Safety Data Sheet

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Section 1: IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product identifier

Product Name Osmocote Exact Standard High K 8-9M; 11-5-15+TE
Product ID 88280225AU

Other means of identification

Proper shipping name Not regulated

Recommended use of the chemical and restrictions on use

Recommended Use Fertilizer (PC12). Restricted to professional users.

Details of manufacturer or importer

Manufacturer
Everris Australia Pty Ltd, 211/33 Lexington Drive, Bella Vista, NSW 2153, Australia. Tel: +61(2) 8801 3300

E-mail address INFO-MSDS@EVERRIS.COM

Emergency telephone number
Australia: (02) 8014 4558
New Zealand: (09) 9929 1483

Section 2: HAZARD(S) IDENTIFICATION

GHS Classification
Mixture

Serious eye damage/eye irritation	Category 1 - (H318)

Label elements

Signal word
Danger

Hazard statements
H318 - Causes serious eye damage

Precautionary Statements - Prevention
Wear protective gloves/protective clothing/eye protection/face protection
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician

Other hazards which do not result in classification
No hazards to be especially mentioned

Section 3: COMPOSITION AND INFORMATION ON INGREDIENTS IN ACCORDANCE WITH

SCHEDULE 8

Substance

Chemical name	CAS No	EC No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Ammonium nitrate; NH_4NO_3	6484-52-2	229-347-8	10 - 30%	Eye Irrit. 2 (H319) Ox. Sol. 3 (H272)	01-2119490981-27
Potassium sulphate; K_2SO_4	7778-80-5	231-915-5	10 - 30%	Eye Dam. 1 (H318)	01-2119489441-34
Iron sulphate; $FeSO_4+1H_2O$	7720-78-7	231-753-5	0.1 - 1%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 4 (H302)	01-2119513203-57
Copper sulphate anhydrous; $CuSO_4$	7758-98-7	231-847-6	0.1 - 1%	Skin irrit. 2 (H319) Eye irrit. 2 (H315) Acute Tox. 4 (H302) Aquatic Chronic 1 (H410)	01-2119520566-40
Manganese sulphate; $MnSO_4+1H_2O$	7785-87-7	232-089-9	0.1 - 1%	STOT RE 2 (H373) Eye Dam. 1 (H318) Aquatic Chronic 2 (H411)	01-2119456624-35
Sodium borate; $Na_2B_4O_7$	1330-43-4	215-540-4	< 0.1%	Eye Irrit. 2 (H319) Repr. 1B (H360FD)	01-2119490790-32
Zinc sulphate mono hydrate; $ZnSO_4+1H_2O$	7446-19-7	231-793-3	< 0.1%	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	01-2119474684-27

53% of the other ingredients are determined not be hazardous.

Section 4: FIRST AID MEASURES

Description of first aid measures

General advice First aid measures should be executed by trained personnel only.

Inhalation Remove to fresh air. In the case of inhalation of aerosol/mist consult a physician if necessary. Possible symptoms are coughing and/or dyspnoea. If breathing is difficult, give oxygen.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin Contact Wash skin with soap and water. Get medical attention if irritation develops and persists.

Ingestion Clean mouth with water and drink afterwards plenty of water. Possible symptoms are nausea and/or vomiting. If a person vomits when lying on his back, place him in the recovery position. Do not induce vomiting without medical advice. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms no data available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIREFIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media CO2, dry chemical, dry sand, alcohol-resistant foam.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams. Dry chemical. Foam.

Special protective actions for fire-fighters

Special protective equipment for fire-fighters Coordinate fire extinguishing measures to fire in surrounding area.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid generation of dust.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system. Prevent product from entering drains. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Section 7: HANDLING AND STORAGE, INCLUDING HOW THE CHEMICAL MAY BE SAFELY USED

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Use personal protection equipment.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep container closed when not in use. Keep in a dry, cool and well-ventilated place. Protect from sunlight.

Incompatible materials None known based on information supplied.

Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters

Copper sulphate anhydrous; $CuSO_4$	
Australia	**N.A.**
Manganese sulphate; $MnSO_4+1H_2O$	
Australia	**0.2 mg/m^3**
Sodium borate; $Na_2B_4O_7$	
Australia	**1 mg/m^3 TWA**

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face Protection No special protective equipment required.

Skin and body protection: No special protective equipment required.

Hand Protection Nitrile rubber. Break though time >8h.

Environmental exposure controls no data available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid
Appearance:	Granules
Color:	brown
Odor:	Fertilizer.
Odor Threshold:	No data available

pH	No data available
Melting Point/Freezing Point:	No data available
Boiling Point/Range:	No data available
Flash Point:	No data available
Evaporation Rate:	no data available
Flammability (solid, gas):	Non-flammable
Vapor Pressure:	No data available
Vapour density	No data available
Water Solubility:	no data available
Partition Coefficient:	no data available
Autoignition Temperature:	No data available
Hyphen	no data available
Kinematic Viscosity:	No data available
Dynamic Viscosity:	no data available

Other information

Softening Point:	no data available
Molecular Weight:	no data available
VOC Content (%)	No data available
Particle Size	
Particle Size Distribution	

Section 10: STABILITY AND REACTIVITY

Reactivity Not reactive.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Hazardous Decomposition Products: Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Conditions to Avoid:

Conditions to avoid For quality reasons: Keep out of reach of direct sunlight, store under dry conditions, partly used bags should be closed well.

