

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

1.1: Product Identifier

Trade name: Phorce

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
Address: 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
Hampshire
GU32 3QG
United Kingdom
Telephone: +44 (0)1730 720 100
Homepage: www.vlsci.com

1.4: Emergency telephone number

Emergency telephone: +44 (0)1235 239670

Section 2: Hazards Identification

2.1 Classification of the substance or mixture

Classification under CLP: Skin Irritant 2: H315
Eye Irritant 2: H319

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

Hazard pictograms:



Signal word: Warning

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H-Statements

H315	Causes skin irritation.
H319	Causes serious eye irritation.

Precautionary-Statements

P261	Avoid breathing spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

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 (%)
13444-12-3	236-594-5	Ammonium hydrogen phosphonate	Skin Irrit. 2: H315 Eye Irrit. 2: H319	20-25
13977-65-6	-	Monopotassium phosphonate	Eye Irrit. 2: H319	20-25
51503-61-8	-	Diammonium hydrogen phosphite	Acute Tox. 4: H302 Skin Irrit. 2: H315 Eye Irrit. 2: H319 STOT SE 3: H335	5-10
3012-65-5	221-146-3	Diammonium hydrogen 2-hydroxypropane-1,2,3-tricarboxylate	Eye Irrit. 2: H319	1-5
3609-96-9	222-775-6	Dipotassium hydrogen citrate	Skin Irrit. 2: H315 Eye Irrit. 2: H319 STOT SE 3: H335	1-5

*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.

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- 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.

Section 6: Accidental release measures

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.

Section 7: Handling and Storage

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.

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 < 2 % Glycerol (CAS: 56-81-5).
Glycerol (mist) has a long term exposure limit of 10 mg/m³ 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

Form/state	Liquid	Explosion limit	No data available
Colour	Colourless/clear	Vapour pressure	No data available
Odour	Perceptible	Vapour density	No data available
Odour threshold	No data available	Relative density	1.45-1.47 g/ml
pH	6.2-6.8	Solubility in water	Miscible
Melting point	No data available	Part. Coeff. N-octanol/water	No data available
Freezing point	No data available	Auto-ignition temperature	No data available
Initial boiling point	No data available	Decomposition temperature	No data available
Boiling range	No data available	Viscosity	No data available
Flash point	No data available	Explosive properties	No data available
Evaporation rate	No data available	Oxidizing properties	No
Flammability	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: No hazardous reactions known.

10.4 Conditions to avoid

Conditions to avoid: Strong heating.

10.5 Incompatible materials

Materials to avoid: No information available.

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 ₅₀ >2000 mg/kg
Eye damage/irritation:	Irritant
Skin corrosion/irritation:	Irritant
Respiratory or Skin sensitisation:	Not determined

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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 is not identified as PBT or vPvB based on all available information.

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. Disposal in an incineration plant in accordance with the regulations of the local authorities.

Recovery operations: Not applicable.

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

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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.

Section 15: Regulatory Information

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.

Section 16: Other Information

Phrases in Sections 2-3:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory 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.
LD50:	Median lethal dose.
PBT:	Persistent, Bioaccumulative and Toxic substance.
PNEC:	Predicted No-Effect Concentration.

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REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals.

vPvB: Very Persistent and very Bioaccumulative.

Legal disclaimer:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The company shall not be held liable for any damage resulting from handling or from contact with the above product.