

Safety Data Sheet

Issue Date: 09-Apr-2014

Revision Date: 12-Jul-2016

Version: 1

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

1.1. Product identifier

Product Code 88440225AU
Product Name: Osmocote Exact Lo Start 16-18M
Synonyms: Osmocote Exact Lo Start 15-3.5-9.1+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 2 - (H411)
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2.2. Label elements

Product Identifier:

Signal Word:

None

Hazard Statements:

H411 - Toxic to aquatic life with long lasting effects

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

P391 - Collect spillage

P501 - Dispose of container in accordance with local regulation

Other hazards (UN-GHS)

Causes mild skin irritation. Toxic 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 ₄ NO 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 ₂ O	231-753-5	7720-78-7	1 - 5%	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 ₂ O	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 - 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.
For Emergency Responders: 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. 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.
 5.1C
 Bags or Bulk.

LGK (Germany)

Packaging Materials:

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**

<i>Ammonium Nitrate; NH₄NO₃</i>	
Australia TWA	N.A.
Czech Republic OEL	10.0 mg/m ³ TWA
<i>Iron sulphate; FeSO₄·1H₂O</i>	
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
<i>Copper sulphate anh; CuSO₄</i>	
Austria	STEL 4 mg/m ³ STEL 0.4 mg/m ³ TWA: 1 mg/m ³ TWA: 0.1 mg/m ³
Australia TWA	N.A.
Finland	TWA: 1 mg/m ³
German mak	TWA: 0.01 mg/m ³ 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/m ³ TWA 1200
Switzerland	STEL: 0.2 mg/m ³ TWA: 0.1 mg/m ³
<i>Manganese sulphate; MnSO₄+1H₂O</i>	
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/m ³ TWA: 0.2 mg/m ³
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
Ireland	TWA: 0.2 mg/m ³ STEL: 0.6 mg/m ³
Netherlands - OEL - MACs:	1 mg/m ³
Norway	TWA: 1 mg/m ³ TWA: 0.1 mg/m ³ STEL: 1 ppm STEL: 0.1 mg/m ³
Poland	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³
Portugal	TWA: 0.2 mg/m ³
Spain OEL - Time Weighted Average (TWA):	TWA: 0.2 mg/m ³
Sweden - OEL - 8 Hour	0.2 mg/m ³ LLV (totalt)
Switzerland	TWA: 0.5 mg/m ³
UK oes/mel:	TWA: 0.5 mg/m ³
<i>Sodium borate; Na₂B₄O₇</i>	
Australia TWA	1 mg/m ³ TWA
Belgium - 8 Hr TWA	2 mg/m ³ TWA borate
Denmark	TWA: 1 mg/m ³
Greece - OEL	10 mg/m ³ TWA
Iceland - OEL - 8 Hour	1 mg/m ³ TWA
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/m ³ TWA (anhydrous, Serial No. 239)
Malaysia - Occupational Exposure Limits - TWAs	1 mg/m ³ TWA
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
<i>Zinc sulphate mono hydrate; ZnSO₄+1H₂O</i>	
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
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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
Appearance:	Granules
Color:	brown, green, purplish.
Odor:	Not significant
Bulk density:	992 - 1142 kg/m ³
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 derivatives 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:	11% 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): 49,505.00 mg/kg

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 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 - Repeated Exposure

None under normal use conditions.

Aspiration Hazard

None under normal use.

Section 12: ECOLOGICAL INFORMATION**12.1. Toxicity**

Toxic to aquatic life with long lasting effects. Do not allow product to enter the environment uncontrolled.

11% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Ingredients	Algae/aquatic plants	Fish	Crustacea
Ammonium Nitrate; NH ₄ NO ₃		65 - 85: 48 h Cyprinus carpio mg/L LC50 semi-static	
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; NH ₄ NO 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:**

III

14.5**Component****IMDG - Marine Pollutants**Copper sulphate anh; CuSO₄
7758-98-7 (0.1 - 1%)

IMDG regulated marine pollutant (Listed in the index, 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**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**

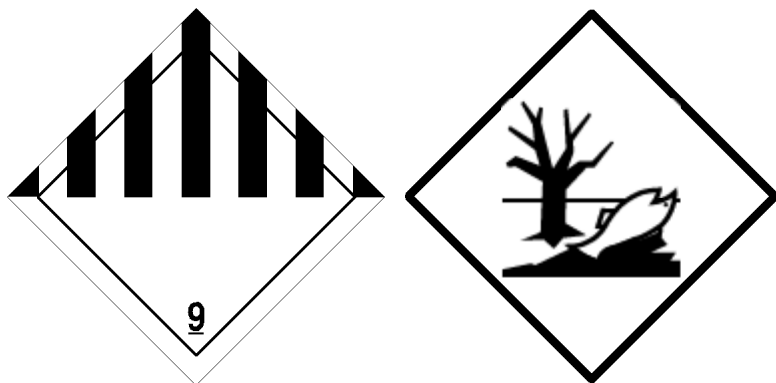
Not regulated

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:	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 ₄ NO ₃ 6484-52-2 (30 - 60%)	Use restricted. See item 58. (Conditions of restrictions 27 June 2010)
Sodium borate; Na ₂ B ₄ O 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 ₄ NO 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
LGK (Germany)

B II
5.1C

Water Endangering Class (WGK):

1 (Everris classification)

Component	German WGK Section
Ammonium Nitrate; NH ₄ NO ₃ 6484-52-2 (30 - 60%)	class 1
Iron sulphate; FeSO ₄ +1H ₂ O 7720-78-7 (1 - 5%)	class 1
Copper sulphate anh; CuSO ₄ 7758-98-7 (0.1 - 1%)	class 2
Manganese sulphate; MnSO ₄ +1H ₂ O 7785-87-7 (0.1 - 1%)	class 1
Sodium borate; Na ₂ B ₄ O ₇ 1330-43-4 (0.1 - 1%)	class 1
Zinc sulphate mono hydrate; ZnSO ₄ +1H ₂ O 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/ 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)

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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

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End of Safety Data Sheet