# **Safety Data Sheet**

**Issue Date**: 30-Jul-2020 **Revision Date**: 30-Jul-2020 **Version** 1

# 1. IDENTIFICATION

Product identifier

Product Name MicroSync Fusion

Other means of identification

**SDS #** VLS-312

FFN 5101

Recommended use of the chemical and restrictions on use

**Recommended Use** For industrial use.

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 Wax coated granules

Physical state Solid

#### Classification

Pellets / Granulars are waxed coated. This coating reduces the risk of occupational exposures to skin, eye and respiratory tract.

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2

# Signal Word Warning

## **Hazard statements**

Harmful if swallowed Harmful in contact with skin Causes skin irritation Causes serious eye irritation



#### **Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product

Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response** 

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

IF ON SKIN: Wash with plenty of water and soap

Take off contaminated clothing and wash before reuse If skin irritation occurs: Get medical advice/attention

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

#### **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

#### Other hazards

Very toxic to aquatic life with long lasting effects

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Gypsum	13397-24-5	25-30
Proprietary	Proprietary	Proprietary
Ammonium Sulfate	7783-20-2	5-10
Manganese Sulfate Monohydrate	10034-96-5	5-10
Sodium tetraborate pentahydrate	12179-04-3	5-10
Ferrous sulfate, monohydrate	7720-78-7	1-5
Proprietary	Proprietary	Proprietary
Proprietary	Proprietary	Proprietary
Zinc	7440-66-6	1-5
Proprietary	Proprietary	Proprietary
Zinc sulfate	7733-02-0	0.1-1

<sup>\*\*</sup>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**

**Eye Contact** Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Skin Contact** Wash with plenty of soap and water. Take off contaminated clothing and wash it before

reuse. If skin irritation occurs: Get medical advice/attention.

Inhalation Remove to fresh air.

Ingestion Call a poison center or doctor/physician if you feel unwell. Rinse mouth.

#### Most important symptoms and effects, both acute and delayed

**Symptoms** Harmful if swallowed. Harmful in contact with skin. Causes skin irritation. Causes serious

eye irritation.

#### Indication of any immediate medical attention and special treatment needed

**Notes to Physician** Treat symptomatically.

# 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 Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or

smoke when using this product. Wear protective gloves/protective clothing and eye/face

protection.

# 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/m³ inhalable particulate matter	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust
Proprietary	TWA: 1 mg/m³ respirable particulate matter	-	-

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Manganese Sulfate Monohydrate 10034-96-5	TWA: 0.02 mg/m³ Mn respirable particulate matter TWA: 0.1 mg/m³ Mn inhalable particulate matter	(vacated) Ceiling: 5 mg/m³ Ceiling: 5 mg/m³ Mn	IDLH: 500 mg/m³ Mn TWA: 1 mg/m³ Mn STEL: 3 mg/m³ Mn
Sodium tetraborate pentahydrate 12179-04-3	STEL: 6 mg/m³ inhalable particulate matter TWA: 2 mg/m³ inhalable particulate matter	(vacated) TWA: 10 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>
Ferrous sulfate, monohydrate 7720-78-7	TWA: 1 mg/m³ Fe	(vacated) TWA: 1 mg/m³ Fe	TWA: 1 mg/m³ Fe
Proprietary	TWA: 0.02 mg/m³ Mn respirable particulate matter TWA: 0.1 mg/m³ Mn inhalable particulate matter	(vacated) Ceiling: 5 mg/m³ Ceiling: 5 mg/m³ Mn	IDLH: 500 mg/m³ Mn TWA: 1 mg/m³ Mn STEL: 3 mg/m³ Mn
Proprietary	STEL: 2 mg/m³ fume TWA: 1 mg/m³ fume	TWA: 1 mg/m³ fume (vacated) TWA: 1 mg/m³ fume (vacated) STEL: 2 mg/m³ fume	IDLH: 50 mg/m³ fume TWA: 1 mg/m³ fume STEL: 2 mg/m³ fume
Proprietary	TWA: 2 mg/m³ fume	(vacated) TWA: 2 mg/m³	TWA: 2 mg/m³ fume
Proprietary	TWA: 5 mg/m³ inhalable particulate matter, particulate matter containing no asbestos and <1% crystalline silica	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 10 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust
Proprietary	Ceiling: 2 mg/m <sup>3</sup>	(vacated) Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m³
Proprietary	-	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust
Proprietary	-	15 mg / m3 (Total)	-

