Issue Date: 24-Sep-2013

Revision Date: 27-Jun-2016

Safety Data Sheet

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

<u>1.1. Product identifier</u> Product Code Product Name: Synonyms:	88530225AU Osmocote Exact Mini 3-4M 15-3.9-9.1+1.2Mg+TE Osmocote Exact Mini 15-3.9-9.1+1.2Mg+TE		
Proper shipping name:	AMMONIUM NITRATE BASED FERTILIZER		
1.2. Relevant identified uses of the Recommended Use:	substance or mixture and uses advised against Fertilizer Restricted to professional users		
Uses Advised Against:	Consumer use [SU 21].		
<u>1.3. Details of the supplier of the safety data sheet</u> 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)

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; NH4NO3	229-347-8	6484-52-2	30 - 60%	Eye Irrit. 2 (H319) Ox. Sol. 3 (H272)	01-2119490981-27
Iron sulphate; FeSO4+1H2O	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; CuSO₄	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 - 1%	Eye Irrit. 2 (H319) Repr. 1B (H360FD)	01-2119490790-32
Zinc sulphate mono hydrate; ZnSO4+1H2O	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:	No specific first aid measures are required.	

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. Keep away from sources of ignition - No smoking.

For Emergency Responders: Use personal protection recommended in Section 8.

6.2. Environmental precautions

Do not let the product, its residues, container or packaging enter water. 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:Use up product completely. Packaging material is industrial waste. Sweep up and shovel.
wear personal protective equipment. Avoid dusting or misting conditions during cleanup.

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) Packaging Materials:

13 (S) 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

Iron sulphate; FeSO4+1H2O	
Belgium - 8 Hr TWA	1 mg/m ³
Denmark	TWA: 1 mg/m ³
Finland	
Ireland	TWA: 1 mg/m ³ TWA: 1 mg/m ³
ireiand	STEL: 2 mg/m ³
Netherlands - OEL - MACs:	1 mg/m ³
Norway	
Denternel	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; CuSO4	
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
Manganese sulphate; MnSO4+1H2O	
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
Nathanda OFL MAO-	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: 0.2 mg/m ³
Portugal	TWA: 0.05 mg/m ³
Spain OEL - Time Weighted Average (TWA):	TWA: 0.2 mg/m ²
Sweden - OEL - 8 Hour	0.2 mg/m ³ LLV (totalt)
Sweden - OEL - 8 Hour	TWA: 0.5 mg/m ³
UK oes/mel:	TWA: 0.5 mg/m ²
Sodium borate; Na ₂ B ₄ O ₇	
Australia TWA	1 mg/m³ TWA
Belgium - 8 Hr TWA	2 mg/m ³ TWA
Denmark	TWA: 1 mg/m ³
Greece - OEL	
	10 mg/m ³ TWA 1 mg/m ³ TWA
Iceland - OEL - 8 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/m ³ TWA (anhydrous, Serial No. 239)
Malaysia - Occupational Exposure Limits - 1 mg/m ³ 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 equipmentEye/Face Protection:Tightly fitting safety gogglesHand 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 clothingHygiene 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

b 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	phy	ysical and	chemical	prop	oerties
--	---------------------------	-----	------------	----------	------	---------

<u>9.1. Information on basic physical and chemical properties</u>	
Physical State:	Solid
Appearance:	Granules
Color:	brown.
Odor:	Not significant
Bulk density:	no data available
Bulk Density:	1026-1176 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:	Not Applicable
Solubility(ies)	Coating not soluble, release nutrients through coating no data
	available
Partition Coefficient:	Solid, Not Applicable
Autoignition Temperature:	Not Applicable
Decomposition Temperature:	>200 °C
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

No information available. Strong bases. Combustible material. 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

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon oxides. Nitrogen oxides (NOx). Nitrogen oxides (NOx). Oxides of phosphorus. Ammonia.

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:	14% 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): 50,000.00 mg/kg

Skin Corrosion or Irritation	May cause skin irritation in susceptible persons.
Serious Eye Damage or Eye Irritation	May cause eye irritation with susceptible persons.
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.

