

SAFETY DATA SHEET

Valagro Sweet

Date of Issue: April 2016

1. IDENTIFICATION

Product Identifier:	Valagro Sweet
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



Pictogram: Exclamation Mark

GHS Hazard Class and Category:

Eye Irritation Category 2: "Warning"

Hazard statement: H319: Causes serious eye irritation

Precautionary Statements:

Prevention

P264 Wash hands thoroughly after handling

P280 Wear eye protection/face protection

Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/attention.

Storage

No additional information

Disposal

No additional information

SAFETY DATA SHEET

Valagro Sweet

Date of Issue: April 2016

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

Component:	CAS Number:	Proportion (%w/v):
Calcium chloride	10043-52-4	15-20
Disodium octaborate	12280-03-4	0.5-1

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 water and soap.

Eye Contact: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Ingestion: Do not under any circumstances 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 Contact: Not an irritant in normal use of the product but irritation can occur.

Eye Contact: Causes serious eye irritation.

Ingestion: Gastrointestinal symptoms such as nausea, vomiting and diarrhea.

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: Do not inhale explosion and combustion gases. Burning produces smoke

SAFETY DATA SHEET

Valagro Sweet

Date of Issue: April 2016

arising from the Chemical:	containing calcium oxide, boron oxide, carbon oxides and nitrogen oxides, hydrochloric acid gas.
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

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, PVC 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
- Remove people to safety

Environmental Precautions:

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Retain contaminated washing water and dispose of it in an approved landfill. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Methods and Materials for Containment and Clean Up

Collect the product using shovel and broom into clean plastic containers, label and reuse as fertilizer. Wash with plenty of water. Contain the spill with absorbing material, soil or sand.

7. HANDLING AND STORAGE

Precautions for Safe Handling:

Avoid contact with skin and eyes, inhalation of vapours or mists. Do not eat or drink while working. See section 8.

Conditions for Safe Storage, including any Incompatibilities:

Keep away from food, drink and feed. Store with adequate ventilation.

SAFETY DATA SHEET

Valagro Sweet

Date of Issue: April 2016

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards:	<p><u>DNELs (Derived No Effect Level) for workers:</u> Worker-DNEL long term, inhalation, systemic = 6.92 mg/m³ or 1.45 mg B/m³ Worker-DNEL long term, cutaneous, systemic = 22901 mg/day or 4800 mg B/day</p> <p><u>DNELs (Derived No Effect Level) for the population (consumers):</u> 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</p> <p><u>PNECS (Predicted No Effect Concentrations):</u> 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 Not available</p>
Biological Monitoring:	
Control Banding:	Not available.
Engineering Controls:	None specified
Individual Protection Measures e.g. Personal Protective Equipment:	<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> Wear gloves that provide comprehensive protection e.g. latex, NBR, PVC, neoprene, rubber. Wear clothing that provides comprehensive 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 specified.</p>

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Purple liquid
Odour:	Not available
Vapour Pressure (mm Hg):	Not available
Bulk Density:	1.35 kg/dm ³ at 20°C
Boiling Point:	Not available

SAFETY DATA SHEET

Valagro Sweet

Date of Issue: April 2016

Freezing/Melting Point:	Not available
Solubility (aqueous solution):	soluble
Specific Gravity:	Not available
pH:	3.5
Flash Point:	Not available
Flammability (explosive) Limits:	Not available
Auto-Ignition Temperature:	Not available
Octanol/Water Partition Coefficient:	Not available

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions of handling and storage
Possibility of Hazardous Reactions:	None known
Conditions to Avoid:	Avoid heating the product
Incompatible Materials:	None known
Hazardous Decomposition Products:	In case of fire and high temperatures can develop calcium oxide, boron oxide, nitrogen oxides, hydrochloric acid gas

11. TOXICOLOGICAL INFORMATION

Toxicological information on the mixture: Not available

Toxicological information on the main substances found in the mixture:

Calcium chloride

Acute Toxicity:

Oral Ingestion:	LD50 - Route: Oral - Species: Rat = 2301 mg/l LD50 - Route: Oral - Species: Rat = 1000 mg/kg
Dermal:	LD50 - Route: Skin - Species: Rabbit > 5000 mg/l LD50 - Route: Skin - Species: Rat = 2630 mg/kg
Inhalation:	LD50 - Route: Inhalation - Species: Mouse = 1940 mg/kg
Skin Contact:	Not available
Eye Contact:	Causes serious eye irritation
Sensitisation:	Not available
Germ Cell Mutagenicity:	Not available
Carcinogenicity:	Not available
Reproductive Toxicity:	Not available

SAFETY DATA SHEET

Valagro Sweet

Date of Issue: April 2016

Specific Target Not available

Organ Toxicity (STOT) - Single Exposure:

Specific Target Not available

Organ Toxicity (STOT) - Repeated Exposure:

Aspiration Hazard: Not available

Disodium octaborate

Acute Toxicity:

Oral Ingestion:

Low acute oral toxicity
 LD50 (male rat): 2.55 g / kg body weight (test material: octaborate disodium tetrahydrate, according to guidelines FIFRA 40 CFR)
 LD50 (male rat): > 2600 mg / kg body weight (test material: boron trioxide, OECD Guideline 401 (Acute Oral Toxicity))

Dermal:

No acute dermal toxicity.
 LD50 (rabbit male / female) > 2000 mg / kg body weight (test material: octaborate disodium tetrahydrate, according to FIFRA 40 CFR 158, 162; TSCA (40 CFR 798) and OECD Guideline 402 (Acute Dermal Toxicity)).
 No acute dermal toxicity, were not observed clinical signs or pathological. The octaborate disodium tetrahydrate has a low absorption through the intact skin.

