



Safety Data Sheet

Last Revision Date 31-May-2023

Version: 1

1. IDENTIFICATION

Product identifier

Product Name: Osmocote ® Plus 15-9-12; 5-6M
Product Number(s): A903226B
Formula No.: S14311

Description: Controlled release fertilizer

Recommended use of the chemical and restrictions on use

Restricted to professional users

Company:

Everris NA Inc.
P.O. Box 3310
Dublin, OH 43016

24-HOUR EMERGENCY TELEPHONE NUMBERS:

CHEMTREC (U.S.): 1-800-424-9300
CHEMTREC (International): 1-703-527-3887
Non-Emergency Calls: 1-800-492-8255

2. HAZARD(S) IDENTIFICATION

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122)

Label Elements:

The product contains no substances which at their given concentration, are considered to be hazardous to health.

Appearance: Granules

Physical state: Solid

Odor: Fertilizer

Hazards Not Otherwise Classified (HNOC):

Not applied

Other Information

Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%	Trade Secret
Ammonium nitrate; NH ₄ NO ₃	6484-52-2	40 - 50%	*
Iron (III) phosphate (US)	10045-86-0	1 - 5%	*
Copper sulphate anhydrous; CuSO ₄	7758-98-7	0.1 - 1%	*
Manganese sulphate; MnSO ₄	7785-87-7	0.1 - 1%	*
Sodium borate; Na ₂ B ₄ O ₇	1330-43-4	0.1 - 1%	*
Zinc sulfate; ZnSO ₄	7733-02-0	< 0.1%	*
Zinc oxide; ZnO	1314-13-2	< 0.1%	*

* The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

Description of first aid measures

Eye Contact:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Skin Contact:	Call a poison control center or doctor for treatment advice. Take off contaminated clothing. Immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Inhalation	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a POISON CENTER or doctor.
Ingestion:	Call a physician or Poison Control Centre immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

<u>Suitable Extinguishing Media:</u>	Carbon dioxide (CO ₂). Dry chemical. Water spray. Chemical foam.
<u>Unsuitable Extinguishing Media:</u>	High volume water jet.
<u>Specific hazards:</u>	Dust may form explosive mixture in air.
<u>Hazardous Combustion Products</u>	Combustion can produce toxic fumes and irritating gases.
<u>Explosion Data:</u>	
Sensitivity to Mechanical Impact:	no data available.
Sensitivity to Static Discharge:	no data available.
<u>Special Protective Equipment for Firefighters:</u>	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions:	Wear suitable protective clothing.
Environmental precautions:	Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment:	Follow good housekeeping practices.
Methods for Cleanup:	If material is uncontaminated, collect and reuse as recommended for product.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling: Avoid container breakage. Keep out of reach of children and pets.

Conditions for safe storage, including any incompatibilities

Storage: Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

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	ACGIH TLV	OSHA:	ACGIH:	IDLH:
Copper sulphate anhydrous; CuSO ₄ 7758-98-7	-	-	1 mg/m ³ TWA	100 mg/m ³ IDLH Cu
Manganese sulphate; MnSO ₄ 7785-87-7	-	-	0.02 mg/m ³ TWA 0.1 mg/m ³ TWA	500 mg/m ³ IDLH Mn
Sodium borate; Na ₂ B ₄ O ₇ 1330-43-4	TWA: 2 mg/m ³ inhalable particulate matter STEL: 6 mg/m ³ inhalable particulate matter	-	2 mg/m ³ TWA	-
Zinc oxide; ZnO 1314-13-2	TWA: 2 mg/m ³ respirable particulate matter STEL: 10 mg/m ³ respirable particulate matter	5 mg/m ³ TWA 15 mg/m ³ TWA	2 mg/m ³ TWA	500 mg/m ³ IDLH

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas. Eyewash. Showers.

Individual protection measures, such as personal protective equipment

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

Hand Protection Neoprene gloves.

Skin and body protection Lightweight protective clothing.

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

Physical state Solid
Color: green
Appearance: Granules
Odor: Fertilizer

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH:	5.42 (5% solution)	
Melting Point/Freezing Point:	Not applicable	
Boiling Point/Range:	No data available	
Flash Point:		
Evaporation Rate:	no data available	
Flammability (solid, gas):	No data available	
Flammability Limits in Air:		
Upper Flammability Limit:	No data available	
Lower Flammability Limit:	No data available	
Vapor Pressure:	No data available	
Vapour density	No data available	
Relative density	no data available	
Solubility:	no data available	
Solubility in other Solvents:	no data available	
Partition Coefficient:	no data available	
Autoignition Temperature:	No data available	
Hyphen	no data available	
Kinematic Viscosity:	No data available	
Dynamic Viscosity:	no data available	
Explosive Properties:	no data available	
Oxidizing Properties:	Not considered an oxidizer	

Other information

Softening Point:	no data available
Molecular Weight:	no data available
VOC content	No data available
Density:	1,026 g/cm ³
Bulk density:	65-70 lbs/cu.ft.
Particle Size	3,36 mm
Dissolution speed	8% (1 M @ 21°C)

10. STABILITY AND REACTIVITY

Reactivity:

Stable under recommended storage conditions

Chemically Stable:

Stable under recommended storage conditions.

Conditions to Avoid:

Protect from extremes of temperature.

Materials to avoid

Oxidizing agent.

Hazardous Decomposition Products:

Toxic fumes and gases may be generated. Metal oxides possible.

Possibility of Hazardous Reactions:

Poses little or no immediate hazard.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin Contact	Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms no data available.