#### **Appropriate engineering controls**

**Engineering Controls** Apply technical measures to comply with the occupational exposure limits.

# Individual protection measures, such as personal protective equipment

**Eye/Face Protection** Refer to 29 CFR 1910.133 for eye and face protection regulations.

**Skin and Body Protection** 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 Solid

AppearanceWax coated granulesOdorNot determinedColorNot determinedOdor ThresholdNot 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 Not determined

limits

Lower flammability or explosive Not determined

limits **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

## 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** Avoid contact with eyes.

**Skin Contact** Harmful in contact with skin.

Inhalation Do not inhale.

Ingestion Harmful if swallowed.

#### **Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Proprietary	> 5000 mg/kg (Rat)	-	-
Ammonium Sulfate 7783-20-2	= 2840 mg/kg ( Rat )	> 2000 mg/kg(Rat)	-
Sodium tetraborate pentahydrate 12179-04-3	= 2403 mg/kg ( Rat )	-	-
Ferrous sulfate, monohydrate 7720-78-7	= 319 mg/kg ( Rat )	= 155 mg/kg(Rat)	-
Proprietary	= 9000 mg/kg ( Rat )	-	> 1500 mg/m³(Rat)4 h
Zinc 7440-66-6	> 8,437 mg/kg (rat)	-	-
Proprietary	= 1100 mg/kg (Rat)	-	<= 1975 mg/m³(Rat)10 min
Proprietary	> 5000 mg/kg (Rat)	> 3600 mg/kg(Rabbit)	-
Proprietary	= 307000 mg/kg ( Rat )	-	-
Proprietary	= 284 mg/kg (Rat)	-	-
Proprietary	> 10000 mg/kg(Rat)	-	-
Proprietary	= 3000 mg/kg (Rat) = 3 g/kg (Rat )	> 2000 mg/kg(Rat)	-
Zinc sulfate 7733-02-0	= 1710 mg/kg ( Rat )	-	-

#### 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

**Skin corrosion/irritation** Causes skin irritation.

Serious eye damage/eye

irritation

Causes serious eye irritation.

Carcinogenicity Based on the information provided, this product does not contain any carcinogens or

potential carcinogens as listed by OSHA, IARC or NTP.

Reproductive toxicity Sodium Borate: Sodium borate and boric acid interfere with sperm production, damage the

testes and interfere with male fertility when given to animals by mouth at high doses. Boric acid produces developmental effects, including reduced body weight, malformations and

death, in the offspring of pregnant animals given boric acid by mouth.

The above-mentioned animal studies were conducted under exposure conditions leading to doses many times in excess of those that could occur through product use or inhalation of dust in occupational settings. Moreover, a human study of occupational exposure to sodium

borate and boric acid dusts showed no adverse effect on fertility.

### **Numerical measures of toxicity**

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

 Oral LD50
 1,412.10 mg/kg

 Dermal LD50
 1,052.63 mg/kg

## 12. ECOLOGICAL INFORMATION

#### **Ecotoxicity**

Very toxic to aquatic life with long lasting effects.

