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

1.1. Product identifier
Product name VERTEX HI-N
Product number LQF012, LQF013, LQF014

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses Fertiliser for use on managed amenity turf

1.3. Details of the supplier of the safety data sheet
Supplier Headland Amenity Ltd
1 Burr Elm Court
Main Street
Caldecote
Cambridge
Cambridgeshire
CB23 7NU
Tel. +44 (0)1223 491090
sds.enquiries@headlandamenity.com

Contact person Wendy Johnson

1.4. Emergency telephone number
Emergency telephone +44 (0)1223 491090 (9.00 - 5.00 GMT Mon-Fri)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (EC 1272/2008)
Physical hazards Not Classified
Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2 - H319
Environmental hazards Not Classified

2.2. Label elements
Pictogram

Signal word Warning
Hazard statements H315 Causes skin irritation.
H319 Causes serious eye irritation.
## VERTEX HI-N

### Precautionary statements
- P264 Wash contaminated skin thoroughly after handling.
- P280 Wear protective gloves, protective clothing and eye protection.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.

### Supplementary precautionary statements
- P321 Specific treatment (see medical advice on this label).
- P362+P364 Take off contaminated clothing and wash it before reuse.

### 2.3. Other hazards
This product does not contain any substances classified as PBT or vPvB.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

<table>
<thead>
<tr>
<th>Substance</th>
<th>Percentage</th>
<th>CAS number</th>
<th>EC number</th>
<th>REACH registration number</th>
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<tbody>
<tr>
<td>AMMONIUM NITRATE</td>
<td>10-30%</td>
<td>6484-52-2</td>
<td>229-347-8</td>
<td>01-2119490981-27-XXXXXX</td>
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<td>Classification</td>
<td></td>
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<td></td>
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<tr>
<td>Ox. Sol. 3 - H272</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye Irrit. 2 - H319</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| MANGANESE DINITRATE        | 1-5%       | 10377-66-9 | 233-828-8 | 01-2119487993-17-XXXXXX   |
| Classification             |            |            |           |                           |
| Ox. Sol. 2 - H272          |            |            |           |                           |
| Acute Tox. 4 - H302        |            |            |           |                           |
| Skin Corr. 1B - H314       |            |            |           |                           |
| Eye Dam. 1 - H318          |            |            |           |                           |
| STOT RE 2 - H373           |            |            |           |                           |
| Aquatic Chronic 3 - H412   |            |            |           |                           |

| COPPER DINITRATE           | <1%        | 3251-23-8  | 221-838-5 |                           |
| Classification             |            |            |           |                           |
| Skin Corr. 1B - H314       |            |            |           |                           |
| Eye Dam. 1 - H318          |            |            |           |                           |
| Aquatic Acute 1 - H400     |            |            |           |                           |
| Aquatic Chronic 2 - H411   |            |            |           |                           |

The data shown are in accordance with the latest EC Directives.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

### SECTION 4: First aid measures
4.1. Description of first aid measures

Inhalation Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if symptoms are severe or persist.

Ingestion Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention if any symptoms develop.

Skin contact Remove affected person from source of contamination. Take off immediately all contaminated clothing and wash it before reuse. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.

Eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.

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.

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

Skin contact Skin contact may cause redness and irritation.

Eye contact Irritation and redness, followed by blurred vision. Profuse watering of the eyes. May cause permanent damage.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor No specific recommendations. If in doubt, get medical attention promptly.

Specific treatments Eye bathing equipment should be available on the premises.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media None known.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products Toxic gases or vapours. Oxides of nitrogen.

5.3. Advice for firefighters

Protective actions during firefighting No specific firefighting precautions known. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Avoid the spillage or runoff entering drains, sewers or watercourses. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up
VERTEX HI-N

Methods for cleaning up
Stop leak if safe to do so. Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4. Reference to other sections
For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Usage precautions
Provide adequate ventilation. Avoid spilling. Avoid contact with skin and eyes. Wash hands thoroughly after handling.
Advice on general occupational hygiene
Do not eat, drink or smoke when using this product. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities
Storage precautions
Store in tightly-closed, original container in a dry, cool and well-ventilated place. Protect from frost. Store at temperatures above 5°C. Keep away from heat. Protect from sunlight. Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)
Specific end use(s)
The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

