Safety Data Sheet

Issue Date: 02-Apr-2014 **Revision Date:** 28-Jun-2016 **Version:** 1

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Code 87480225AU
Product Name: Osmocote Pro 8-9M
Synonyms: Osmocote Pro 16-4.8-8.3+1.2Mg+TE

Proper shipping name: AMMONIUM NITRATE BASED FERTILIZER

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use: Fertilizer
Restricted to professional users
Uses Advised Against: Consumer use [SU 21].

1.3. Details of the supplier of the safety data sheet

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

For further information, please contact
INFO-MSDS@EVERRIS.COM

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

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture
Mixture

Regulation (EC) No 1272/2008

Chronic aquatic toxicity	Category 3 - (H412)

2.2. Label elements
Product Identifier:
Signal Word:
None

Hazard Statements:
H412 - Harmful to aquatic life with long lasting effects

Other hazards (UN-GHS)
Harmful to aquatic life.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Ingredients	EC-No.	CAS-No	Weight %	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Ammonium Nitrate; NH_4NO_3	229-347-8	6484-52-2	30 - 60%	Eye Irrit. 2 (H319) Ox. Sol. 3 (H272)	01-2119490981-27
Iron sulphate; $FeSO_4$+1H_2O	231-753-5	7720-78-7	0.1 - 1%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 4 (H302)	01-2119513203-57

Copper sulphate anh; $CuSO_4$	231-847-6	7758-98-7	0.1 - 1%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	01-2119520566-40
Manganese sulphate; $MnSO_4+1H_2O$	232-08-99	7785-87-7	0.1 - 1%	STOT RE 2 (H373) Eye Dam. 1 (H318) Aquatic Chronic 2 (H411)	01-2119456624-35
Sodium borate; $Na_2B_4O_7$	215-540-4	1330-43-4	0.1 - 1%	Eye Irrit. 2 (H319) Repr. 1B (H360FD)	01-2119490790-32
Biuret; $C_6H_8O_7$	203-559-0	108-19-0	< 0.1%	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	no data available
Zinc sulphate mono hydrate; $ZnSO_4+1H_2O$	231-793-3	7446-19-7	< 0.1%	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	01-2119474684-27

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

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

Inhalation: Dusty conditions are unlikely if product is used as intended. However, if prolonged inhalation of dust occurs, remove casualty to fresh air. If symptoms persist, call a physician.

Skin Contact: If a person feels unwell or symptoms of skin irritation appear, consult a physician. Rinse with plenty of water.

Eye Contact: Rinse eyes with water as a precaution. If eye irritation persists, consult a specialist.

Ingestion: If conscious, drink plenty of water. Do NOT induce vomiting. Rinse mouth. Consult a physician if necessary.

Protection of First-Aiders: Low hazard for usual industrial or commercial handling.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms: None under normal processing

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician: None under normal processing.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media:
Water.

Unsuitable extinguishing media:
High volume water jet. Dry powder. Sand. Foam.

5.2. Special hazards arising from the substance or mixture

In case of fire, the product will smoulder even without the presence of external oxygen. In these conditions the product will show

self sustaining decomposition. The best method to extinguish the fire is to cool the decomposition front with water. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Hazardous Combustion Products:
Carbon oxides. Phosphorus oxides. Ammonia. Nitrogen oxides (NOx).

5.3. Advice for firefighters
Coordinate fire extinguishing measures to fire in surrounding area. In the event of fire and/or explosion do not breathe fumes. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Use water spray to cool fire exposed surfaces.

Hazchem code:
1Z

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions:	Avoid dust formation. Sweep-up to prevent slipping hazard.
For Emergency Responders:	Use personal protection recommended in Section 8.

6.2. Environmental precautions
Do not flush into surface water or sanitary sewer system. Keep away from living quarters.

6.3. Methods and material for containment and cleaning up

Methods for Containment:	Prevent further leakage or spillage if safe to do so.
Methods for Cleanup:	Avoid dust formation. Shovel or sweep up. Use up product completely. Packaging material is industrial waste.

6.4. Reference to other sections
§ 8, 12, 13.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

General hygiene considerations:	Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. When using, do not eat, drink or smoke.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/storage conditions:	Keep away from heat and sources of ignition. Keep away from food, drink and animal feeding stuffs. For quality reasons: Keep out of reach of direct sunlight, store under dry conditions, partly used bags should be closed well. Keep at temperatures between 0 °C and 40 °C.
LGK (Germany)	5.1C
Packaging Materials:	Bags or Bulk.

