

Safety Data Sheet

This safety data sheet was created pursuant to the requirements of:
GB/T 16483-2008, GB/T 17519-2013

Product Name Osmocote Exact High K 12-8-19+1.8MgO+TE
Last Revision Date 23-Aug-2023 **(M)SDS Number** 8833-225HA

Version 1

1. Identification

Product identifier

Product Name Osmocote Exact High K 12-8-19+1.8MgO+TE

Other means of identification

(M)SDS Number 8833-225HA

Pure substance/mixture Mixture

Details of the supplier of the safety data sheet

Supplier

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

E-mail address INFO-MSDS@EVERRIS.COM

Emergency telephone number

IN CASE OF AN EMERGENCY CALL: +44 1235 239 670 (24/7)

Recommended use of the chemical and restrictions on use

Recommended Use Fertilizer

Uses Advised Against Consumer use (SU21)

2. Hazard(s) identification

Emergency Overview

No significant adverse health effects

Appearance: Granules

Physical state Solid

Odor: Fertilizer

Classification of the substance or mixture

Skin corrosion/irritation	Category 3
Eye Irritation	Category 1
Hazardous to the Aquatic Environment - Chronic Hazard	Category 3

Label elements

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Signal Word: Danger

Hazard Statements:

Causes mild skin irritation
Causes serious eye damage
Harmful to aquatic life with long lasting effects

Prevention

Wear eye/face protection
Avoid release to the environment

Response

If skin irritation occurs: Get medical advice/attention

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor

Disposal

Dispose of contents/container to an approved waste disposal plant

Physical and chemical hazards

Not applicable.

Health hazards

Immediate Health Effects: Not applicable.
Chronic effects: Not applicable.

Environmental hazards

Not applicable

Other hazards which do not result in classification

No information available.

3. Composition/information on ingredients

Substance

Chemical nature Fertilizer.

Chemical name	Weight-%	CAS No.
Ammonium nitrate; NH ₄ NO ₃ 6484-52-2	25 - 50%	6484-52-2
Potassium sulphate; K ₂ SO ₄ 7778-80-5	10 - 25%	7778-80-5
Iron sulphate; FeSO ₄ +7H ₂ O 7782-63-0	1 - 10%	7782-63-0
Copper sulphate+5H ₂ O; CuSO ₄ +5H ₂ O 7758-99-8	0 - 1%	7758-99-8
Manganese sulphate; MnSO ₄ 7785-87-7	0 - 1%	7785-87-7
Disodium tetraborate pentahydrate 12179-04-3	0 - 1%	12179-04-3

4. First-aid measures

Description of necessary first aid measures

Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Ingestion	Clean mouth with water and drink afterwards plenty of water.
<u>Most important symptoms/effects, acute and delayed</u>	No information available.
<u>For emergency responders</u>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. First aider: Pay attention to self-protection.
<u>Note to physicians</u>	Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Small Fire	Water may not be effective to extinguish fire.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
<u>Specific hazards arising from the chemical</u>	No information available.
<u>Special protective actions for fire-fighters</u>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation.
For emergency responders	Use personal protection recommended in Section 8.
<u>Environmental precautions</u>	See Section 12 for additional Ecological Information.
<u>Methods and material for containment and cleaning up</u>	Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labeled containers. Sweep up and shovel into suitable containers for disposal.
<u>Precautions to prevent secondary</u>	Clean contaminated objects and areas thoroughly observing environmental regulations.

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hazards

7. Handling and storage

Precautions for safe handling Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment.

Conditions for safe storage, including any incompatibilities Keep containers tightly closed in a dry, cool and well-ventilated place.

Packaging materials Sacks/Bags.

Incompatible materials None known based on information supplied.

8. Exposure controls/personal protection

Occupational exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical name	China	ACGIH TLV
Manganese sulphate; MnSO ₄	TWA: 0.15 mg/m ³	-
Disodium tetraborate pentahydrate	-	TWA: 2 mg/m ³ inhalable particulate matter STEL: 6 mg/m ³ inhalable particulate matter

See section 16 for terms and abbreviations

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring and observation processes

No applicable information was found.

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Lightweight protective clothing.