**Component Information** 

Chemical name	Algae/aquatic plants	Fish	Crustacea
Proprietary		19000: 96 h Oncorhynchus mykiss	
		mg/L LC50 static 8.0 - 19.0: 96 h	
Ammonium Sulfate		Salmo gairdneri g/L LC50 250: 96 h Brachydanio rerio mg/L	14: 48 h Daphnia magna mg/L LC50
7783-20-2		LC50 32.2 - 41.9: 96 h	423: 24 h Daphnia magna mg/L
		Oncorhynchus mykiss mg/L LC50	EC50
		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	
		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	
Ferrous sulfate, monohydrate		Pimephales promelas mg/L LC50 925: 96 h Poecilia reticulata mg/L	152: 48 h Daphnia magna mg/L
7720-78-7		LC50 static 0.56: 96 h Cyprinus	EC50 6.15 - 9.26: 48 h Daphnia
1120101		carpio mg/L LC50 semi-static	magna mg/L EC50 Static
Zinc	0.11 - 0.271: 96 h	30: 96 h Cyprinus carpio mg/L LC50	
7440-66-6	Pseudokirchneriella subcapitata	0.24: 96 h Oncorhynchus mykiss	mg/L EC50 Static
	mg/L EC50 static 0.09 - 0.125: 72 h	mg/L LC50 flow-through 2.66: 96 h	
	Pseudokirchneriella subcapitata	Pimephales promelas mg/L LC50	
	mg/L EC50 static	static 3.5: 96 h Lepomis macrochirus mg/L LC50 static 0.59:	
		96 h Oncorhynchus mykiss mg/L	
		LC50 semi-static 0.45: 96 h	
		Cyprinus carpio mg/L LC50 semi-	
		static 2.16 - 3.05: 96 h Pimephales	
		promelas mg/L LC50 flow-through	
		0.41: 96 h Oncorhynchus mykiss mg/L LC50 static 7.8: 96 h Cyprinus	
		carpio mg/L LC50 static 0.211 -	
		0.269: 96 h Pimephales promelas	
		mg/L LC50 semi-static	
Proprietary		80: 96 h Gambusia affinis mg/L	
		LC50 static	100 70   D
Proprietary		1516: 96 h Lepomis macrochirus	120: 72 h Daphnia magna mg/L EC50
Zinc sulfate	64.8: 72 h Chlorella vulgaris mg/L	mg/L LC50 0.34 - 0.93: 96 h Oncorhynchus	0.75: 48 h Daphnia magna mg/L
7733-02-0	EC50 2.4: 96 h Chlorella vulgaris	mykiss mg/L LC50 static 3 - 4.6: 96	EC50 0.538 - 0.908: 48 h Daphnia
	mg/L EC50 0.056: 72 h	h Lepomis macrochirus mg/L LC50	magna mg/L EC50 Static
	Pseudokirchneriella subcapitata	flow-through 0.48 - 1.72: 96 h	
	mg/L EC50 static	Poecilia reticulata mg/L LC50 static	
		0.03 - 0.05: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 0.218	
		- 0.42: 96 h Pimephales promelas	
		mg/L LC50 flow-through 0.63: 96 h	
		Poecilia reticulata mg/L LC50 0.168	
		- 0.25: 96 h Pimephales promelas	
		mg/L LC50 semi-static 0.23 - 0.48:	
		96 h Pimephales promelas mg/L LC50 0.162: 96 h Oncorhynchus	
		mykiss mg/L LC50 flow-through	
		0.15: 96 h Cyprinus carpio mg/L	
		LC50 semi-static 16.85 - 27.18: 96 h	
		Cyprinus carpio mg/L LC50 static	
		0.06: 96 h Pimephales promelas	
		mg/L LC50 static 3.55 - 6.32: 96 h	
		Lepomis macrochirus mg/L LC50 static 49.23 - 64.16: 96 h Poecilia	
		reticulata mg/L LC50 semi-static	

Persistence/Degradability
Not determined.

# **Bioaccumulation**

There is no data for this product.

#### **Mobility**

Chemical name	Partition coefficient
Ammonium Sulfate 7783-20-2	-5.1
Proprietary	<0

#### **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.

#### California Hazardous Waste Status

Chemical name	California Hazardous Waste Status
Proprietary	Toxic
	Corrosive
Zinc	Ignitable powder Toxic
7440-66-6	
Zinc sulfate	Toxic
7733-02-0	

# 14. TRANSPORT INFORMATION

Please see current shipping paper for most up to date shipping information, including **Note** 

exemptions and special circumstances.

