Safety Data Sheet

Issue Date: 28-Jan-2014 Revision Date: 11-Jul-2016

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

1.1. Product identifier

Product Code 87390225AU **Product Name:** Osmocote Bloom

Synonyms: Osmocote Bloom 12-3.1-14.9+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 Consumer use [SU 21].

Uses Advised Against:

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

Serious Eye Damage or Eye Irritation	Category 1 - (H318)
Chronic aquatic toxicity	Category 3 - (H412)

2.2. Label elements

Product Identifier:



Signal Word:

Danger

Hazard Statements:

H318 - Causes serious eye damage

H412 - Harmful to aquatic life with long lasting effects

Contains Ammonium Nitrate; NH4NO3, Potassium sulphate; K2SO4

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear eye protection/ face protection

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 CENTER or doctor/physician

P501 - Dispose of container in accordance with local regulation

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; NH4NO3	229-347-8	6484-52-2	30 - 60%	Eye Irrit. 2 (H319) Ox. Sol. 3 (H272)	01-2119490981-27
Potassium sulphate; K ₂ SO ₄	231-915-5	7778-80-5	10 - 30%	Eye Dam. 1 (H318)	01-2119489441-34
Iron sulphate; FeSO ₄ +1H ₂ O	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; MnSO₄+1H₂O	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 ₂ B ₄ O ₇	215-540-4	1330-43-4	< 0.1%	Eye Irrit. 2 (H319) Repr. 1B (H360FD)	01-2119490790-32
Zinc sulphate mono hydrate; ZnSO ₄ +1H ₂ O	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.

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. Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent product from entering drains. Do not contaminate surface water.

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: Shovel or sweep up.

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) 5.1B

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; NH4NO3		
Australia TWA	N.A.	
Czech Republic OEL	10.0 mg/m³ TWA	
Potassium sulphate; K ₂ SO ₄	10.0 Hig/iii [.] TWA	
Bulgaria - Occupational Exposure Limits - TWAs	10.0 mg/m³ TWA	
Latvia - Occupational Exposure Limits - TWAs	10 mg/m³ TWA	
Iron sulphate; FeSO ₄ +1H ₂ O	10 119/11 1177	
Belgium - 8 Hr TWA	1 mg/m ³	
Denmark	TWA: 1 mg/m ³	
Finland	TWA: 1 mg/m ³	
Ireland	TWA: 1 mg/m ³	
	STEL: 2 mg/m ³	
Netherlands - OEL - MACs:	1 mg/m ³	
Norway	TWA: 1 mg/m ³	
	STEL: 1 mg/m ³	
Portugal	TWA: 1 mg/m ³	
Spain OEL - Time Weighted Average (TWA):	TWA: 1 mg/m ³	
Switzerland	TWA: 1 mg/m ³	
UK oes/mel:	TWA: 1 mg/m ³	
Copper sulphate anh; CuSO ₄		
Austria	STEL 4 mg/m ³	
	STEL 0.4 mg/m ³	
	TWA: 1 mg/m ³	
Australia TMA	TWA: 0.1 mg/m³	
Australia TWA	N.A. TWA: 1 mg/m³	
Finland German mak	TWA: 1 mg/m ³ TWA: 0.01 mg/m ³	
German mak	Ceiling / Peak: 0.02 mg/m ³	
Netherlands - OEL - MACs:	0.1 mg/kg TWA	
Poland	TWA: 0.2 mg/m ³	
Russia TWA	0.5 mg/m³ TWA 1200	
Switzerland	STEL: 0.2 mg/m ³	
- The state of the	TWA: 0.1 mg/m ³	
Manganese sulphate; MnSO ₄ +1H ₂ O		
Austria	STEL 2 mg/m ³	
	TWA: 0.5 mg/m ³	
Australia TWA	0.2 mg/m ³	
Belgium - 8 Hr TWA	0.2 mg/m ³	
Denmark	TWA: 0.2 mg/m ³	
Finland	TWA: 0.02 mg/m³ TWA: 0.2 mg/m³	
German mak	TWA: 0.2 mg/m ³	
	TWA: 0.02 mg/m ³	
	Ceiling / Peak: 1.6 mg/m ³ Ceiling / Peak: 0.16 mg/m ³	
	Celling / Feak. 0.10 mg/m	
Ireland	TWA: 0.2 mg/m ³	
	STEL: 0.6 mg/m ³	
Netherlands - OEL - MACs:	1 mg/m³	
Norway	TWA: 1 mg/m ³	
	TWA: 0.1 mg/m ³	
	STEL: 1 ppm	
	STEL: 0.1 mg/m³	
Poland	TWA: 0.2 mg/m ³	
Dowleysol	TWA: 0.05 mg/m³ TWA: 0.2 mg/m³	
Portugal Spain OEL - Time Weighted Average (TWA):		
Sweden - OEL - 8 Hour	TWA: 0.2 mg/m³ 0.2 mg/m³ LLV (totalt)	
Switzerland	TWA: 0.5 mg/m³	
UK oes/mel:	TWA: 0.5 mg/m ³	
Sodium borate; Na ₂ B ₄ O ₇	I WA. U.J IIIG/III	
Australia TWA	1 mg/m³ TWA	
Belgium - 8 Hr TWA	2 mg/m³ TWA borate	
Denmark	TWA: 1 mg/m ³	
Greece - OEL	10 mg/m³ TWA	
Iceland - OEL - 8 Hour	1 mg/m³ TWA	
position OLE - O Hour		
France - Occupational Exposure Limits - 8 Hour VMEs	TWA: 1 mg/m ³	

