

# Safety Data Sheet

Issue Date: 09-Jun-2014

Revision Date: 03-Aug-2018

Version 3

## 1. IDENTIFICATION

### Product Identifier

**Product Name** Multi-Com Granular Plus 2

### Other means of identification

**SDS #** VLS-025R1

**Other Information** Factory Formula: 01198.

### Recommended use of the chemical and restrictions on use

**Recommended Use** Plant Nutrients.

### 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 (24 hr)** INFOTRAC 1-352-323-3500 (International)  
1-800-535-5053 (North America)

## 2. HAZARDS IDENTIFICATION

**Appearance** Granular

**Physical state** Solid Dry material

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

### Signal Word

**Danger**

### Hazard statements

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



**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  
 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  
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 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-%
Proprietary ingredient	Proprietary	20-30
Zinc sulfate	7446-19-7	10-20
Manganese Sulfate Monohydrate	10034-96-5	1-10
Inorganic Borate	12280-03-4	1-10
Ammonium Sulfate	7783-20-2	1-10
Copper sulfate pentahydrate	7758-99-8	1-10
Silica, Quartz	14808-60-7	1-5
Citric Acid	77-92-9	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**

**First Aid Measures**

- General Advice** Provide this SDS to medical personnel for treatment.
- Eye Contact** Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Seek immediate medical attention/advice.
- Skin Contact** Wash off immediately with plenty of water for at least 15 minutes.
- Inhalation** Remove to fresh air. If breathing becomes difficult, call a physician.
- Ingestion** Drink large volumes of milk or water. Induce vomiting only if advised by medical personnel. Call a physician or poison control center immediately.

**Most important symptoms and effects**

- Symptoms** Direct contact may cause skin or eye irritation. Inhalation may aggravate respiratory problems.

**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

None.

**Hazardous Combustion Products** May release toxic oxides of Zinc and Sulfur in a fire.

### 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** Avoid creating dust. Sweep up and shovel into suitable containers for disposal. Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations. For waste disposal, see section 13 of the SDS.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on Safe Handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep container tightly closed and store in a cool, dry and well-ventilated place. Protect from direct sunlight. Keep out of the reach of children.

**Incompatible Materials** Strong oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Trade Secret	TWA: 1 mg/m <sup>3</sup> respirable particulate matter	-	-

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Manganese Sulfate Monohydrate 10034-96-5	TWA: 0.02 mg/m <sup>3</sup> Mn respirable particulate matter TWA: 0.1 mg/m <sup>3</sup> Mn inhalable particulate matter	(vacated) Ceiling: 5 mg/m <sup>3</sup> Ceiling: 5 mg/m <sup>3</sup> Mn	IDLH: 500 mg/m <sup>3</sup> Mn TWA: 1 mg/m <sup>3</sup> Mn STEL: 3 mg/m <sup>3</sup> Mn
Inorganic Borate 12280-03-4	STEL: 6 mg/m <sup>3</sup> inhalable particulate matter TWA: 2 mg/m <sup>3</sup> inhalable particulate matter	-	-
Copper sulfate pentahydrate 7758-99-8	TWA: 1 mg/m <sup>3</sup> Cu dust and mist	TWA: 1 mg/m <sup>3</sup> Cu dust and mist	IDLH: 100 mg/m <sup>3</sup> Cu dust and mist TWA: 1 mg/m <sup>3</sup> Cu dust and mist
Silica, Quartz 14808-60-7	TWA: 0.025 mg/m <sup>3</sup> respirable particulate matter	TWA: 50 µg/m <sup>3</sup> TWA: 50 µg/m <sup>3</sup> excludes construction work, agricultural operations, and exposures that result from the processing of sorptive clays (vacated) TWA: 0.1 mg/m <sup>3</sup> respirable dust : (250)/(%SiO <sub>2</sub> + 5) mppcf TWA respirable fraction : (10)/(%SiO <sub>2</sub> + 2) mg/m <sup>3</sup> TWA respirable fraction	IDLH: 50 mg/m <sup>3</sup> respirable dust TWA: 0.05 mg/m <sup>3</sup> respirable dust
Citric Acid 77-92-9	-	15 mg / m <sup>3</sup> (Total)	-

**Appropriate engineering controls**

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

**Individual protection measures, such as personal protective equipment**

- Eye/Face Protection** Safety goggles.
- Skin and Body Protection** Refer to 29 CFR 1910.138 for appropriate skin and body protection.
- Respiratory Protection** In case of inadequate ventilation wear respiratory protection. Wear an appropriate NIOSH/MSHA approved respirator if ventilation is inadequate.

**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**

<b>Physical state</b>	Solid Dry material	<b>Odor</b>	Not determined
<b>Appearance</b>	Granular	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Not determined		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not applicable	
Melting point / freezing point	Not applicable	
Boiling Point / Boiling Range	Not applicable	
Flash Point	Not applicable	
Evaporation Rate	Not applicable	
Flammability (Solid, Gas)	Not determined	
Flammability Limit in Air		
Upper Flammability Limit	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not known	
Vapor Density	Not known	
Relative Density	Not determined	

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Water Solubility</b>	Not determined	
<b>Solubility in other solvents</b>	Not determined	
<b>Partition Coefficient</b>	Not determined	
<b>Autoignition temperature</b>	Not determined	
<b>Decomposition Temperature</b>	Not determined	
<b>Kinematic Viscosity</b>	Not determined	
<b>Dynamic Viscosity</b>	Not determined	
<b>Explosive Properties</b>	Not determined	
<b>Oxidizing Properties</b>	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

Strong oxidizing agents.