Inhalation:

Low acute toxicity by inhalation.
 LD50 (4h) (rat male / female) > 2.01 mg / L air (Test equipment: Disodium octaborate tetrahydrate, OECD Guideline 403 (Acute Inhalation Toxicity)).

Skin Contact:

Studies on rabbits didn't show any irritation. (Material Test: Disodium octaborate tetrahydrate, according to FIFRA (40 CFR 158, 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.

Eye Contact:

No evidence of corrosion (FIFRA guidelines (40 CFR 162) and TSCA (40 CFR 798)). The test material applied by washing every 24 hours on the eyes of New Zealand white rabbits causes conjunctival irritation and iris. (FIFRA guidelines (40 CFR 162) and TSCA (40 CFR 798)). (FIFRA guidelines (40 CFR 162) and TSCA (40 CFR 798)). Years of occupational exposure to disodium tetrahydrate octaborate showed no adverse effects on the human eye.
 Consequently the product is not irritating to eyes in normal use Industrial. Based on the available data, the classification criteria as eye irritant are not met.

Sensitisation:

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

Germ Cell

The bacterial reverse mutation test (Ames test) was performed on S. typhimurium TA 1535, TA 1537, TA 98 and TA 100. There was no

SAFETY DATA SHEET

Valagro Sweet

Date of Issue: April 2016

Mutagenicity:	mutagenic activity. (Material Test: Boric acid). Based on the available data, the classification criteria as a mutagen are not met.
Carcinogenicity:	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 as a carcinogen are not met.
Reproductive Toxicity:	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 has detected a decreased ovulation in most of the ovaries examined. None of the females exposed to high doses has 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 body weight) 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 body weight 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 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 automatically classified as toxic for reproduction, Repro 1B, H360FD according to the new classification criteria of the EC Regulation 1272/2008 (CLP).
Specific Target Organ Toxicity (STOT) - Single Exposure:	Based on the available data, the classification criteria as STOT-single exposure are not met.
Specific Target Organ Toxicity (STOT) - Repeated Exposure:	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 body weight daily) showed adverse effects such as: rough coat, hunched posture, fingers swollen, eyes inflamed and bleeding, atrophy testicular, degeneration of the seminiferous tubules, effects observed in animals exposed to the highest levels of boric acid. NOAEL 17.5 mg boron / kg body weight / day LOAEL 58.5 mg boron / kg body weight / day

SAFETY DATA SHEET

Valagro Sweet

Date of Issue: April 2016

There were no adverse effects in the group exposed to a minimum and medium level.

Aspiration Hazard: Based on the available data, the classification criteria are not met.

Possible Routes Of Exposure:

Inhalation: Unlikely route of exposure.

Skin: Not irritant in normal use of the product through the skin but irritation can occur.

Eye: Causes serious eye irritation.

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

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Aquatic acute toxicity:

Calcium Chloride:

Endpoint: EC50 - Species: Daphnia = 2400 mg/l - Duration h: 48

Endpoint: EC50 - Species: Fish = 2900 mg/l - Duration h: 72

Endpoint: LC50 - Species: Fish = 4630 mg/l - Duration h: 96

Endpoint: NOEC - Species: Daphnia = 320 mg/l - Duration h: 504

Endpoint: LC50 - Species: Daphnia = 3005 mg/l - Duration h: 48

Disodium octaborate

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 LC50 = 34 mg B / L

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). It was found an inhibitory effect on the respiratory rate of microorganisms:

3-hr EC50 = 175 mg B/L

3-hr EC20 = 112 mg B/L

3-hr EC10 = 35.4 mg B/L

SAFETY DATA SHEET

Valagro Sweet

Date of Issue: April 2016

3-d 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 ISO 11267 (Inhibition of Reproduction of Collembola by Soil Pollutants) on the *Folsomia candida*, Collembola. 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 of Monocotyledonae (as *Allium cepa*) and the 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 daily weight soil (sandy loam)

Not applicable for inorganic substances.

Persistence and Degradability:

Bioaccumulative Potential:

Mobility in Soil:

The product does not contain any bioaccumulative substance

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

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.

SAFETY DATA SHEET

Valagro Sweet

Date of Issue: April 2016

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, 7 th 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
Toxic Substance – NZ	Exempt

16. OTHER INFORMATION

Edition:	Initial edition
Revision Due:	April 2021
Reason for Revision:	Initial version
Preparation Information:	Prepared by Campbells Fertilisers Australasia
Data Sources:	Supplier SDS
Trademark Information:	Aqua-Fert is a Registered Trademark of Campbells Fertilisers Australasia



SAFETY DATA SHEET

Valagro Sweet

Date of Issue: April 2016

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