7.3. Specific end use(s)

Specific use(s)	Fertilizer; Read and follow label instructions; www.everris.com

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Ammonium Nitrate; NH_4NO_3	
Australia TWA	N.A.
Czech Republic OEL	10.0 mg/m³ TWA
Iron sulphate; $FeSO_4$+1H_2O	
Belgium - 8 Hr TWA	1 mg/m³
Denmark	TWA: 1 mg/m³
Finland	TWA: 1 mg/m³
Ireland	TWA: 1 mg/m³ STEL: 2 mg/m³

Netherlands - OEL - MACs:	1 mg/m³
Norway	TWA: 1 mg/m³ STEL: 1 mg/m³
Portugal	TWA: 1 mg/m³
Spain OEL - Time Weighted Average (TWA):	TWA: 1 mg/m³
Switzerland	TWA: 1 mg/m³
UK oes/mel:	TWA: 1 mg/m³
Copper sulphate anh; $CuSO_4$	
Austria	STEL 4 mg/m³ STEL 0.4 mg/m³ TWA: 1 mg/m³ TWA: 0.1 mg/m³
Australia TWA	N.A.
Finland	TWA: 1 mg/m³
German mak	TWA: 0.01 mg/m³ Ceiling / Peak: 0.02 mg/m³
Netherlands - OEL - MACs:	0.1 mg/kg TWA
Poland	TWA: 0.2 mg/m³
Russia TWA	0.5 mg/m³ TWA 1200
Switzerland	STEL: 0.2 mg/m³ TWA: 0.1 mg/m³
Manganese sulphate; $MnSO_4$+1H_2O	
Austria	STEL 2 mg/m³ TWA: 0.5 mg/m³
Australia TWA	0.2 mg/m³
Belgium - 8 Hr TWA	0.2 mg/m³
Denmark	TWA: 0.2 mg/m³
Finland	TWA: 0.02 mg/m³ TWA: 0.2 mg/m³
German mak	TWA: 0.2 mg/m³ TWA: 0.02 mg/m³ Ceiling / Peak: 1.6 mg/m³ Ceiling / Peak: 0.16 mg/m³
Ireland	TWA: 0.2 mg/m³ STEL: 0.6 mg/m³
Netherlands - OEL - MACs:	1 mg/m³
Norway	TWA: 1 mg/m³ TWA: 0.1 mg/m³ STEL: 1 ppm STEL: 0.1 mg/m³
Poland	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³
Portugal	TWA: 0.2 mg/m³
Spain OEL - Time Weighted Average (TWA):	TWA: 0.2 mg/m³
Sweden - OEL - 8 Hour	0.2 mg/m³ LLV (totalt)
Switzerland	TWA: 0.5 mg/m³
UK oes/mel:	TWA: 0.5 mg/m³
Sodium borate; $Na_2B_4O_7$	
Australia TWA	1 mg/m³ TWA
Belgium - 8 Hr TWA	2 mg/m³ TWA borate
Denmark	TWA: 1 mg/m³
Greece - OEL	10 mg/m³ TWA
Iceland - OEL - 8 Hour	1 mg/m³ TWA
France - Occupational Exposure Limits - 8 Hour VMEs	TWA: 1 mg/m³
Ireland	TWA: 1 mg/m³ STEL: 3 mg/m³
Korea - ISHA - Occupational Exposure Limits - TWAs	1 mg/m³ TWA (anhydrous, Serial No. 239)

Malaysia - Occupational Exposure Limits - TWAs 1 mg/m³ TWA

Norway	TWA: 1 mg/m³ STEL: 3 mg/m³
Portugal	STEL: 6 mg/m³ TWA: 2 mg/m³
Spain OEL - Time Weighted Average (TWA):	STEL: 6 mg/m³ TWA: 2 mg/m³
Switzerland	TWA: 1 mg/m³
UK oes/mel:	STEL: 3 mg/m³

	TWA: 1 mg/m³
Zinc sulphate mono hydrate; $ZnSO_4+1H_2O$	
German mak	TWA: 0.1 mg/m³ TWA: 2 mg/m³ Ceiling / Peak: 0.4 mg/m³ Ceiling / Peak: 4 mg/m³

Derived No Effect Level (DNEL)
No data available

Predicted No Effect Concentration (PNEC)
No data available.

