

Safety Data Sheet

Issue Date: 03-Jul-2017

Revision Date: 03-Dec-2020

Version 3

1. IDENTIFICATION

Product identifier

Product Name MicroSync® Ultra

Other means of identification

SDS # VLS-223

Product Code FFN 05071

Recommended use of the chemical and restrictions on use

Recommended Use Fertilizer.

Details of the supplier of the safety data sheet

Supplier Address

Verdesian Life Sciences, U.S., LLC.
1001 Winstead Drive, Suite 480
Cary, NC 27513

Emergency telephone number

Company Phone Number Business Phone: (800) 868-6446
Fax: (919) 535-3652
Emergency Telephone INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Black course granule

Physical state Solid

Odor None

Classification

Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

Signal Word

Danger

Hazard statements

Causes serious eye damage
May cause damage to organs through prolonged or repeated exposure



Precautionary Statements - Prevention

Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Get medical advice/attention if you feel unwell

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/physician

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards

Harmful to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Gypsum	13397-24-5	30-35
Ammonium Sulfate	7783-20-2	5-10
Sodium tetraborate pentahydrate	12179-04-3	5-10
Manganese Oxide	1344-43-0	1-5
Manganese Sulfate Monohydrate	10034-96-5	1-5
Silica, Quartz	14808-60-7	<1
Silica, cristobalite	14464-46-1	<1

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General Advice	Provide this SDS to medical personnel for treatment.
Eye Contact	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/physician.
Skin Contact	IF ON SKIN: Wash with plenty of water and soap. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Ingestion	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

Most important symptoms and effects, both acute and delayed

Symptoms	May be harmful if swallowed. May be harmful in contact with skin. Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Not determined.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Wear protective gloves/protective clothing and eye/face protection. Wash face, hands and any exposed skin thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

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

Incompatible Materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Gypsum 13397-24-5	TWA: 10 mg/m ³ inhalable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Sodium tetraborate pentahydrate 12179-04-3	STEL: 6 mg/m ³ inhalable particulate matter TWA: 2 mg/m ³ inhalable particulate matter	(vacated) TWA: 10 mg/m ³	TWA: 1 mg/m ³
Manganese Oxide 1344-43-0	TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	(vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 500 mg/m ³ Mn TWA: 1 mg/m ³ Mn STEL: 3 mg/m ³ Mn

Manganese Sulfate Monohydrate 10034-96-5	TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	(vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 500 mg/m ³ Mn TWA: 1 mg/m ³ Mn STEL: 3 mg/m ³ Mn
Paraffin Emulsion 8002-74-2	TWA: 2 mg/m ³ fume	(vacated) TWA: 2 mg/m ³	TWA: 2 mg/m ³ fume
Silica, Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ TWA: 50 µg/m ³ excludes construction work, agricultural operations, and exposures that result from the processing of sorptive clays (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(100 + 5) mppcf TWA respirable fraction : (10)/(100 + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
Limestone 1317-65-3	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Silica, cristobalite 14464-46-1	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ TWA: 50 µg/m ³ excludes construction work, agricultural operations, and exposures that result from the processing of sorptive clays (vacated) TWA: 0.05 mg/m ³ respirable dust : (1/2)(250)/(100 + 5) mppcf TWA respirable fraction : (1/2)(10)/(100 + 2) mg/m ³ TWA respirable fraction	IDLH: 25 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust

Appropriate engineering controls

Engineering Controls

Apply technical measures to comply with the occupational exposure limits. Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Wear eye/face protection. Refer to 29 CFR 1910.133 for eye and face protection regulations.

Skin and Body Protection

Wear protective gloves and protective clothing. Refer to 29 CFR 1910.138 for appropriate skin and body protection.

Respiratory Protection

Refer to 29 CFR 1910.134 for respiratory protection requirements.

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
Appearance
Color

Solid
Black coarse granule
Black

Odor
Odor Threshold

None
Not determined

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not determined	
Melting point / freezing point	Not determined	
Boiling point / boiling range	Not determined	
Flash point	Not determined	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Not determined	
Flammability Limit in Air		
Upper flammability or explosive limits	Not determined	
Lower flammability or explosive limits	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Relative Density	Not determined	
Water Solubility	Not determined	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Autoignition temperature	Not determined	
Decomposition temperature	Not determined	
Kinematic viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	
 <u>Other information</u>		
Bulk density	7.5 lb/gal	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to Avoid

Keep out of reach of children.

Incompatible materials

None known based on information supplied.

