Safety Data Sheet

Issue Date 24-Sep-2013 **Revision Date** 10-Oct-2019 **Version:** 5

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

1.1. Product identifier

Product Name	**Osmocote Exact Mini 3-4M; 15-9-11+2MgO+TE**
Product Code:	**88530210EB**
Synonyms:	**Osmocote Exact Mini 15-3.9-9.1+1.2Mg+TE**
Pure substance/mixture	**Mixture.**

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

Recommended Use	Fertilizer (PC12). Restricted to professional users.
Uses Advised Against:	Consumer use [SU 21].

1.3. Details of the supplier of the safety data sheet

Everris International B.V.Nijverheidsweg 1-5; 6422 PD Heerlen (NL); Tel: +31 (0)45-5609100; Fax: +31 (0)45-5609190.

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

1.4. Emergency telephone number: IN CASE OF AN EMERGENCY CALL: +44 1235 239 670 (24h).

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Mixture

Regulation (EC) No 1272/2008 (CLP)

Chronic aquatic toxicity	Category 2 - (H411)

2.2. Label elements



Hazard Statements:

H411 - Toxic to aquatic life with long lasting effects

Other hazards (UN-GHS)

H316 - Causes mild skin irritation

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	EC-No.	CAS No	Weight %	Classification according Regulation (EC) 1272/2008 [CLP]	REACH registration number
Ammonium nitrate; NH_4NO_3	229-347-8	6484-52-2	40 - 65%	Eye Irrit. 2 (H319) Ox. Sol. 3 (H272)	01-2119490981-27
Iron sulphate; $FeSO_4+1H_2O$	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 anhydrous; $CuSO_4$	231-847-6	7758-98-7	0.1 - 1%	Eye Dam. 1 (H318) 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

Component	SVHC candidates
Sodium borate; $Na_2B_4O_7$ 1330-43-4 (0.1 - 1%)	Present

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.

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

None under normal processing

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

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.

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. 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 packaging should be closed well. Keep at temperatures between 0 °C and 40 °C.

Packaging Materials: Store in original container. Store in a closed container.

PGS-7 (The Netherlands) 2/B

LGK (Germany) 13 (S)

7.3. Specific end use(s)

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

Exposure scenario Mixture. Not required.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Ammonium nitrate; NH_4NO_3	
Australia	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
Norway	TWA: 1 mg/m³ STEL: 2 mg/m³
Portugal	TWA: 1 mg/m³
Spain - Valores Limite Ambientales - VLE	TWA: 1 mg/m³
Switzerland	TWA: 1 mg/m³
UK EH40 WEL (8h)	LTEL (8 hr TWA) 1 mg/m³ STEL (15 min) 2mg/m³
Copper sulphate anhydrous; $CuSO_4$	
Austria	STEL 4 mg/m³ TWA: 1 mg/m³
Australia	N.A.
Finland	TWA: 0.02 mg/m³

Poland	TWA: 0.2 mg/m³
Russia TWA	0.5 mg/m³ TWA 1258
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	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
Ireland	TWA: 0.2 mg/m³ STEL: 0.6 mg/m³
Japan	0.2 mg/m³ OEL Mn
NL MAC - TWA:	STEL: 0.05 mg/m³ TWA: 0.2 mg/m³
Norway	TWA: 0.1 mg/m³ STEL: 0.1 ppm
Poland	TWA: 0.05 mg/m³
Portugal	TWA: 0.2 mg/m³
Spain - Valores Limite Ambientales - VLE	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³
Switzerland	TWA: 0.5 mg/m³
UK EH40 WEL (8h)	5 mg/m³
Sodium borate; $Na_2B_4O_7$	
Australia	1 mg/m³ TWA
Belgium - 8 Hr TWA	2 mg/m³ TWA borate
Denmark	TWA: 1 mg/m³
FR - OEL - 8h VMEs	TWA: 1 mg/m³
Iceland - OEL - 8 Hour	1 mg/m³ TWA
Ireland	TWA: 1 mg/m³ STEL: 3 mg/m³
Korea - ISHA - OEL - TWAs	1 mg/m³ TWA (anhydrous, Serial No. 244)
Malaysia	1 mg/m³ TWA
Norway	TWA: 1 mg/m³ STEL: 2 mg/m³
Portugal	STEL: 6 mg/m³ TWA: 2 mg/m³
Spain - Valores Limite Ambientales - VLE	STEL: 6 mg/m³ TWA: 2 mg/m³
Singapore - OEL:PELs	1 mg/m³ PEL
Switzerland	STEL: 0.8 mg/m³
UK EH40 WEL (8h)	1 mg/m³ TWA

