Safety Data Sheet

Issue Date: 13-Oct-2014 Revision Date: 01-Jun-2022 Version 3

1. IDENTIFICATION

Product identifier

Product Name Take Off Sulfone

Other means of identification

SDS # VLS-057

FFN: 1120

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 2753

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 Tan Granules Physical state Solid

Classification

This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%	
Fe EDTA	15708-41-5	Proprietary	
Proprietary Ammonium Compounds	Proprietary	Proprietary	
Urea	57-13-6	Proprietary	
Proprietary Potassium Compounds	Proprietary	>10	
Dimethyl Sulfone	67-71-0	>10	
Organic Acid Salt	Proprietary	>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 Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If

eye irritation persists: Get medical advice/attention.

Skin Contact Wash off immediately with plenty of water. Take off contaminated clothing. Wash

contaminated clothing before reuse. If skin irritation persists, call a physician.

Inhalation Remove exposed individual(s) to fresh air for 20 minutes. Consult a physician/poison center

if individual's condition declines or if symptoms persist.

Ingestion Do NOT induce vomiting. Rinse mouth. Call a physician immediately.

Most important symptoms and effects, both acute and delayed

Symptoms May cause eye, skin and respiratory tract irritation. Will cause gastrointestinal tract irritation.

May be harmful if swallowed.

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

Product is not flammable.

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 Wear protective clothing as described in Section 8 of this safety data sheet. Ventilate area

of leak or spill.

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.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Wash thoroughly after handling. Use personal protection recommended in Section 8. Avoid

generation of dust. Do not breathe dust. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

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

Incompatible Materials Strong oxidizing agents. Strong acids. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Nuisance Dust	-	TWA: 15 mg/m ³ total dust	TWA: 10 mg/m ³ total dust
		TWA: 5 mg/m³ respirable fraction	TWA: 5 mg/m ³ respirable dust
		(vacated) TWA: 15 mg/m ³ total	
		dust	
		(vacated) TWA: 5 mg/m ³	
		respirable fraction	
Fe EDTA	TWA: 1 mg/m³ Fe	(vacated) TWA: 1 mg/m³ Fe	TWA: 1 mg/m ³ Fe
15708-41-5			-

Appropriate engineering controls

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

Individual protection measures, such as personal protective equipment

Wear eye/face protection. **Eye/Face Protection**

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

Tan Granules **Appearance** Odor Not determined Color **Odor Threshold** Not determined Tan

Property Values Remarks • Method

Hq 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) Liquid-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

Dynamic Viscosity

Not determined

Explosive Properties

Not determined

Oxidizing Properties

Not determined

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

Avoid generation of dust.

Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases.

Hazardous decomposition products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Direct contact with eyes may cause temporary irritation.

Skin Contact May cause temporary irritation on skin contact.

Inhalation Dusts of this product may cause irritation of the nose, throat, and respiratory tract.

Ingestion May cause discomfort if swallowed.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50		
Dimethyl sulfone 67-71-0	> 5 g/kg (Rat)	> 5 g/kg(Rabbit)	•		
Potassium Sulfate 7778-80-5	= 6600 mg/kg (Rat)	-	-		
Urea 57-13-6	= 8471 mg/kg (Rat)	•	•		
Fe EDTA 15708-41-5	> 5000 mg/kg (Rat) = 5 g/kg (Rat)	> 5000 mg/kg(Rat)	> 2.05 g/m³(Rat)4 h		

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

potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity

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

Oral LD50 4,653.80 mg/kg **Dermal LD50** 5,545.30 mg/kg mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information

Chemical name	Algae/aquatic plants	Fish	Crustacea
Potassium Sulfate 7778-80-5	2900: 72 h Desmodesmus subspicatus mg/L EC50	653: 96 h Lepomis macrochirus mg/L LC50 510 - 880: 96 h	890: 48 h Daphnia magna mg/L EC50
		Pimephales promelas mg/L LC50	
		static 3550: 96 h Lepomis macrochirus mg/L LC50 static	
Urea		16200 - 18300: 96 h Poecilia	10000: 24 h Daphnia magna Straus
57-13-6		reticulata mg/L LC50	mg/L EC50 3910: 48 h Daphnia
			magna mg/L EC50 Static

Persistence/Degradability

Not determined.

Bioaccumulation

There is no data for this product.

Mobility

Chemical name	Partition coefficient		
Urea	-1.59		
57-13-6			

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 The data provided in this section is for information only. Please apply the appropriate

regulations to properly classify your shipment for transportation.

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

Chemical name	TSCA	TSCA Inventory	DSL/NDSL	EINECS/ELI	ENCS	IECSC	KECL	PICCS	AICS
		Status		NCS					
Dimethyl sulfone	Х	ACTIVE	X	X	X	X		X	X
Potassium phosphite	Х	ACTIVE	Х		Х				Х
Diammonium phosphite	Х	ACTIVE	Х	Х			Х		
Potassium Sulfate	Х	ACTIVE	Х	Х	Х	Х	Х	Х	Х
Urea	Х	ACTIVE	Х	X	Х	X	Х	Х	Х
Fe EDTA	X	ACTIVE	Χ	X		Х	Χ	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

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 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

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 does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Not determined

16. OTHER INFORMATION

NFPAHealth HazardsFlammabilityInstabilitySpecial Hazards100Not determinedHMISHealth HazardsFlammabilityPhysical hazardsPersonal Protection

Issue Date: 13-Oct-2014 **Revision Date:** 01-Jun-2022

Revision Note: SDS sections updated

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