### Hazardous Decomposition Products

May release toxic oxides of Zinc and Sulfur in a fire.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Eye Contact</b>	Causes serious eye damage.
<b>Skin Contact</b>	Avoid contact with skin.
<b>Inhalation</b>	Avoid inhalation of dust.
<b>Ingestion</b>	Harmful if swallowed.

### Component Information

<b>Chemical Name</b>	<b>Oral LD50</b>	<b>Dermal LD50</b>	<b>Inhalation LC50</b>
Trade Secret	> 5000 mg/kg ( Rat )	-	-
Sodium Lignosulfonate 8061-51-6	> 40 g/kg ( Rat )	-	-
Inorganic Borate 12280-03-4	= 2500 mg/kg ( Rat )	-	-
Ammonium Sulfate 7783-20-2	= 2840 mg/kg ( Rat )	> 2000 mg/kg ( Rat )	-
Copper sulfate pentahydrate 7758-99-8	= 472 mg/kg ( Rat )	> 2 g/kg ( Rat ) > 8 g/kg ( Rabbit )	> 2.95 mg/L (Rat)
Citric Acid 77-92-9	= 3000 mg/kg ( Rat ) = 3 g/kg ( Rat )	-	-

**Information on physical, chemical and toxicological effects**

**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** Silica (quartz) is a possible carcinogen when it appears as a respirable dust. Pellets / Granulars are waxed coated. This coating reduces the risk of occupational exposures to skin, eye and respiratory tract.

Chemical Name	ACGIH	IARC	NTP	OSHA
Silica, Quartz 14808-60-7	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.

**Numerical measures of toxicity**

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

- ATEmix (oral)** 1,004.00 mg/kg
- ATEmix (dermal)** 22,950.00 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 ingredient		19000: 96 h Oncorhynchus mykiss mg/L LC50 static 8.0 - 19.0: 96 h Salmo gairdneri g/L LC50	
Sodium Lignosulfonate 8061-51-6		7300: 48 h Oncorhynchus mykiss mg/L LC50	
Ammonium Sulfate 7783-20-2		18: 96 h Cyprinus carpio mg/L LC50 123 - 128: 96 h Poecilia reticulata mg/L LC50 semi-static 480: 96 h Brachydanio rerio mg/L LC50 flow-through 250: 96 h Brachydanio rerio mg/L LC50 126: 96 h Poecilia reticulata mg/L LC50 32.2 - 41.9: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 420: 96 h Brachydanio rerio mg/L LC50 semi-static 460 - 1000: 96 h Leuciscus idus mg/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 5.2 - 8.2: 96 h Oncorhynchus mykiss mg/L LC50 static	423: 24 h Daphnia magna mg/L EC50 14: 48 h Daphnia magna mg/L LC50

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Copper sulfate pentahydrate 7758-99-8		0.09 - 0.19: 96 h Oncorhynchus mykiss mg/L LC50 static 0.96 - 1.8: 96 h Lepomis macrochirus mg/L LC50 static 0.6752: 96 h Pimephales promelas mg/L LC50 static 0.66 - 1.15: 96 h Lepomis macrochirus mg/L LC50 semi-static 0.1478 - 0.165: 96 h Oncorhynchus mykiss mg/L LC50 flow-through	0.147 - 0.227: 48 h Daphnia magna mg/L EC50 Static
Citric Acid 77-92-9		1516: 96 h Lepomis macrochirus mg/L LC50 static	120: 72 h Daphnia magna mg/L EC50

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

Not determined.

**Mobility**

Chemical Name	Partition Coefficient
Ammonium Sulfate 7783-20-2	-5.1
Citric Acid 77-92-9	-1.72

**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
Zinc sulfate 7446-19-7	Toxic
Copper sulfate pentahydrate 7758-99-8	Toxic

**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**  
**Marine Pollutant** This product contains copper sulfate which is listed as a DOT Marine Pollutant (49 CFR 172.101, Appendix B)

## 15. REGULATORY INFORMATION

### International Inventories

Chemical Name	TSCA	DSL/NDSL	EINECS/E LINCS	ENCS	IECSC	KECL	PICCS	AICS
Trade Secret	X	X	X		X	X	X	X
Lignite Powder (Lenordite)	X	X	X		X	X		
Zinc sulfate	X	X			X		X	X
Manganese Sulfate Monohydrate				X	X		X	X
Sodium Lignosulfonate	X	X		X	X	X	X	X
Inorganic Borate	X				X		X	
Ammonium Sulfate	X	X	X	X	X	X	X	X
Copper sulfate pentahydrate	X				X		X	X
Silica, Quartz	X	X	X	X	X	X	X	X
Citric Acid	X	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

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Copper sulfate pentahydrate 7758-99-8	10 lbs	10 lbs	10 lbs

#### SARA 313

Chemical Name	CAS No.	Weight-%	SARA 313 - Threshold Values %
Zinc sulfate - 7446-19-7	7446-19-7	10-20	1.0
Manganese Sulfate Monohydrate - 10034-96-5	10034-96-5	1-10	1.0
Ammonium Sulfate - 7783-20-2	7783-20-2	1-10	1.0
Copper sulfate pentahydrate - 7758-99-8	7758-99-8	1-10	1.0

#### CWA (Clean Water Act)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Zinc sulfate		X		
Copper sulfate pentahydrate		X		

### 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



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

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Zinc sulfate 7446-19-7	X		X
Manganese Sulfate Monohydrate 10034-96-5	X		X
Inorganic Borate 12280-03-4	X		
Ammonium Sulfate 7783-20-2		X	X
Copper sulfate pentahydrate 7758-99-8	X		X
Silica, Quartz 14808-60-7	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:**

09-Jun-2014

**Revision Date:**

03-Aug-2018

**Revision Note:**

Regulatory update

**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**