Hazardous decomposition products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Causes serious eye damage.
Skin Contact	May be harmful in contact with skin.
Inhalation	Do not inhale.
Ingestion	May be harmful if swallowed.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ammonium Sulfate 7783-20-2	= 2840 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Sodium tetraborate pentahydrate 12179-04-3	= 2403 mg/kg (Rat)	-	-
Paraffin Emulsion 8002-74-2	> 5000 mg/kg (Rat)	> 3600 mg/kg (Rabbit)	-

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity Crystalline Silica is considered to be a human carcinogen when in respirable form (dust / powder).

Chemical name	ACGIH	IARC	NTP	OSHA
Silica, Quartz*** 14808-60-7	A2	Group 1	Known	X
Silica, cristobalite*** 14464-46-1	A2	Group 1	Known	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

. Respirable crystalline silica causes damage to organs (lung effects, immune system effects, and kidney effects) through prolonged or repeated exposure.

Numerical measures of toxicity

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

Oral LD50 2,379.10 mg/kg

Dermal LD50 4,577.20 mg/kg

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Harmful to aquatic life with long lasting effects.

Component Information

Chemical name	Algae/aquatic plants	Fish	Crustacea
Ammonium Sulfate*** 7783-20-2		250: 96 h Brachydanio rerio mg/L LC50 32.2 - 41.9: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 18: 96 h Cyprinus carpio mg/L LC50 123 - 128: 96 h Poecilia reticulata mg/L LC50 semi- static 460 - 1000: 96 h Leuciscus idus mg/L LC50 static 420: 96 h Brachydanio rerio mg/L LC50 semi- static 480: 96 h Brachydanio rerio	14: 48 h Daphnia magna mg/L LC50 423: 24 h Daphnia magna mg/L EC50

		mg/L LC50 flow-through 126: 96 h Poecilia reticulata mg/L LC50 5.2 - 8.2: 96 h Oncorhynchus mykiss mg/L LC50 static 100: 96 h Pimephales promelas mg/L LC50	
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Persistence/Degradability

Not determined.

Bioaccumulation

There is no data for this product.

Mobility

Chemical name	Partition coefficient
Ammonium Sulfate*** 7783-20-2	-5.1

Other Adverse Effects

Not determined

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

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

Not regulated

IATA

Not regulated

IMDG

Not regulated

15. REGULATORY INFORMATION

International Inventories

Chemical name	TSCA	TSCA Inventory Status	DSL/NDSL	EINECS/ELI NCS	ENCS	IECSC	KECL	PICCS	AICS
Gypsum	X		X			X			
Humic Acid	X	ACTIVE	X	X		X	X	X	X
Water	X	ACTIVE	X	X	X	X	X	X	X
Ammonium Sulfate	X	ACTIVE	X	X	X	X	X	X	X
Sodium tetraborate pentahydrate	X				X	X		X	
Manganese Oxide	X	ACTIVE	X	X	X	X	X	X	X
Flue dust, automotive metal recovery	X	ACTIVE	X						
Manganese Sulfate Monohydrate					X	X		X	X
Calcium Sulfate Anhydrite						X			
Paraffin Emulsion	X	ACTIVE	X	X	X	X	X	X	X

Silica, Quartz	X	ACTIVE	X	X	X	X	X	X	X
Limestone	X	ACTIVE	X	X	X	X	X	X	X
Silica, cristobalite	X	ACTIVE	X	X	X	X	X	X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	CAS No	Weight-%	SARA 313 - Threshold Values %
Ammonium Sulfate*** - 7783-20-2	7783-20-2	5-10	1.0
Manganese Oxide*** - 1344-43-0	1344-43-0	1-5	1.0
Manganese Sulfate Monohydrate*** - 10034-96-5	10034-96-5	1-5	1.0

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals.

Chemical name	California Proposition 65
Silica, Quartz - 14808-60-7	Carcinogen
Silica, cristobalite - 14464-46-1	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Gypsum 13397-24-5	X		X
Sodium tetraborate pentahydrate 12179-04-3	X	X	
Manganese Oxide 1344-43-0	X		X
Manganese Sulfate Monohydrate 10034-96-5	X		X
Paraffin Emulsion 8002-74-2	X	X	X
Silica, Quartz 14808-60-7	X	X	X
Limestone 1317-65-3	X	X	X
Silica, cristobalite 14464-46-1	X	X	X

16. OTHER INFORMATION**NFPA****Health Hazards**

Not determined

Flammability

Not determined

Instability

Not determined

Special Hazards

Not determined

HMIS**Health Hazards**

Not determined

Flammability

Not determined

Physical hazards

Not determined

Personal Protection

Not determined

Issue Date:

03-Jul-2017

Revision Date:

03-Dec-2020

Revision Note:

Reformulation

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