8% 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	
Iron sulphate; FeSO4+1H2O		925: 96 h Poecilia reticulata mg/L	152: 48 h Daphnia magna mg/L
		LC50 static 0.56: 96 h Cyprinus	EC50 6.15 - 9.26: 48 h Daphnia

		carpio mg/L LC50 semi-static	magna mg/L EC50 Static
Copper sulphate anh; CuSO4		0.1: 96 h Oncorhynchus mykiss mg/L LC50	0.024: 48 h Daphnia magna mg/L EC50
Sodium borate; Na₂B₄O⁊	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; NH₄NO ₃	-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:

Contaminated Packaging: Other Information:

Disposal should be in accordance with applicable regional, national and local laws and regulations. Do not re-use empty containers. Dispose of as unused product. Use up product completely. Packaging material is industrial

Waste codes / waste designations according to EWC / AVV 02 01 08

Section 14: TRANSPORT INFORMATION

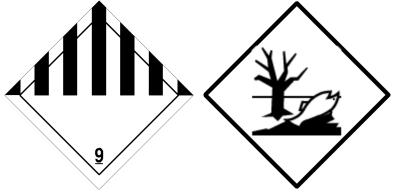
waste.

IMO / IMDG	
14.1	
<u>14.1</u> UN-No:	2071
14.2	2011
Proper shipping name:	AMMONIUM NITRATE BASED FERTILIZER
14.3_	AMMONIUM NITRATE DAGED I ERTIEIZER
Hazard Class:	9
14.4	9
Packing group:	11
14.5	111
	IMDG - Marine Pollutants
Component	
Copper sulphate anh; CuSO4	IMDG regulated marine pollutant (Listed in the index,
7758-98-7 (0.1 - 1%)	listed under Copper sulphate, anhydrous, hydrates and solution)
Marine Pollutant:	This material meets the definition of a marine pollutant
14.6	· ·
EmS:	F-H / S-Q
Special Provisions	186, 193
14.7	,
Transport in bulk according to Annex II of MARPOL 73/78	Not regulated
and the IBC Code	
ADR/RID	
14.1	
UN-No:	2071
14.2	-
<u></u>	

Proper shipping name:	AMMONIUM NITRATE BASED FERTILIZER
<u>14.3</u>	
Hazard Class:	9
<u>14.4</u>	
Packing group:	III
<u>14.5</u>	
Environmental Hazard	Not regulated
<u>14.6</u>	
Special Provisions	None

l	4	I	1	١

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



Section 15: REGULATORY INFORMATION

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

EU - REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances
Use restricted. See item 58. (Conditions of restrictions 27 June 2010)
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; NH4NO3	2500 tonne (Note 3, applies to Ammonium	350 tonne (Note 3, applies to Ammonium
6484-52-2 (30 - 60%)	nitrate in which the Nitrogen content due to	nitrate in which the Nitrogen content due to
	Ammonium nitrate is >28% by weight	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 Amm is >80% by weight)	onium nitrate concentration of Ammonium nitrate is >80% by weight)
<u>Denmark</u> Danish Sikkerhedsgruppe	В	
<u>France</u> ICPE	Classified ins	stallation: article 1331
<u>Germany</u> Gefahrstoffverordnung (Germany) TRGS 511 LGK (Germany) Water Endangering Class (WGK):	B II 13 (S) 1 (Everris cla	ssification)
Component	Germa	n WGK Section

Component	German WGK Section	
Ammonium Nitrate; NH₄NO ₃	class 1	
6484-52-2 (30 - 60%)		
Iron sulphate; FeSO4+1H2O	class 1	
7720-78-7(1 - 5%)		
Copper sulphate anh; CuSO4	class 2	
7758-98-7 (0.1 - 1%)		
Manganese sulphate; MnSO4+1H2O	class 1	
7785-87-7 (0.1 - 1%)		
Sodium borate; Na ₂ B ₄ O ₇	class 1	
1330-43-4 (0.1 - 1%)		
Zinc sulphate mono hydrate; ZnSO4+1H2O	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

- 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 organs through prolonged or repeated exposure in contact with skin
- H411 Toxic to aquatic life with long lasting effects
- H360FD May damage fertility. May damage the unborn child

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:	24-Sep-2013
Revision Date:	27-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