

SAFETY DATA SHEET

Valagro Brexil Zn

Date of Issue: August 2016

1. IDENTIFICATION

Product Identifier: Valagro Brexil Zn

Other Means of Identification: Zinc sulphate anhydrous

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

Pictogram: Corrosion

Pictogram: Environment

GHS Hazard Class and Category:

Acute Toxicity Oral Category 4: "Warning"

Hazard statement: H302 Harmful if swallowed

Eye Damage Category 1: "Danger"

Hazard statement: H318 Causes serious eye damage

Hazardous to the Aquatic Environment Acute Category 1: "Danger"

Hazardous to the Aquatic Environment Chronic Category 1: "Danger"

Hazard statement: H410 Very toxic to aquatic life with long lasting effects

Precautionary Statements:

Prevention

P264 Wash hands thoroughly after handling

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment

P280 Wear eye protection/face protection

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Response

P301 + P312 IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.

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

P310 Immediately call a POISON CENTRE or doctor/physician

P330 Rinse mouth

P391 Collect spillage

Storage

No additional information

Disposal

P501 Dispose of contents/container in accordance with local/regional/national regulations

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. See special provision in section 14.

SUSMP

Classification:

Exempt from Poison Scheduling

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Component:	CAS Number:	Proportion (%w/w):
Zinc sulphate anhydrous	7733-02-0	20-25

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: 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.

Advice: Persons providing first aid must use personal protection equipment (latex gloves and safety glasses).

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Symptoms caused by Exposure:

- Inhalation:** May cause irritation to the respiratory tract. Cough, shortness of breath.
- Skin Contact:** May cause irritation to the skin. Redness, itching, pain.
- Eye Contact:** Causes severe eye irritation. Pain, redness.
- Ingestion:** The zinc salts are hydrolyzing in an acidic environment. May cause severe irritation and burns of the mouth, throat and digestive tract. Vomiting, abdominal pain, increased heart rate, pulmonary edema, diarrhea, renal disease, gastrointestinal disorders, hemorrhagic pancreatitis.

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 carbon oxides, nitrogen oxides, sulfur oxides, zinc oxide.
- Special Protective Equipment and Precautions for Fire Fighters:** Use suitable breathing apparatus, protective clothing, eye protection and gloves resistant to chemicals according to EN469. 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. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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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.
- Alert the internal emergency team
- Wear protective clothes giving total skin protection, latex gloves, safety glasses and mask with filter P2
- Keep people not involved in the emergency intervention away from the affected area.
- Ensure adequate ventilation, move people into a safe place

For emergency responders:

- Wear protective clothes giving total skin protection, latex gloves, safety glasses and mask with filter P2
- See protective measures in section 8
- Ensure adequate ventilation, move people into a safe place
- Avoid dust generation

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 of it in an 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, organic, sand. Avoid dust generation.

Methods and Materials for Containment and Cleaning Up:

Dusts at sufficient concentrations can form explosive mixtures with air. Avoid any accumulation of electrostatic charge which may create a hazardous condition and cause an ignition. Collect the product in plastic containers, cleaned and labeled, for example using a shovel and broom. Avoid raising dust. Wash with plenty of water and contain the spill with absorbent material, earth or sand.

7. HANDLING AND STORAGE

Precautions for Safe Handling:

Avoid contact with skin and eyes, inhalation of vapours and mists. Do not use empty containers before they have been cleaned. Before transferring product, ensure there are no incompatible material residuals in the containers. Contaminated clothing should be changed before entering eating areas. Do not drink or eat in work areas. See section 8 for recommended protective equipment.

Conditions for Safe Storage, including any Incompatibilities:

Keep in original plastic containers tightly closed in a well-ventilated area, away from humidity, heat sources and direct sunlight. Keep away from food, drink or feed. Incompatible materials: bases, oxidizing and reducing agents. Adequately ventilate premises. Avoid dust generation. Dusts at sufficient

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concentrations can form explosive mixtures with air. Avoid any accumulation of electrostatic charge which may create a hazardous condition and cause an ignition.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards:

Soluble zinc compounds

Country/organisation	8 hour-TWA mg/m ³	15 min-STEEL mg/m ³	References
USA	1	2	ACGIH (1991)
The Netherlands	1		SZW (1997)
UK	1	2 ^{a)}	HSE (1998)
Sweden	1 ^{b)}		National Board of Occupational Safety and Health, Sweden (1993)
Denmark	0.5		Arbejdstilsynet, 1992

a) This value is a 10 minutes-STEEL

b) This TWA is determined for dust

DNELs and PNECs

DNELs

Oral

DNEL_{oral soluble Zn} = 50 mg Zn/day (i.e., 0.83 mg Zn/kg bw/day);