8.2. Exposure controls
Protective equipment
Appropriate engineering controls
Provide adequate ventilation.
Eye/face protection
The following protection should be worn: Chemical splash goggles or face shield. Provide eyewash station.
Hand protection
Other skin and body protection
Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures
Do not smoke in work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. Do not eat, drink or smoke when using this product.
Respiratory protection
No specific recommendations. Respiratory protection may be required if excessive airborne contamination occurs.
Environmental exposure controls
Refer to specific Member State legislation for requirements under Community environmental legislation.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties
### VERTEX HI-N

**Appearance**  
Liquid.

**Colour**  
Blue.

**Odour**  
Almost odourless.

**Odour threshold**  
No information available.

**pH**  
$pH$ (concentrated solution): 3.0 - 5.0

**Melting point**  
No information available.

**Initial boiling point and range**  
No information available.

**Flash point**  
Mixture not classed as flammable

**Evaporation rate**  
No information available.

**Evaporation factor**  
No information available.

**Flammability (solid, gas)**  
Not applicable.

**Upper/lower flammability or explosive limits**  
Not applicable.

**Vapour pressure**  
No information available.

**Vapour density**  
No information available.

**Relative density**  
1.34 - 1.36

**Bulk density**  
No information available.

**Solubility(ies)**  
Soluble in water.

**Partition coefficient**  
No information available.

**Auto-ignition temperature**  
No information available.

**Decomposition Temperature**  
No information available.

**Viscosity**  
No information available.

**Explosive properties**  
Not considered to be explosive.

**Oxidising properties**  
Does not meet the criteria for classification as oxidising.

### 9.2. Other information

**Other information**  
No information required.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

**Reactivity**  
There are no known reactivity hazards associated with this product. Stable under recommended transport or storage conditions.

#### 10.2. Chemical stability

**Stability**  
Stable at normal ambient temperatures. Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions**  
Under normal conditions of storage and use, no hazardous reactions will occur.

#### 10.4. Conditions to avoid

**Conditions to avoid**  
Avoid heat.
10.5. Incompatible materials

**Materials to avoid**

- Strong acids.
- Strong oxidising agents.
- Strong reducing agents.

10.6. Hazardous decomposition products

**Hazardous decomposition products**

- In combustion emits toxic fumes.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**Toxicological effects**

- No information available.

**Acute toxicity - oral**

- Acute toxicity oral (LD₅₀ mg/kg)
  - 5,000.0

- **Species**
  - Rat

- **ATE oral (mg/kg)**
  - 5,000.0

**Inhalation**

- There may be irritation of the throat with a feeling of tightness in the chest.

**Ingestion**

- There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur.

**Skin contact**

- Skin contact may cause redness and irritation.

**Eye contact**

- There may be irritation and redness. Profuse watering of the eyes.

### SECTION 12: Ecological Information

#### 12.1. Toxicity

**Ecotoxicity**

- Not regarded as dangerous for the environment.

#### 12.2. Persistence and degradability

**Persistence and degradability**

- No information available.

#### 12.3. Bioaccumulative potential

**Bioaccumulative potential**

- No information available.

**Partition coefficient**

- No information available.

#### 12.4. Mobility in soil

**Mobility**

- No information available.

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

**Results of PBT and vPvB assessment**

- This product does not contain any substances classified as PBT or vPvB.

#### 12.6. Other adverse effects

**Other adverse effects**

- Not applicable.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

**Disposal methods**

- Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
SECTION 14: Transport information

General
The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number
Not applicable.

14.2. UN proper shipping name
Not applicable.

14.3. Transport hazard class(es)
No transport warning sign required.

14.4. Packing group
Not applicable.

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user
Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation

15.2. Chemical safety assessment
No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments
NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date
19/05/2016

Revision
3

Supersedes date
04/09/2015

Risk phrases in full
R34 Causes burns.
R36 Irritating to eyes.
R36/38 Irritating to eyes and skin.
R41 Risk of serious damage to eyes.
R50 Very toxic to aquatic organisms.
R8 Contact with combustible material may cause fire.
VERTEX HI-N

**Hazard statements in full**

- H272 May intensify fire; oxidiser.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.