Incompatible materials

Incompatible materials None known based on information supplied.

Hazardous decomposition products

Hazardous Decomposition Products None known based on information supplied.

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Information on likely routes of exposure

Product Information .

Inhalation May cause irritation of respiratory tract.

Eye contact May cause redness, itching, and pain.

Skin Contact May cause irritation.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

Symptoms no data available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 6,500.80
ATEmix (dermal) 9,318.20

Unknown acute toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ammonium nitrate; NH_4NO_3	= 2217 mg/kg (Rat)	> 5000 mg/kg	> 88.8 mg/L (Rat) 4 h
Potassium sulphate; K_2SO_4	= 6600 mg/kg (Rat)	> 2000 mg/kg (Rat)	.?
Iron sulphate; $FeSO_4+1H_2O$	= 500 mg/kg (Rat)	-	.?
Copper sulphate anhydrous; $CuSO_4$	= 300 mg/kg (Rat)	= 1000 mg/kg (Rabbit)	.?
Manganese sulphate; $MnSO_4+1H_2O$	= 2125 mg/kg (Rat)	-	> 4.98 mg/L (Rat) 4h
Sodium borate; $Na_2B_4O_7$	= 2660 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2 mg/m^3 (Rat) 4 h

See section 16 for terms and abbreviations

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure:

skin corrosion/irritation Classification based on individual ingredients of the mixture.

Serious eye damage/eye irritation Classification based on individual ingredients of the mixture.

Respiratory or skin sensitization Classification based on individual ingredients of the mixture.

Germ Cell Mutagenicity Classification based on individual ingredients of the mixture.

Carcinogenicity Classification based on individual ingredients of the mixture.

Reproductive Toxicity Classification based on individual ingredients of the mixture.

STOT - Single Exposure Classification based on individual ingredients of the mixture.

STOT - Repeated Exposure Classification based on individual ingredients of the mixture.

Aspiration Hazard Classification based on individual ingredients of the mixture.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity Do not allow product to enter the environment uncontrolled.

Unknown aquatic toxicity 10 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Potassium sulphate; K_2SO_4	EC50: =2900mg/L (72h, Desmodesmus subspicatus)	LC50: 510 - 880mg/L (96h, Pimephales promelas) LC50: =3550mg/L (96h, Lepomis macrochirus) LC50: =653mg/L (96h, Lepomis macrochirus)	-	EC50: =890mg/L (48h, Daphnia magna)
Iron sulphate; $FeSO_4+1H_2O$	-	LC50: =0.56mg/L (96h, Cyprinus carpio) LC50: =925mg/L (96h, Poecilia reticulata)	-	EC50: 6.15 - 9.26mg/L (48h, Daphnia magna) EC50: =152mg/L (48h, Daphnia magna)
Copper sulphate anhydrous; $CuSO_4$	-	LC50: =0.1mg/L (96h, Oncorhynchus mykiss)	-	0.024: 48 h Daphnia magna mg/L EC50
Sodium borate; $Na_2B_4O_7$	158: 96 h Desmodesmus subspicatus mg/L	LC50: =340mg/L (96h, Limanda limanda)	-	LC50: 1085 - 1402mg/L (48h, Daphnia magna)

Persistence and degradability

Persistence and Degradability: no data available.

Bioaccumulative potential

Bioaccumulation No information available.

Mobility

Mobility in soil no data available.

Mobility no data available.

Chemical name	Partition coefficient
Ammonium nitrate; NH_4NO_3	-3.1

Other adverse effects

Other adverse effects No information available.

Section 13: DISPOSAL CONSIDERATIONS

Waste Treatment Methods:

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

Section 14: TRANSPORT INFORMATION

ADG	Not regulated
IATA	Not regulated
IMDG	Not regulated

Bulk transport according Annex II of MARPOL and IBC Code
no data available

Section 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

New Zealand:
Hazardous Substances Regulations Not regulated
Australia
See section 8 for national exposure control parameters

International Inventories:

TSCA	This product complies with USINV
ENCS	This product complies with encs:
Australian Inventory of Chemical Substances	This product does not comply with AICS

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
AICS - Australian Inventory of Chemical Substances

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applied

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

Section 16: ANY OTHER RELEVANT INFORMATION

Prepared by	Regulatory Affairs Department (INFO-MSDS@EVERRIS.COM)
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Revision Note Not applied

Key or legend to abbreviations and acronyms used in the safety data sheet

ADG: Australian Dangerous Goods code
RID: Regulations Concerning the International Transport of Dangerous Goods by Rail
ICAO: International Civil Aviation Organization
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labeling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
PNEC: Predicted No Effect Concentration
DNEL: Derived No-Effect Level
REACh: Registration, Evaluation, Authorization of Chemicals
CLP: EU-GHS; Classification, Labelling and Packaging
OEL: Occupational Exposure Limit
TWA: Time Weighted Average
ATE: Acute Toxicity Estimate
EUH phrase: CLP (EU) specific hazard statement
LD50: Lethal dose, 50%.
LC50: Lethal concentration, 50%.
SVHC: Substance of Very High Concern.

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Disclaimer

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End of Safety Data Sheet