Ireland	TWA: 1 mg/m ³	
	STEL: 3 mg/m ³	
Korea - ISHA - Occupational Exposure Limits - TWAs	1 mg/m³ TWA (anhydrous, Serial No. 239)	
Malaysia - Occupational Exposure Limits - 1 mg/m³ TWA TWAs		
Norway	TWA: 1 mg/m ³	
	STEL: 3 mg/m ³	
Portugal	STEL: 6 mg/m ³	
	TWA: 2 mg/m ³	
Spain OEL - Time Weighted Average (TWA):	STEL: 6 mg/m ³	
	TWA: 2 mg/m ³	
Switzerland	TWA: 1 mg/m ³	
UK oes/mel:	STEL: 3 mg/m ³	
	TWA: 1 mg/m ³	
Zinc sulphate mono hydrate; ZnSO4+1H2O		
German mak	TWA: 0.1 mg/m ³	
	TWA: 2 mg/m ³	
	Ceiling / Peak: 0.4 mg/m ³	
	Ceiling / Peak: 4 mg/m ³	

Derived No Effect Level (DNEL)

No data available

Predicted No Effect Concentration (PNEC)

No data available.

8.2. Exposure controls

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

Exposure:

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 Appearance: Granules Color: brown. Odor: Not significant 900-1100 kg/m³ **Bulk density:** no data available pH: 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 Not Applicable **Autoignition Temperature:**

Explosive Properties: Doesn't present explosion hazard. Based on data of ingredients.

no data available

9.2. Other information

Decomposition Temperature:

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: Causes serious eye damage.

Skin Contact: May cause irritation.

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

Unknown Acute Toxicity: 10% of the mixture consists of ingredient(s) of unknown toxicity.

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

ATEmix (oral): 41,667.00 mg/kg

Skin Corrosion or IrritationSee also section 3.Serious Eye Damage or Eye IrritationSee also section 3.SensitizationSee also section 3.Mutagenic effectsSee 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 ₂ B ₄ O 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 - Panastad Evnosura	None 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. Do not allow product to enter the environment uncontrolled.

10% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Ingredients	Algae/aquatic plants	Fish	Crustacea
-------------	----------------------	------	-----------

Ammonium Nitrate; NH4NO3		65 - 85: 48 h Cyprinus carpio mg/L LC50 semi-static	
Potassium sulphate; K ₂ SO ₄	2900: 72 h Desmodesmus subspicatus mg/L EC50	653: 96 h Lepomis macrochirus mg/L LC50 3550: 96 h Lepomis macrochirus mg/L LC50 static 510 - 880: 96 h Pimephales promelas mg/L LC50 static	890: 48 h Daphnia magna mg/L EC50
Iron sulphate; FeSO ₄ +1H ₂ O		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 ₂ B ₄ O 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; NH₄NO₃	-3.1
6484-52-2 (30 - 60%)	

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

AMMONIUM NITRATE BASED FERTILIZER Proper shipping name:

14.3

Hazard Class: 9

<u>14.4</u>

Component

Ш

Packing group: 14.5

IMDG - Marine Pollutants

Copper sulphate anh; CuSO ₄	IMDG regulated marine pollutant (Listed in the index,
7758-98-7 (0.1 - 1%)	listed under Copper sulphate, anhydrous, hydrates and
	solution)

Marine Pollutant: No information available

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

<u>14.1</u> 2071 UN-No:

14.2

Proper shipping name: AMMONIUM NITRATE BASED FERTILIZER

14.3

Hazard Class:

14.4

Ш Packing group:

14.5

Not regulated **Environmental Hazard**

14.6

Special Provisions 186, 193

IATA

14.1 UN-No: 2071

14.2

AMMONIUM NITRATE BASED FERTILIZER Proper shipping name:

14.3

Hazard Class: 9

14.4

Packing group: Ш

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:

se restricted. See item 58. (Conditions of restrictions 27 June 2010)
se restricted. See item 30.

No data available

National regulations

Belgium

Component	, ,	Belgium - Major Accidents - Qualifying Quantities for Accident Prevention
1		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,	containing <=0.2 % combustible material,

	>24.5% and <28% by weight containing	>24.5% and <28% by weight containing
	<=0.4% combustible material and to	<=0.4% combustible material and to aqueous
	aqueous Ammonium nitrate solutions in	Ammonium nitrate solutions in which the
	which the concentration of Ammonium nitrate	concentration of Ammonium nitrate is >80%
	is >80% by weight)	by weight)

Denmark

Danish Sikkerhedsgruppe B

<u>France</u>

ICPE Classified installation: article 1331 (Type I)

Germany

Gefahrstoffverordnung (Germany) TRGS 511 B II LGK (Germany) 5.1B

Water Endangering Class (WGK): 1 (Everris classification)

Component	German WGK Section	
Ammonium Nitrate; NH4NO3	class 1	
6484-52-2 (30 - 60%)		
Potassium sulphate; K ₂ SO ₄	class 1	
7778-80-5 (10 - 30%)		
Iron sulphate; FeSO ₄ +1H ₂ O	class 1	
7720-78-7 (0.1 - 1%)		
Copper sulphate anh; CuSO ₄	class 2	
7758-98-7 (0.1 - 1%)		
Manganese sulphate; MnSO ₄ +1H ₂ O	class 1	
7785-87-7 (0.1 - 1%)		
Sodium borate; Na ₂ B ₄ O ₇	class 1	
1330-43-4 (< 0.1%)		
Zinc sulphate mono hydrate; ZnSO ₄ +1H ₂ O	class 3	
7446-19-7 (< 0.1%)		

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/ respiratory system/ central nervous system through prolonged or repeated exposure in contact with skin

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: 28-Jan-2014

Revision Date: 11-Jul-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