DOT Not regulated

IATA Not regulated

**IMDG** 

Marine Pollutant This material may meet the definition of a marine pollutant

# 15. REGULATORY INFORMATION

#### **International Inventories**

Chemical name	TSCA	TSCA Inventory Status	DSL/NDSL	EINECS/ELI NCS	ENCS	IECSC	KECL	PICCS	AICS
Gypsum	Х		Х			Х			
Proprietary	Х	ACTIVE	Х	Х		Х	Х	Х	Х
Ammonium Sulfate	Х	ACTIVE	Х	X	X	Х	Х	Х	Х
Manganese Sulfate Monohydrate					Х	Х		Х	Х
Chemical name	TSCA	TSCA Inventory Status	DSL/NDSL	EINECS/ELI NCS	ENCS	IECSC	KECL	PICCS	AICS
Sodium tetraborate pentahydrate	Х				Х	Х		Х	
Ferrous sulfate,	Х	ACTIVE	Х	Х	Х	Х	Х	Х	Х

monohydrate									
Proprietary	Х	ACTIVE	Х	Х	Х	X	Х	Х	Х
Ulexite									Х
Proprietary						Х			
Zinc	Х	ACTIVE	Х	Х	Х	Х	Х	Х	Х
Proprietary	Х	ACTIVE	X	X	Х	X	Х	Х	Х
Proprietary	Х	ACTIVE	X	X	X	X	Х	Х	Х
Proprietary	Х	ACTIVE	X	X	X	X	Х	Х	Х
Proprietary	Х	ACTIVE	Х	Х	Х	Х	Х	Х	Х
Proprietary	Х	ACTIVE	X	X	Х	X	Х	Х	Х
Proprietary	Х	ACTIVE	X	X	X	X	Х	Х	Х
Proprietary	Х	ACTIVE	Х	Х	Х	Х	Х	Х	Х
Zinc sulfate	Х	ACTIVE	Х	Х	Х	X	Х	Х	Х

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**

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ferrous sulfate, monohydrate	1000 lb		RQ 1000 lb final RQ
7720-78-7			RQ 454 kg final RQ
Zinc	1000 lb		RQ 454 kg final RQ
7440-66-6			RQ 1000 lb final RQ
Proprietary	1000 lb		RQ 1000 lb final RQ
			RQ 454 kg final RQ
Proprietary	1000 lb		RQ 1000 lb final RQ
			RQ 454 kg final RQ
Zinc sulfate	1000 lb		RQ 1000 lb final RQ
7733-02-0			RQ 454 kg final RQ

## **SARA 313**

Chemical name	CAS No	Weight-%	SARA 313 - Threshold Values %
Ammonium Sulfate - 7783-20-2	7783-20-2	5-10	1.0
Manganese Sulfate Monohydrate - 10034-96-5	10034-96-5	5-10	1.0
Proprietary -		Proprietary	1.0
Zinc - 7440-66-6	7440-66-6	1-5	1.0
Proprietary -		Proprietary	1.0
Proprietary -		Proprietary	1.0
Zinc sulfate - 7733-02-0	7733-02-0	0.1-1	1.0

## **CWA (Clean Water Act)**

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ferrous sulfate, monohydrate	1000 lb			Χ
Proprietary	1000 lb	X		Х
Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Zinc		X	X	
Zinc sulfate	1000 lb	X		X

VLS-312 - MicroSync Fusion Revision Date: 30-Jul-2020

#### **US State Regulations**

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

#### **U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Gypsum 13397-24-5	Х		Х
Manganese Sulfate Monohydrate 10034-96-5	Х		Х
Sodium tetraborate pentahydrate 12179-04-3	Х	X	
Ferrous sulfate, monohydrate 7720-78-7	Х	X	Х
Proprietary	Х		Х
Zinc 7440-66-6	Х	Х	Х
Proprietary	Х	Х	Х
Proprietary	Х	Х	Х
Proprietary	Х	Х	Х
Proprietary	X	Х	Х
Proprietary	X	Х	X
Zinc sulfate 7733-02-0	X	X	Х

# **16. OTHER INFORMATION**

NFPA **Health Hazards Flammability** Instability **Special Hazards** Not determined Not determined Not determined Not determined **Health Hazards Flammability** Physical hazards **Personal Protection HMIS** Not determined Not determined Not determined Not determined

Issue Date:30-Jul-2020Revision Date:30-Jul-2020Revision Note:New format

#### <u>Disclaimer</u>

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**