



**SAFETY DATA SHEET**  
**Take-Off ST**  
Date reviewed: 17/01/2017  
Revision No.: 2

## **Section 1: Identification of the substance/mixture and of the company/undertaking**

### **1.1: Product Identifier**

Trade name: Take-Off ST

### **1.2: Relevant identified uses of the substance or mixture and uses advised against**

Registered uses: For use only as a fertiliser.  
Uses advised against: None known.

### **1.3: Details of the supplier of the safety data sheet**

Company name: Verdesian Life Sciences LLC  
1001 Winstead Drive  
Cary  
NC-27513  
USA  
Telephone: +1 919 825 1901  
European contact name: Verdesian Life Sciences Europe Ltd  
Address: 7 Rotherbrook Court  
Bedford Road  
Petersfield GU32 3QG  
UK  
Telephone: +44 (0)1730 720100  
Homepage: [www.vlsci.com](http://www.vlsci.com)

### **1.4: Emergency telephone number**

Emergency telephone: +44 1235 239670

## **Section 2: Hazards Identification**

### **2.1 Classification of the substance or mixture**

This product has no classification under CLP.

### **2.2 Label Elements (In compliance with EC Regulation No. 1272/2008 (CLP), as amended)**

This product has no label elements.

### **2.3 Other hazards**

Further hazards were not determined with the current level of knowledge.

**Section 3: Composition/information on ingredients**

**Product type:** This product is a mixture.

CAS No.	EEC No.	Substance Name	Classification*	Range (%)
13446-12-3	236-594-5	Ammonium hydrogen phosphonate	Skin Irrit. 2: H315 Eye Irrit. 2: H319	< 5
13977-65-6	-	Monopotassium phosphonate	Eye Irrit. 2: H319	< 5
13933-52-3	237-707-0	Sodium hydrogen phosphonate	Skin Irrit. 2: H315 Eye Irrit. 2: H319	< 5

\*For full text of H statements see Section 16

**Section 4: First Aid Measures**

**4.1 Description of first aid measures**

**Inhalation:** Remove casualty from exposure ensuring one's own safety whilst doing so. Ensure supply of fresh air. Consult a doctor.

**Skin contact:** Remove all contaminated clothes and footwear immediately unless stuck to the skin. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Consult a doctor.

**Eye contact:** Remove contact lenses, if present and easy to do so. Bathe the eye with running water for 15 minutes. Consult a doctor.

**Ingestion:** Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Consult a doctor.

**4.2 Most important symptoms and effects, both acute and delayed**

**Inhalation:** There may be irritation of the throat with a feeling of tightness in the chest.

**Skin contact:** There may be irritation and redness at the site of contact.

**Eye contact:** There may be irritation and redness. The eyes may water profusely.

**Ingestion:** There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting.

**Delayed/immediate effects:** Immediate effects can be expected after short-term exposure.

**4.3 Indication of any immediate medical attention and treatment needed**

**Immediate/special treatment:** Not applicable. Treat symptomatically.

**Section 5: Firefighting Measures**

**5.1 Extinguishing media**

**Suitable:** Foam, dry powder, water spray jet, carbon dioxide.

**Unsuitable:** Full water jet.

### **5.2 Special hazards arising from the substance or mixture**

**Exposure hazards:** Risk of formation of toxic pyrolysis products: Carbon monoxide (CO), Phosphorous oxides (POx), Nitrogen oxides (NOx).

### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin or eyes. Fire residues and contaminated firefighting water must be disposed of in accordance with local regulations.

<b>Section 6: Accidental release measures</b>
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### **6.1 Personal precautions, protective equipment and emergency procedures**

**Personal precautions:** Refer to Section 8 of the SDS. If outside do not approach from downwind and keep bystanders away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent escape of liquid. High risk of slipping due to leakage/spillage of product. Use personal protective equipment.

### **6.2 Environmental Precautions**

**Environmental precautions:** Do not discharge into drains or rivers. Contain the spillage using bunding to prevent spread over a wide area.

### **6.3 Methods for cleaning up**

**Clean-up procedures:** Absorb into an absorbent material (e.g. sand, sawdust, universal absorbent, diatomaceous earth). Transfer to a closeable, labelled salvage container for disposal in accordance with local regulations.

### **6.4 Reference to other sections**

**Reference to other sections:** Refer to Section 8 of the SDS.

<b>Section 7: Handling and Storage</b>
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### **7.1 Precautions for safe handling**

**Handling:** The normal safety precautions for handling chemicals must be observed. Avoid direct contact with the substance. Use only in well ventilated areas. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Use skin barrier cream.

### **7.2 Conditions for safe storage, including any incompatibilities**

**Storage conditions:** Store in cool, dry, well ventilated area. Keep container tightly closed. Do not store together with animal feed/diet. Protect from frost. The floor of the storage area must be impermeable to prevent the escape of liquids.

**Suitable packaging:** Must only be kept in original packaging.

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**7.3 Specific end use(s)**

**Specific end use:** See product use, Section 1.2.

**Section 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Workplace exposure limits:** Contains < 1 % Glycerol (CAS: 56-81-5).  
Glycerol (mist) has a long term exposure limit of 10 mg/m<sup>3</sup> in the UK.

**DNEL/PNEC:** No data available.

**8.2 Exposure controls**

**Engineering measures:** Ensure there is sufficient ventilation of the area.

**Environmental:** Comply with applicable environmental regulations limiting discharge to air, water and soil. Prevent from entering public sewers.