Hand protection Protective gloves.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance: Granules
Color: brown
Physical state Solid
Odor: Fertilizer
Odor Threshold: No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	No data available
Melting Point/Freezing Point:	No data available	Not applicable
Boiling Point/Range:	No data available	None known
Flash Point:	No data available	None known
Evaporation Rate:		Flammability (solid, gas):
Not applicable		Flammability Limits in Air:
Not applicable		Upper Flammability Limit: No data available
		Lower Flammability Limit: No data available
		Vapor Pressure: no data available
Vapour density	No data available	None known
Relative density	No data available	No data available
Water Solubility:	no data available	None known
Solubility(ies)	no data available	No data available
Partition Coefficient:	No data available	None known
Autoignition Temperature:	No data available	No data available
Decomposition Temperature:	No data available	None known
Kinematic Viscosity:	No data available	None known
Dynamic Viscosity:	No data available	None known

Additional information

Explosive properties Not applicable
Oxidizing properties No information available
Bulk Density: 1019 kg/m³

10. Stability and reactivity

Stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

Conditions to avoid Burning produces obnoxious and toxic fumes. Heat, flames and sparks. dust formation.

Incompatible materials None known based on information supplied.

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

11. Toxicological information

Acute toxicity

Numerical measures of toxicity
 No information available

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

ATEmix (oral): 33,557.00 mg/kg

- 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ammonium nitrate; NH ₄ NO ₃ 6484-52-2	= 2217 mg/kg (Rat)	> 5000 mg/kg (Rat)	> 88.8 mg/L (Rat) 4 h
Potassium sulphate; K ₂ SO ₄ 7778-80-5	= 6600 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Iron sulphate; FeSO ₄ +7H ₂ O 7782-63-0	= 1520 mg/kg	-	-
Copper sulphate+5H ₂ O; CuSO ₄ +5H ₂ O 7758-99-8	= 960 mg/kg (Rat)	> 8 g/kg (Rabbit)	-
Manganese sulphate; MnSO ₄ 7785-87-7	= 782 mg/kg (Rat)	-	> 4.45 mg/L (Rat) 4 h
Disodium tetraborate pentahydrate 12179-04-3	= 2403 mg/kg (Rat)	-	-

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Chemical name	China	IARC
Ammonium nitrate; NH ₄ NO ₃ 6484-52-2	-	Group 2A

Reproductive toxicity No information available.

Specific target organ toxicity (single exposure) No information available.

Specific target organ toxicity (repeated exposure) No information available.

Aspiration hazard No information available.

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Unknown Aquatic Toxicity: 7 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Crustacea
Potassium sulphate; K ₂ SO ₄ 7778-80-5	EC50: =2900mg/L (72h, Desmodesmus subspicatus)	LC50: =653mg/L (96h, Lepomis macrochirus)	EC50: =890mg/L (48h, Daphnia magna)

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		LC50: =3550mg/L (96h, Lepomis macrochirus) LC50: 510 - 880mg/L (96h, Pimephales promelas)	
Copper sulphate+5H ₂ O; CuSO ₄ +5H ₂ O 7758-99-8	-	LC50: 0.66 - 1.15mg/L (96h, Lepomis macrochirus) LC50: 0.96 - 1.8mg/L (96h, Lepomis macrochirus) LC50: 0.1478 - 0.165mg/L (96h, Oncorhynchus mykiss) LC50: 0.09 - 0.19mg/L (96h, Oncorhynchus mykiss) LC50: =0.6752mg/L (96h, Pimephales promelas)	EC50: 0.147 - 0.227mg/L (48h, Daphnia magna)

Persistence and degradability No persistent or cumulative effects were observed.

Bioaccumulative potential No information available.

Chemical name	Partition coefficient
Ammonium nitrate; NH ₄ NO ₃ 6484-52-2	-3.1

Mobility in soil no data available.

13. Disposal considerations

Waste chemicals Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

IMDG Not regulated
Bulk transport according Annex II of MARPOL and IBC Code no data available

IATA Not regulated

China Not regulated

Special precautions for user
Please refer to the applicable dangerous goods regulations for additional information

15. Regulatory information

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

National regulations

Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Catalog of occupational hazard factors: Not applicable.
Catalog of occupational diseases: Not applicable.

Chemical name	Category
Iron sulphate; FeSO ₄ +7H ₂ O	Inhalation of dust/particles

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7782-63-0	
Copper sulphate+5H ₂ O; CuSO ₄ +5H ₂ O 7758-99-8	Chemical hazards
Manganese sulphate; MnSO ₄ 7785-87-7	Chemical hazards

Regulations on the Control over Safety of Hazardous Chemicals

Inventory of hazardous chemicals Not applicable.

