpoint: NOEC = 654 mg/L; duration 3 h. Notes: OECD 209

Sodium molybdate

The lowest acute reference values for fish, invertebrates and algae are >100 mg Mo/L.

The lowest aquatic NOEC for these three trophic levels is >1 mg Mo/L (i.e. 43.2 mg Mo/L for the rainbow trout).

Persistence and Degradability:

Not applicable for inorganic substances

Bioaccumulative Potential:

The product does not contain any bioaccumulative substance.

Mobility in Soil:

The product is soluble and mobile in both terrestrial and aquatic compartments.

SAFETY DATA SHEET

Valagro EDTA Mix 5

Date of Issue: December 2016

13. DISPOSAL CONSIDERATIONS

Product Disposal: Recover if possible. Dispose of in accordance with state, federal and local regulations.

Container Disposal: Empty containers must be handled according to local 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: Schedule 5

APVMA: Exempt from registration

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

16. OTHER INFORMATION

Edition: Initial edition

Revision Due: December 2021

Reason for Revision: Initial version

Preparation: Prepared by Campbells Fertilisers Australasia



SAFETY DATA SHEET

Valagro EDTA Mix 5

Date of Issue: December 2016

Information:

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

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