Derived No Effect Level (DNEL)

Component	Oral	Dermal	Inhalation
Ammonium nitrate; NH_4NO_3 6484-52-2 (40 - 65%)	36 mg/m³	5.12 mg/kg bw/day	8.9 mg/m³
Manganese sulphate; $MnSO_4+1H_2O$ 7785-87-7 (0.1 - 1%)	37.6 mg/m³	0.004 mg/kg bw/day	0.2 mg/m³

Predicted No Effect Concentration (PNEC)

No data available

Component	Fresh Water	Freshwater sediment	Sea Water	Sea sediment	Soil	Impact on Sewage Treatment
Ammonium nitrate; NH_4NO_3 6484-52-2 (40 - 65%)						18 mg/l
Copper sulphate anhydrous; $CuSO_4$ 7758-98-7 (0.1 - 1%)	7.8 µg/l	87 mg/kg	5.2 µg/l	676 mg/kg	65 mg/kg	230 µg/l
Manganese sulphate;	0.013 mg/l	0.011 mg/kg	0 mg/l	0.001 mg/kg	25.1 mg/kg	25.1 mg/kg

$MnSO_4+1H_2O$ 7785-87-7 (0.1 - 1%)						

8.2. Exposure controls

Personal protective equipment

Eye/Face Protection	Wear eye/face protection
Hand protection	Gloves. Nitrile rubber (0.26 mm). Break through time. > 8 h.
Respiratory Protection	Not required; except in case of aerosol formation. In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit
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.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State:	Solid
Appearance:	Granules
Color:	brown.
Odor:	None
Bulk density:	1026-1176 kg/m^3 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):	Not flammable
Vapor Pressure:	Solid. Not applicable.
Vapour density	Solid. Not applicable.
Relative density	No data available
Water Solubility:	No data available Not applied
Solubility(ies)	Coating not soluble, release nutrients through coating No data available
Partition Coefficient:	Solid. Not applicable.
Autoignition Temperature:	No data available
Decomposition temperature:	>200 °C
Explosive Properties:	Doesn't present explosion hazard.

9.2. Other information

VOC Content (%):	Solid. Not applicable.

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Not reactive.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

10.4. Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible 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

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

Product Information
If this product is a mixture, the classification is not based on toxicology studies for this product, but is based solely on toxicology studies for ingredients found within this product. More detailed substance and/or ingredient information may be provided in the other sections of this SDS

Information on the Likely Routes of Exposure (inhalation, ingestion, skin and eye contact):

Inhalation Inhalation of dust in high concentration may cause irritation of respiratory system.

Eye contact May cause slight irritation.

Skin Contact May cause irritation.

Ingestion May cause gastrointestinal discomfort if consumed in large amounts.

Information on Toxicological Effects
None known
Acute Toxicity
The following values are calculated based on chapter 3.1 of the GHS document:
ATEmix (oral): *47,619.00 mg/kg*

Unknown Acute Toxicity: 0% of the mixture consists of ingredient(s) of unknown toxicity.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ammonium nitrate; NH_4NO_3	= 2217 mg/kg (Rat)	> 5000 mg/kg	> 88.8 mg/L (Rat) 4 h
Iron sulphate; $FeSO_4+1H_2O$	= 500 mg/kg (Rat)	= 155 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

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure:
If this product is a mixture, the classification is not based on toxicology studies for this product, but is based solely on toxicology studies for ingredients found within this product. More detailed substance and/or ingredient information may be provided in the other sections of this SDS

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

12.1. Toxicity
Ecotoxicity Should not be released into the environment
Unknown Aquatic Toxicity 8% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	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 anhydrous; $CuSO_4$	-	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
Persistence and Degradability: No persistent or cumulative effects were observed.