Chemical name	Inventory of hazardous chemicals
Ammonium nitrate; NH ₄ NO ₃ 6484-52-2	Listed

GB 18218-2009 Identification of major hazard installations for dangerous chemicals Not applicable

Chemical name	Threshold quantity (T)
Ammonium nitrate; NH ₄ NO ₃ 6484-52-2	5 50 200

List of hazardous chemicals under priority management

Not applicable

Chemical name	List of priority hazardous chemicals under work safety management
Ammonium nitrate; NH ₄ NO ₃ 6484-52-2	Listed

Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used

Inventory of highly toxic goods Not applicable

Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

List of toxic chemicals severely restricted for import and export in China Not applicable

Measures for the Environmental Management of New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applied

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

16. Other information

Prepared by Regulatory Affairs Department (INFO-MSDS@EVERRIS.COM)

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Revision Note *** Indicates changes since the last revision. This version replaces all previous versions.

Abbreviations and acronyms

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)	Ceiling	Maximum limit value
*	Skin designation	C	carcinogen		

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

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U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AELG(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 RTECS (Registry of Toxic Effects of Chemical Substances)
 World Health Organization

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet

Data for Regulatory Rules

Region	Template name
Reason for revision	China
CGHS	3.0

EN / CGHS

GHS Product Information

Physical state	Solid			
Globally Harmonized System (GHS)	Europe		Japan	
	China	STOT SE 1 target organ(s)	No information available	
	no data available	no data available	STOT SE 2 target organ(s)	No information available
	No	no data available	no data available	

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infor matio n availa ble			
STOT RE 1 target organ(s)	No information available	no data available	
no data available	STOT RE 1 target organ(s)	No information available	No information available
no data available	no data available	STOT RE 2 target organ(s)	No information available
No information available	no data available	no data available	
China			

Signal Word: Danger
 GHS Classification: Hazardous to the Aquatic Environment - Category 3
 Chronic Hazard
 Hazard Statements: Harmful to aquatic life with long lasting effects
 Skin corrosion/irritation: Category 3
 Hazard Statements: Causes mild skin irritation
 Signal Word: Warning
 Eye Irritation: Category 1
 Hazard Statements: Causes severe eye damage
 Signal Word: Danger
 Eye Damage



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

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0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Hazard Statements: Causes mild skin irritation Causes serious eye damage Harmful to aquatic life with long lasting effects
Hazard Statements: H316 - Causes mild skin irritation H318 - Causes serious eye damage H412 - Harmful to aquatic life with long lasting effects
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
Precautionary statements If skin irritation occurs: Get medical advice/attention Wear protective gloves IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor Call a POISON CENTER or doctor Avoid release to the environment
Prevention Wear eye/face protection Avoid release to the environment
Response
Skin If skin irritation occurs: Get medical advice/attention
Eyes IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor
Disposal Dispose of contents/container to an approved waste disposal plant
The following values are calculated based on chapter 3.1 of the GHS document:
ATEmix (oral): 33,557.00
mg/kg
Eye Damage



Unknown Aquatic Toxicity: 7 % of the mixture consists of component(s) of unknown hazards to the aquatic environment
Unknown chronic aquatic toxicity 99.99999
Product ATE Oral Status 1
Product ATE Dermal Status 1
Product ATE Inhalation - Gas Status 1
Product ATE Inhalation - Vapor Status 1
Product ATE Inhalation - Dust/Mist Status 1
Product Skin Corrosion Status 1
Product Eye Damage Status 1
Product Respiratory Sens. Status 1
Product Skin Sens. Status 1
Product Mutagenic Status 1
Product Carcinogenic Status 1
Product Reproductive Toxicity Status 1
Product STOT Single Status 1
Product STOT Repeated Status 1
Product Aquatic Toxicity Status 1
Product Aspiration Toxicity Status 1
Product Ozone Status 1
Product and Component Overall 1
Classification Status
skin corrosion/irritation - (H316)
Eye Damage - (H318)
Chronic aquatic toxicity - (H412)
Symbols/Pictograms

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Precautionary statements

P332 + P313 - If skin irritation occurs: Get medical advice/attention P280 - Wear protective gloves/protective clothing/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 P273 - Avoid release to the environment P501 - Dispose of contents/ container to an approved waste disposal plant

Contains Potassium sulphate; K_2SO_4 , Copper sulphate+5H₂O; $CuSO_4 \cdot 5H_2O$, Manganese sulphate; $MnSO_4$, Zinc sulfate; $ZnSO_4$

