Safety Data Sheet

Issue Date 07-Jan-2014 **Revision Date** 09-Oct-2019 **Version:** 4

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

1.1. Product identifier

Product Name	**OsmoTop 22-5-10+2MgO+TE**
Product Code:	**52320225EA**
Synonyms:	**OsmoTop 22-2.2-8.3+2MgO+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)

Eye Irritation	Category 1 - (H318)

2.2. Label elements



Signal Word: Danger

Hazard Statements:
H318 - Causes serious eye damage

Contains Iron sulphate; $FeSO_4$+1H_2O, Potassium sulphate; K_2SO_4, Single super phosphate; SSP

Precautionary Statements:
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

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
Potassium sulphate; K_2SO_4	231-915-5	7778-80-5	10 - 25%	Eye Dam. 1 (H318)	01-2119489441-34
Single super phosphate; SSP	232-379-5	8011-76-5	5 - 10%	Eye Dam. 1 (H318)	01-2119488967-11
Sulphur; S	231-722-6	7704-34-9	5 - 10%	Skin Irrit. 2 (H315)	01-2119487295-27
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
Manganese sulphate; $MnSO_4+1H_2O$	232-08-99	7785-87-7	1 - 5%	STOT RE 2 (H373) Eye Dam. 1 (H318) Aquatic Chronic 2 (H411)	01-2119456624-35
Biuret; $C_6H_8O_7$	203-559-0	108-19-0	1 - 5%	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	no data available

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 In case of shortness of breath, give oxygen. Possible symptoms are coughing and/or dyspnoea. Move 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 thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.

Ingestion: Do not induce vomiting without medical advice. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person. In case of respiratory difficulties practice oxygenotherapy. Possible symptoms are nausea and/or vommiting.

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

None under normal processing.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media: Coordinate fire extinguishing measures to fire in surrounding area. Use dry chemical, CO2, water spray or "alcohol" foam.

Unsuitable Extinguishing Media: High volume water jet.

5.2. Special hazards arising from the substance or mixture

The product itself does not burn. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

5.3. Advice for firefighters

Use extinguishing agent suitable for type of surrounding fire. In the event of fire and/or explosion do not breathe fumes. Firefighters

should wear self-contained breathing apparatus and full firefighting turnout gear.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions: Avoid dust formation. Ensure adequate ventilation.
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 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.

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

Potassium sulphate; K_2SO_4	
Bulgaria - OEL- TWAs	10.0 mg/m³ TWA
Latvia - OEL - TWAs	10 mg/m³ TWA
Single super phosphate; SSP	
Bulgaria - OEL- TWAs	5.0 mg/m³ TWA (listed under Double superphosphate)
Sulphur; S	
Latvia - OEL - TWAs	6 mg/m³ TWA
Russia TWA	6 mg/m³ TWA 1863
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
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

Derived No Effect Level (DNEL)

Component	Oral	Dermal	Inhalation
Potassium sulphate; K_2SO_4 7778-80-5 (10 - 25%)		21.3 mg/kg bw/day	37.6 mg/m³
Manganese sulphate; $MnSO_4+1H_2O$ 7785-87-7 (1 - 5%)	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
Potassium sulphate; K_2SO_4 7778-80-5 (10 - 25%)	0.68 mg/l		0.068 mg/l			10 mg/l
Manganese sulphate; $MnSO_4+1H_2O$ 7785-87-7 (1 - 5%)	0.013 mg/l	0.011 mg/kg	0 mg/l	0.001 mg/kg	25.1 mg/kg	25.1 mg/kg

8.2. Exposure controls

Personal protective equipment

Eye/Face Protection Tightly fitting safety goggles

Hand protection Nitrile rubber (0.26 mm). Break through time. > 8 h.

Respiratory Protection No personal respiratory protective equipment normally required

Skin and body protection: Usual safety precautions while handling the product will provide adequate protection against this potential effect

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: 900 - 1100 kg/m³ 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
Solubility(ies)	No data available
Partition Coefficient:	Solid. Not applicable.
Autoignition Temperature:	No data available
Decomposition temperature:	No data available
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
None under normal processing. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

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): *11,077.00 mg/kg*

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

Potassium sulphate; K_2SO_4 (7778-80-5)

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium sulphate; K_2SO_4	= 6600 mg/kg (Rat)	> 2000 mg/kg (Rat)	N.E.
Sulphur; S	> 3000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 9.23 mg/L (Rat) 4 h
Iron sulphate; $FeSO_4+1H_2O$	= 500 mg/kg (Rat)	= 155 mg/kg (Rat)	
Manganese sulphate; $MnSO_4+1H_2O$	= 2125 mg/kg (Rat)		> 4.98 mg/L (Rat) 4h
Biuret; $C_6H_8O_7$	14300 - 15000 mg/kg (Rat)		

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 2% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Potassium sulphate; K_2SO_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
Sulphur; S	-	866: 96 h Brachydanio rerio mg/L LC50 static 14: 96 h Lepomis macrochirus mg/L LC50 static 180: 96 h Oncorhynchus mykiss mg/L LC50 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

12.2. Persistence and degradability

Persistence and Degradability: No persistent or cumulative effects were observed.

12.3. Bioaccumulative potential

Bioaccumulation: Does not bioaccumulate.

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: Not regulated

14.2
Proper shipping name: Not regulated

14.3
Hazard Class: Not regulated

14.4
Packing group: Not regulated

14.5
Marine Pollutant: This material meets the definition of a marine pollutant

14.6
Special Provisions None

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: 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

Section 15: REGULATORY INFORMATION

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

Belgium

Denmark
Denmark — No data available

France
ICPE — Not regulated

Germany
LGK (Germany) — 13 (S)
Water Endangering Class (WGK): — 1 (Everris classification)
Gefahrstoffverordnung (Germany) TRGS 511 — Not regulated

Component	German WGK Section
Potassium sulphate; K_2SO_4 7778-80-5 (10 - 25%)	1
Single super phosphate; SSP 8011-76-5 (5 - 10%)	NWG
Sulphur; S 7704-34-9 (5 - 10%)	class 1
Iron sulphate; $FeSO_4+1H_2O$ 7720-78-7 (1 - 5%)	1
Manganese sulphate; $MnSO_4+1H_2O$ 7785-87-7 (1 - 5%)	2
Biuret; $C_6H_8O_7$ 108-19-0 (1 - 5%)	3

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

Section 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3
- H335 - May cause respiratory irritation
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H302 - Harmful if swallowed
- H318 - Causes serious eye damage
- 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)
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