Numerical measures of toxicity

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

Oral LD50 37,854.00 mg/kg
Dermal LD50 52,323.50 mg/kg

Unknown Acute Toxicity: no data available

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
Iron (III) phosphate (US) 10045-86-0	-	-	> 5.05 mg/L (Rat) 4 h
Copper sulphate anhydrous; CuSO ₄ 7758-98-7	= 300 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Manganese sulphate; MnSO ₄ 7785-87-7	= 782 mg/kg (Rat)	-	> 4.45 mg/L (Rat) 4 h
Sodium borate; Na ₂ B ₄ O ₇ 1330-43-4	= 2660 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2 mg/m ³ (Rat) 4 h
Zinc sulfate; ZnSO ₄ 7733-02-0	= 1710 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Zinc oxide; ZnO 1314-13-2	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 5700 mg/m ³ (Rat) 4 h

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure:

Skin corrosion/irritation no data available.

Serious eye damage/eye irritation no data available.

Respiratory or skin sensitization no data available.

Germ Cell Mutagenicity no data available.

Carcinogenicity no data available.

Chemical name	ACGIH	IARC	NTP	OSHA
Ammonium nitrate; NH ₄ NO ₃ 6484-52-2	-	Group 2A	-	X

Reproductive Toxicity no data available.

STOT - Single Exposure no data available.

STOT - Repeated Exposure no data available.

Aspiration Hazard no data available.

12. ECOLOGICAL INFORMATION

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

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Copper sulphate anhydrous; CuSO ₄ 7758-98-7	-	LC50: =0.1mg/L (96h, Oncorhynchus mykiss)	-	EC50: 0.0058 - 0.0073mg/L (48h, Daphnia magna)
Sodium borate; Na ₂ B ₄ O ₇ 1330-43-4	EC50: =158mg/L (96h, Desmodesmus subspicatus) EC50: 2.6 - 21.8mg/L (96h, Pseudokirchneriella subcapitata)	LC50: =340mg/L (96h, Limanda limanda)	-	LC50: 1085 - 1402mg/L (48h, Daphnia magna)
Zinc sulfate; ZnSO ₄ 7733-02-0	EC50: =0.056mg/L (72h, Pseudokirchneriella subcapitata)	LC50: =0.162mg/L (96h, Oncorhynchus mykiss) LC50: 0.03 - 0.05mg/L (96h, Oncorhynchus mykiss) LC50: 0.34 - 0.93mg/L (96h, Oncorhynchus mykiss) LC50: 0.218 - 0.42mg/L (96h, Pimephales promelas) LC50: =0.06mg/L (96h, Pimephales promelas) LC50: 0.23 - 0.48mg/L (96h, Pimephales promelas) LC50: 0.168 - 0.25mg/L (96h, Pimephales promelas) LC50: =0.15mg/L (96h, Cyprinus carpio) LC50: 16.85 - 27.18mg/L (96h, Cyprinus carpio) LC50: 3 - 4.6mg/L (96h, Lepomis macrochirus) LC50: 3.55 - 6.32mg/L (96h, Lepomis macrochirus) LC50: =0.63mg/L (96h, Poecilia reticulata) LC50: 49.23 - 64.16mg/L (96h, Poecilia reticulata) LC50: 0.48 - 1.72mg/L (96h, Poecilia reticulata)	-	EC50: =0.75mg/L (48h, Daphnia magna) EC50: 0.538 - 0.908mg/L (48h, Daphnia magna)
Zinc oxide; ZnO 1314-13-2	-	LC50: =1.55mg/L (96h, Danio rerio)	-	-

Persistence and Degradability: no data available.

Bioaccumulation No information available.

Chemical name	Partition coefficient
Ammonium nitrate; NH ₄ NO ₃ 6484-52-2	-3.1
Sodium borate; Na ₂ B ₄ O ₇ 1330-43-4	-1.53

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

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.

14. TRANSPORT INFORMATION

The description shown may not apply to all situations. Consult 49 CFR, or appropriate dangerous goods regulations for additional description requirements (e.g. technical name) and mode-specific or quantity-specific shipping requirements.

DOT (Land) Not DOT regulated
DOT (AIR) UN2071, Ammonium Nitrate Based Fertilizer, 9, PGIII
DOT (Vessel) UN2071, Ammonium Nitrate Based Fertilizer, 9, PGIII
IATA (Air) UN2071, Ammonium Nitrate Based Fertilizer, 9, PGIII
IMO/IMDG (Vessel) UN2071, Ammonium Nitrate Based Fertilizer, 9, PGIII

15. REGULATORY INFORMATION

Federal Regulations:

SARA 313:
 Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories:

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act):

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	Clean Water Act - Priority Pollutants	Clean Water Act - Hazardous Substances
Copper sulphate anhydrous; CuSO ₄ 7758-98-7	-	-	-	Present
Zinc sulfate; ZnSO ₄ 7733-02-0	-	-	-	Present

CERCLA:

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	CERCLA/SARA 313	CERCLA/SARA RQ
Copper sulphate anhydrous; CuSO ₄	10 lb final RQ	-

7758-98-7	4.54 kg final RQ	
Zinc sulfate; ZnSO ₄	1000 lb final RQ	-
7733-02-0	454 kg final RQ	

California Proposition 65:

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations:

State Regulations (RTK): no data available

U.S. EPA Label information:

EPA Pesticide Registration Number: Not applied

16. OTHER INFORMATION

NFPA: Health hazards 3 Flammability 2 Reactivity: 1

HMIS: Health hazards - Flammability 2 Reactivity: 1

Prepared by Regulatory Affairs Department

Last Revision Date 31-May-2023

Reason for revision *** Indicates changes since the last revision. This version replaces all previous versions

Disclaimer

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End of Safety Data Sheet