**Hand protection:** Use impermeable gloves.

**Eye protection:** Safety glasses. Ensure eye bath is to hand.

**Skin protection:** Impermeable protective clothing.

**Respiratory protection:** Use self-contained breathing apparatus in the event of aerosol or mist formation.

**Thermal hazards:** Not applicable.

**Section 9: Physical and Chemical Properties**

**9.1 Information on basic physical and chemical properties**

<b>Form/state</b>	Solution	<b>Explosion limit</b>	No data available
<b>Colour</b>	Red	<b>Vapour pressure</b>	No data available
<b>Odour</b>	Faint	<b>Vapour density</b>	No data available
<b>Odour threshold</b>	No data available	<b>Relative density</b>	1.05 g/ml
<b>pH</b>	6.3	<b>Solubility in water</b>	Miscible
<b>Melting point</b>	No data available	<b>Part. Coeff. N-octanol/water</b>	No data available
<b>Freezing point</b>	No data available	<b>Auto-ignition temperature</b>	No data available
<b>Initial boiling point</b>	>110°C	<b>Decomposition temperature</b>	No data available
<b>Boiling range</b>	No data available	<b>Viscosity</b>	No data available
<b>Flash point</b>	No data available	<b>Explosive properties</b>	No data available
<b>Evaporation rate</b>	No data available	<b>Oxidizing properties</b>	No data available
<b>Flammability</b>	No data available		

**9.2 Other information**

**Other information:** No data available.

**Section 10: Stability and Reactivity**

**10.1 Reactivity**

**Reactivity:** No dangerous reactions known if used as directed.

### **10.2 Chemical stability**

**Chemical stability:** Stable under normal ambient conditions.

### **10.3 Possibility of hazardous reactions**

**Hazardous reactions:** Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on reaction with strong oxidising agents, strong acids and alkalines.

### **10.4 Conditions to avoid**

**Conditions to avoid:** Strong heating.

### **10.5 Incompatible materials**

**Materials to avoid:** Strong oxidising agents, strong acids and alkalines.

### **10.6 Hazardous decomposition products**

**Decomp. Products:** In the event of fire, see Section 5.

## **Section 11: Toxicological Information**

### **11.1 Acute toxicity**

Acute Toxicity	Oral LD <sub>50</sub> >2000 mg/kg
Eye damage/irritation:	Not damaging/Not irritant
Skin corrosion/irritation:	Not corrosive/Not irritant
Respiratory or Skin sensitisation:	Not sensitizing
STOT (single exposure):	Not determined
STOT (repeated):	Not determined
Germ cell mutagenicity:	Not determined
Carcinogenicity:	Not determined
Reproductive and lactation toxicity:	Not determined
Aspiration hazard:	Not determined

### **General remarks**

May cause respiratory tract irritation.

The product was classified on the basis of calculation procedure of the CLP Regulation. Toxicological data of complete product are not available.

## **Section 12: Ecological Information**

### **12.1 Toxicity**

#### **General remarks**

The product was classified on the basis of calculation procedure of the CLP Regulation. Ecological data of complete product are not available.

### **12.2 Persistence and degradability**

**Persistence/biodegradability:** No data available.

### **12.3 Bio accumulative potential**

**Bioaccumulative potential:** No data available.

### **12.4 Mobility in soil**

**Mobility:** No data available.

### **12.5 Results of PBT and vPvB assessment**

**PBT identification:** This product has not been evaluated for PBT/vPvB characteristics.

### **12.6 Other adverse effects**

Ecological data of complete product are not available. Based on the calculation procedure of the CLP Regulation no ecological classification is required.

## **Section 13: Disposal Considerations**

### **13.1 Waste treatment methods**

**Disposal procedure:** Transfer to a suitable container and arrange for collection by specialised disposal company.

**Recovery operations:** Not applicable.

**Disposal of packaging:** Dispose of as normal industrial waste at an approved site.

**N.B.:** The users attention is drawn to the possible existence of regional or national regulations regarding disposal.

## **Section 14: Transport Information**

### **14.1 UN Number**

**UN number:** See Section 14.2 in accordance with UN shipping name.

### **14.2 UN proper shipping name**

**Shipping name:** Not classified as "dangerous goods".

### **14.3 Transport hazard classes**

**Transport class:** See Section 14.2 in accordance with UN shipping name.

### **14.4 Packing group**

**Packing group:** See Section 14.2 in accordance with UN shipping name.

### **14.5 Environmental hazards**

**Environmentally hazardous:** See Section 14.2 in accordance with UN shipping name.

### **14.6 Special precautions for user**

**Special precautions:** No special precautions. See relevant information in Sections 6 to 8.

<b>Section 15: Regulatory Information</b>
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**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Specific regulations: Not applicable.

**15.2 Chemical Safety Assessment**

A chemical safety assessment has not been carried out for the substances in this mixture.

<b>Section 16: Other Information</b>
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Phrases in Sections 2-3:	H315 Causes skin irritation. H319 Causes serious eye irritation.
Other information:	This safety data sheet is prepared in accordance with Regulation (EC) No. 1907/2006 (REACH) and 1272/2008 (CLP) as amended in each case.
Abbreviations:	CLP: Classification, Labelling and Packaging. DNEL: Derived No Effect Level. LC50: Lethal concentration, 50%. LD50: Median lethal dose. PBT: Persistent, Bioaccumulative and Toxic substance. PNEC: Predicted No-Effect Concentration. REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals. VOC: Volatile Organic Compound. vPvB: Very Persistent and very Bioaccumulative.
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