8.2. Exposure controls

Engineering Measures to Reduce Exposure: Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/Face Protection:	Tightly fitting safety goggles
Hand protection:	Nitrile rubber (0.26 mm). Break through time. > 8 h.
Respiratory Protection:	In case of insufficient ventilation wear suitable respiratory equipment.
Skin and Body Protection:	Lightweight protective clothing
Hygiene Measures:	Follow good housekeeping practices. When using, do not eat, drink or smoke. Keep away from food, drink and animal feeding stuffs.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State:	Solid
Color:	brown, Greenish.
Odor:	Not significant
Bulk density:	900 - 1100 kg/m³
pH:	no data available
Melting Point/Freezing Point:	no data available
Boiling Point/Range:	Solid, Not Applicable
Flash Point:	Solid, Not Applicable
Evaporation Rate:	Solid, Not Applicable
Flammability (solid, gas):	Non-flammable
Vapor Pressure:	Solid, Not Applicable
Vapor Density:	Solid, Not Applicable
Specific Gravity:	no data available
Water Solubility:	Soluble in water
Solubility(ies)	no data available
Partition Coefficient:	Solid, Not Applicable
Autoignition Temperature:	Not Applicable
Decomposition Temperature:	no data available
Explosive Properties:	Doesn't present explosion hazard. Based on data of ingredients.

9.2. Other information
Not applicable

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity
Not reactive.

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

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

Possibility of Hazardous Reactions:
None under normal processing.

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

10.5. Incompatible materials
Strong oxidizing agents. Acids and bases. Strong reducing agents. Flammable materials. Keep away from catalysts like derivates of hexavalent chromium and metal halides. Keep away from flammable products (fuels) like charcoal, wood, flour, soot etc.

10.6. Hazardous decomposition products
None under normal processing.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
Acute Toxicity
Product Information:

Inhalation:	May cause irritation of respiratory tract.
Eye Contact:	May cause irritation.
Skin Contact:	May cause irritation.
Ingestion:	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Unknown Acute Toxicity:	7% of the mixture consists of ingredient(s) of unknown toxicity.

Skin Corrosion or Irritation	See also section 3.
Serious Eye Damage or Eye Irritation	See also section 3.
Sensitization	See also section 3.
Mutagenic effects	See also section 3.
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Reproductive Toxicity

Ingredients	EU - GHS - SV - CLP (1272/2008) - Reproductive Toxicity
Sodium borate; $Na_2B_4O_7$	Reproductive Toxicity - Repr. 1B: H360FD May damage fertility. May damage the unborn child. (C >= 4.5 %)

Teratogenicity	No known effects under normal use conditions.
STOT - Single Exposure-Category 3 (H335)	No known effects under normal use conditions.
STOT - Repeated Exposure	None under normal use conditions.
Aspiration Hazard	None under normal use.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Harmful to aquatic life with long lasting effects.

7% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Ingredients	Algae/aquatic plants	Fish	Crustacea
Ammonium Nitrate; NH_4NO_3		65 - 85: 48 h Cyprinus carpio mg/L LC50 semi-static	
Iron sulphate; $FeSO_4$+1H_2O		925: 96 h Poecilia reticulata mg/L LC50 static 0.56: 96 h Cyprinus carpio mg/L LC50 semi-static	152: 48 h Daphnia magna mg/L EC50 6.15 - 9.26: 48 h Daphnia magna mg/L EC50 Static
Copper sulphate anh; $CuSO_4$		0.1: 96 h Oncorhynchus mykiss mg/L LC50	0.024: 48 h Daphnia magna mg/L EC50
Sodium borate; $Na_2B_4O_7$	158: 96 h Desmodesmus subspicatus mg/L	340: 96 h Limanda limanda mg/L LC50	1085 - 1402: 48 h Daphnia magna mg/L LC50

12.2. Persistence and degradability
No data available.

12.3. Bioaccumulative potential

Component	LOGPOW
Ammonium Nitrate; NH_4NO_3 6484-52-2 (30 - 60%)	-3.1

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
No data available.

12.6. Other adverse effects
No data available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Disposal of Wastes: Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging: Do not re-use empty containers. Dispose of as unused product.

Other Information: Use up product completely. Packaging material is industrial waste.

Section 14: TRANSPORT INFORMATION

IMO / IMDG

14.1
UN-No: 2071

14.2
Proper shipping name: AMMONIUM NITRATE BASED FERTILIZER

14.3
Hazard Class: 9

14.4
Packing group: PG III

14.5

Component	IMDG - Marine Pollutants
Copper sulphate anh; $CuSO_4$ 7758-98-7 (0.1 - 1%)	IMDG regulated marine pollutant (Listed in the index, listed under Copper sulphate, anhydrous, hydrates and solution)