DNEL_{oral insoluble Zn} = 50 mg Zn/day (i.e., 0.83 mg Zn/kg bw/day);

Dermal

DNEL_{dermal soluble Zn} = 500 mg Zn/day (i.e., 8.3 mg Zn/kg bw/day);

DNEL_{dermal insoluble Zn} = 5000 mg Zn/day (i.e., 83 mg Zn/kg bw/day);

Inhalation - Worker

DNEL_{inhal soluble Zn (worker)} = 1 mg Zn/m³;

DNEL_{inhal insoluble Zn (worker)} = 5 mg Zn/m³;

Inhalation - Consumer

DNEL_{inhal soluble Zn (consumer)} = 1.3 mg Zn/m³;

DNEL_{inhal insoluble Zn (consumer)} = 2.5 mg Zn/m³;

PNECs derived for the zinc ion

Compartment (Environment)	PNEC value for Zn ion
Freshwater	20.6* µg/L
Saltwater	6.1* µg/L
STP	52 µg/L
Freshwater sediment	117.8* mg/kg sediment d.w. A generic bioavailability factor of 0.5 is applied by default: PNEC _{bioav} : 235.6 mg/kg sediment d.w.
Saltwater sediment	56.5* mg/kg sediment d.w. A generic bioavailability factor of 0.5 is applied by default: PNEC _{bioav} : 113 mg/kg sediment d.w.

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Soil	35.6* mg/kg soil d.w. A generic bioavailability/ageing factor of 3 is applied by default: PNECbioav: 106.8 mg/kg soil d.w.
Oral	No potential for bioaccumulation

*added value

Biological Monitoring: Not available.

Control Banding: Not available.

Engineering Controls: Not specified.

Individual Protection Measures e.g. Personal Protective Equipment (PPE):

Please observe the usual precautionary measures for handling of chemicals

Eye and Face Protection:
Use close fitting safety goggles according to the standard EN166. Do not use contact lenses.

Skin Protection:
Use protective gloves that provide comprehensive protection e.g. PVC, neoprene or rubber according to EN374-1, EN374-2, EN374-3. Wear protective clothing.

Respiratory Protection:
Not needed for normal use. In case of dust generation, use dust mask with P2 filters according to the EN143. Respect the occupational exposure limits.

Thermal Hazards:
None known.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Brown microgranules
Odour:	Not available
Vapour Pressure (mm Hg):	Not available
Apparent Density:	0.6 kg/dm ³
Boiling Point:	Not available
Freezing/Melting Point:	Not available
Solubility (aqueous solution):	300 g/L at 20°C
Specific Gravity:	Not available
pH:	Not available
Flash Point:	Not available
Flammability (explosive) Limits:	Not available
Auto-Ignition Temperature:	Not available
Octanol/Water Partition Coefficient:	Not available
Conductivity	0.43 mS/cm 18°C

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10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions of storage and handling
Possibility of Hazardous Reactions:	The product can release gaseous ammonia if in contact with alkaline substances such as lime.
Conditions to Avoid:	Avoid heating the product at high temperatures. Avoid contact with strong bases, oxidizing and reducing agents. Avoid dust generation. Dusts at sufficient concentrations can form explosive mixtures with air. Avoid any accumulation of electrostatic charge which may create a hazardous condition and cause an ignition.
Incompatible Materials:	Bases, oxidizing and reducing agents
Hazardous Decomposition Products:	In case of fire, can develop carbon oxides, nitrogen oxides, sulfur oxides, zinc oxide.

11. TOXICOLOGICAL INFORMATION

No information on the toxicological effects of the mixture or its main components are available.

Acute and Chronic Toxicity:

Acute Toxicity:	LD50 rat >2000 mg/kg (OECD guidelines TEST No 423, Database Valagro)
Oral Ingestion:	Not available
Dermal:	Not available
Inhalation:	Not available
Skin Contact:	Not available. For zinc sulphate: not irritant (Van Huygevoort, 1999b; Lansdown, 1991)
Eye Contact:	Rabbit: Eye irrit. 2, Causes serious eye irritation (OECD 405, Database Valagro)
Sensitisation:	Not available
Germ Cell Mutagenicity:	Not mutagenic
Carcinogenicity:	No experimental or epidemiological evidence exists to justify classification of zinc compounds for carcinogenic activity
Reproductive Toxicity:	No experimental or epidemiological evidence exists to justify classification of zinc compounds for reproductive or developmental toxicity
Specific Target Organ Toxicity (STOT) - Single Exposure:	No experimental or epidemiological sufficient evidence for specific target organ toxicity (single exposure)
Specific Target	No experimental or epidemiological sufficient evidence for specific target

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Organ Toxicity (STOT) - Repeated Exposure: organ toxicity (repeated exposure)

Aspiration Hazard: Not available

General information for soluble salts of zinc (zinc chloride):

ROUTES OF EXPOSURE:

The substance can be absorbed into the body by inhalation and by ingestion.