12.3. Bioaccumulative potential
Bioaccumulation: Does not bioaccumulate.

Chemical Name	LOGPOW
Ammonium nitrate; NH_4NO_3	-3.1

12.4. Mobility in soil No data available.

12.5. 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 reuse container.
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

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

Marine Pollutant: Not regulated
14.6
EmS: F-H / S-Q
Special Provisions 186, 193
14.7

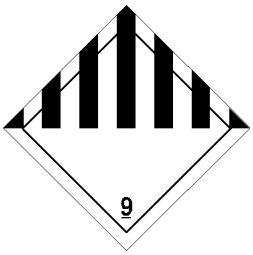
Bulk transport according Annex II of MARPOL and IBC Code No data available

ADR/RID

14.1
UN-No: Not regulated
14.2
Proper shipping name: Not regulated
14.3
Hazard Class: Not regulated
14.4
Packing group: Not regulated
14.5
Environmental Hazard Not regulated
14.6
Special Provisions None

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

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 (40 - 65%)	2500 tonne (technical grade; (a) this applies to Ammonium nitrate in which the Nitrogen content as a result of Ammonium nitrate is (i) between 24.5% and 28% by weight and which contain <=0.4% total combustible or (ii) >28% by weight and which contain <=0.2% combustible substances (b) aqueous Ammonium nitrate solutions in which the concentration of Ammonium nitrate is >80% by weight)	350 tonne

Denmark
Denmark B

France
ICPE Classified installation: article 1331 (Type I)

Germany

LGK (Germany)	13 (S)
Water Endangering Class (WGK):	1 (Everris classification)
Gefahrstoffverordnung (Germany) TRGS 511	B II

Component	German WGK Section
Ammonium nitrate; NH_4NO_3 6484-52-2 (40 - 65%)	1
Iron sulphate; $FeSO_4+1H_2O$ 7720-78-7 (1 - 5%)	1
Copper sulphate anhydrous; $CuSO_4$ 7758-98-7 (0.1 - 1%)	2
Manganese sulphate; $MnSO_4+1H_2O$ 7785-87-7 (0.1 - 1%)	2
Sodium borate; $Na_2B_4O_7$ 1330-43-4 (0.1 - 1%)	1

Component	EU - Explosives Precursors Marketing and Use (98/2013) - Substances Subject to Suspicious Transactions Reporting	EU - REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances
Ammonium nitrate; NH_4NO_3 6484-52-2 (40 - 65%)	Present (in concentration of 16% by weight of Nitrogen in relation to Ammonium nitrate or higher)	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.

Component	EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances for Eventual Inclusion in Annex XIV
Sodium borate; $Na_2B_4O_7$ 1330-43-4 (0.1 - 1%)	Reason for inclusion Toxic for reproduction, Article 57c (215-540-4)

15.2 Chemical safety assessment

Substance(s) usage is covered according to Reach regulation 1907/2006
Take note of Dir. 98/24/EC on the protection of the health and safety of workers from risks related to chemical agents at work

Chemical Name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
Ammonium nitrate; NH_4NO_3	Use restricted. See item 58.	
Sodium borate; $Na_2B_4O_7$	Use restricted. See item 30.	

Chemical Name	Lower-tier requirements (tons)	Upper-tier requirements (tons)
Ammonium nitrate; NH_4NO_3	350	2500

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
- H316 - Causes mild skin irritation

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 phrase: CLP (EU) specific hazard statement
LD50: Lethal dose, 50%.
LC50: Lethal concentration, 50%.
SVHC: Substance of Very High Concern.

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 (CLP).
Prepared by	Regulatory Affairs Department (INFO-MSDS@EVERRIS.COM)
Issue Date	24-Sep-2013
Restrictions on use	Restricted to professional users
Reason for revision	*** Indicates changes since the last revision. This version replaces all previous versions

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