Marine Pollutant: This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

14.6
EmS: F-H / S-Q
Special Provisions 186, 193

14.7
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not regulated

ADR/RID

14.1
UN-No: 2071

14.2
Proper shipping name: AMMONIUM NITRATE BASED FERTILIZER

14.3
Hazard Class: 9

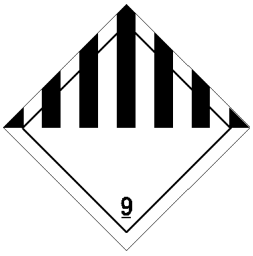
14.4
Packing group: III

14.5
Environmental Hazard Not regulated

14.6
Special Provisions 186, 193

IATA

14.1	
UN-No:	2071
14.2	
Proper shipping name:	AMMONIUM NITRATE BASED FERTILIZER
14.3	
Hazard Class:	9
14.4	
Packing group:	PG III
14.5	
Environmental Hazard	Not regulated
14.6	
Special Provisions	A89, A90



Section 15: REGULATORY INFORMATION

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

REACH:

Component	EU - REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances
Ammonium Nitrate; NH_4NO_3 6484-52-2 (30 - 60%)	Use restricted. See item 58. (Conditions of restrictions 27 June 2010)
Sodium borate; $Na_2B_4O_7$ 1330-43-4 (0.1 - 1%)	Use restricted. See item 30.

No data available

National regulations

Belgium

Component	Belgium - Major Accidents - Qualifying Quantities for Safety Reporting	Belgium - Major Accidents - Qualifying Quantities for Accident Prevention
Ammonium Nitrate; NH_4NO_3 6484-52-2 (30 - 60%)	2500 tonne (Note 3, applies to Ammonium nitrate in which the Nitrogen content due to Ammonium nitrate is >28% by weight containing <=0.2 % combustible material, >24.5% and <28% by weight containing <=0.4% combustible material and to aqueous Ammonium nitrate solutions in which the concentration of Ammonium nitrate is >80% by weight)	350 tonne (Note 3, applies to Ammonium nitrate in which the Nitrogen content due to Ammonium nitrate is >28% by weight containing <=0.2 % combustible material, >24.5% and <28% by weight containing <=0.4% combustible material and to aqueous Ammonium nitrate solutions in which the concentration of Ammonium nitrate is >80% by weight)

Denmark

Danish Sikkerhedsgruppe	B

France

ICPE	Classified installation: article 1331 (Type I)

Germany

Gefahrstoffverordnung (Germany) TRGS 511	B II
LGK (Germany)	5.1C
Water Endangering Class (WGK):	1 (Everris classification)

Component	German WGK Section
Ammonium Nitrate; NH_4NO_3	class 1

6484-52-2 (30 - 60%)	
Iron sulphate; $FeSO_4+1H_2O$ 7720-78-7 (0.1 - 1%)	class 1
Copper sulphate anh; $CuSO_4$ 7758-98-7 (0.1 - 1%)	class 2
Manganese sulphate; $MnSO_4+1H_2O$ 7785-87-7 (0.1 - 1%)	class 1
Sodium borate; $Na_2B_4O_7$ 1330-43-4 (0.1 - 1%)	class 1
Zinc sulphate mono hydrate; $ZnSO_4+1H_2O$ 7446-19-7 (< 0.1%)	class 3

European Union
Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

15.2 Chemical safety assessment
Not required. Substance(s) usage is covered according to Reach regulation 1907/2006.

Section 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3
H360FD - May damage fertility. May damage the unborn child
H319 - Causes serious eye irritation
H272 - May intensify fire; oxidizer
H302 - Harmful if swallowed
H318 - Causes serious eye damage
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H315 - Causes skin irritation
H373 - May cause damage to the kidneys/ liver/ eyes/ brain/ digestive system/ central nervous system through prolonged or repeated exposure if swallowed
H411 - Toxic to aquatic life with long lasting effects

Key or legend to abbreviations and acronyms used in the safety data sheet
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 statement: CLP (EU) specific hazard statement.

Classification procedure:	- Calculation method - Expert judgment and weight of evidence determination
Key literature references and sources for data	According to EC Regulation 1907/2006 (Reach), Regulation EU No. 2015/830. Regulation (EC) No 1272/2008.
Prepared by:	Regulatory Affairs Department (INFO-MSDS@EVERRIS.COM)
Issue Date:	02-Apr-2014
Revision Date:	28-Jun-2016

Reason for revision: *** Indicates changes since the last revision. This version replaces all previous versions.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

This information contained herein is, to the best of Everris' knowledge and belief, accurate and reliable as of the date of preparation of this document. However, no warranty or guarantee, express or implied, is made as to the accuracy or reliability, and Everris shall not be liable for any loss or damage arising out of the use thereof. No authorization is given or implied to use any patented invention without a license. In addition, Everris shall not be liable for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

End of Safety Data Sheet