EFFECTS OF SHORT-TERM EXPOSURE:

The substance is corrosive to the eyes. The aerosol is irritating to the respiratory tract. Corrosive by ingestion. Inhalation of the fumes of this substance may cause lung edema. If ingested, the substance may cause effects on the pancreas. Acute exposure to high concentrations of smoke of zinc can lead to respiratory distress syndrome, which leads to pulmonary fibrosis and death.

ACUTE HAZARDS / SYMPTOMS

Cough, sore throat, burning sensation, laboured breathing, shortness of breath.

Symptoms may be delayed.

SKIN: Can cause skin burns, pain, redness.

EYES: Pain, redness, severe deep burns.

INGESTION: Abdominal pain, burning sensation in the throat and chest, sore throat, nausea, vomiting, lethargy, shock or collapse

NOTE:

The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Adopt good working practices so that the product is not released to the environment. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Acute toxicity:

- Zebra fish (*Danio rerio*)

LC 50 96 h > 100 mg/L (database Valagro, OECD 203)

NOEC 96h = 100 mg/L (database Valagro, OECD 203)

LOEC 96h > 100 mg/L (database Valagro, OECD 203)

- *Daphnia magna*

IC50 24h >100 mg/L (database Valagro, OECD 202)

NOEC 24h 10.0 mg/L (database Valagro, OECD 202)

LOEC 24h 17.8 mg/L (database Valagro, OECD 202)

IC50 48h 24.4 mg/l (database Valagro, OECD 202)

NOEC 48h < 10.0 mg/L (database Valagro, OECD 202)

LOEC 48h 10.0 mg/L (database Valagro, OECD 202)

- algae

EyC 50 72 h 0.67 mg/L (database Valagro, OECD 201)

ErC 50 72 h 0.86 mg/L (database Valagro, OECD 201)

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Persistence and Degradability:	No data available
Bioaccumulative Potential:	This product does not contain any bioaccumulative substances.
Mobility in Soil:	No data available for the mixture. For zinc: solid-water partition coefficient 158.5 L/kg (log value 2.2)

13. DISPOSAL CONSIDERATIONS

Product Disposal:	Recover if possible. In doing so, comply with state, federal and local regulations.
Container Disposal:	Dispose of according to local regulations.

14. TRANSPORT INFORMATION

Classification:	<p>ROAD AND RAIL TRANSPORT: Not classified as Dangerous Goods under ADG 7 when being transported in IBC's or other receptacles < 500L (kg) (Special Provision AU01)</p> <p>MARINE AND AIR: Classified as Dangerous Goods for transport by sea and air according to the criteria of the UN Model Regulations of Transport of Dangerous Goods 17th Edition.</p>
UN Number:	3077
Proper Shipping Name or Technical Name:	SOLID SUBSTANCE - HARMFUL FOR THE ENVIRONMENT, N.A.S. (zinc sulphate)
Transport Hazard Class:	9
Packing Group:	III
Environmental Hazards for Transport Purposes:	<p>ADR-Environmental Pollutant: Yes</p> <p>IMDG-Marine pollutant: Marine Pollutant</p> <p>Most important toxic component: zinc sulphate</p>
Special Precautions for User:	<p>ADR-Subsidiary risks: -</p> <p>ADR-S.P.: 274 335 601</p> <p>ADR-Tunnel Restriction Code: (E)</p> <p>IATA-Passenger Aircraft: 956</p> <p>IATA-Subsidiary risks: -</p> <p>IATA-Cargo Aircraft: 956</p> <p>IATA-S.P.: A97 A158 A179</p> <p>IATA-ERG: 9L</p> <p>IMDG-EmS: F-A , S-F</p>

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IMDG-Subsidiary risks: -
 IMDG-Storage category: Category A
 IMDG-Storage notes: -
HAZCHEM Code: None allocated

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: August 2021
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

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