SECTION 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY/UNDERTAKING.

1.1 Product identifier.

Product Name: Vitalroot
Product Code: 1116

1.2 Relevant identified uses of the mixture and uses advised against.

FERTILIZANTE

Uses advised against:
Uses other than those recommended.

1.3 Details of the supplier of the safety data sheet.

Company: LIDA PLANT RESEARCH
Address: Calle la Granja, 12
City: 46440 Almussafes
Province: Valencia
Telephone: 961767033
E-mail: info@lidaplantresearch.com
Web: www.lidaplantresearch.com

1.4 Emergency telephone number: (Only available during office hours; Monday-Friday; 08:00-18:00)

SECTION 2: HAZARDS IDENTIFICATION.

2.1 Classification of the mixture.
In accordance with Regulation (EU) No 1272/2008:
Aquatic Chronic 3 : Harmful to aquatic life with long lasting effects.

2.2 Label elements.

Labelling in accordance with Regulation (EU) No 1272/2008:
Pictograms:

H statements:
H412 Harmful to aquatic life with long lasting effects.

P statements:
P273 Avoid release to the environment.
P501 Dispose of contents/container to ... 

EUH statements:
Restricted to professional users.

2.3 Other hazards.
In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS.

-Continued on next page.-
3.1 Substances.
Not Applicable.

3.2 Mixtures.
Substances posing a danger to health or the environment in accordance with the Regulation (EC) No. 1272/2008, assigned a Community exposure limit in the workplace, and classified as PBT/vPvB or included in the Candidate List:

<table>
<thead>
<tr>
<th>Identifiers</th>
<th>Name</th>
<th>Concentrate (specific concentration limit)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>boric acid</td>
<td>0.1 - 5.5 % Repr. 1B, H360FD, C ≥ 5.5 %</td>
</tr>
<tr>
<td>Index No: 005-007-00-2, CAS No: 10043-35-3, EC No: 233-139-2, Registration No: O1-2119486683-25-XXXX</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[4] zinc sulfate heptahydrate</td>
<td>0.25 - 1 % Acute Tox. 4, H302 - Aquatic Acute 1, H400 - Aquatic Chronic 1, H410 - Eye Dam. 1, H318</td>
</tr>
<tr>
<td>CAS No: 7446-20-0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(*) The complete text of the H phrases is given in section 16 of this Safety Data Sheet.
[4] Substance included in the list established under Article 59, paragraph 1, REACH (Candidate or subject to authorization).

SECTION 4: FIRST AID MEASURES.

4.1 Description of first aid measures.
In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

Inhalation.
Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration. Do not administer anything orally. If unconscious, place them in a suitable position and seek medical assistance.

Eye contact.
If wearing contact lenses, remove them. Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance.

Skin contact.
Remove contaminated clothing. Wash skin vigorously with water and soap or a suitable skin cleaner. NEVER use solvents or thinners.

Ingestion.
If accidentally ingested, seek immediate medical attention. Keep calm. NEVER induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed.
No known acute or delayed effects from exposure to the product.

4.3 Indication of any immediate medical attention and special treatment needed.
In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

SECTION 5: FIREFIGHTING MEASURES.

The product does not present any particular risk in case of fire.

5.1 Extinguishing media.
Recommended extinguishing methods.
Extinguisher powder or CO\textsubscript{2}. In case of more serious fires, also alcohol-resistant foam and water spray. Do not use a direct stream of water to extinguish.

5.2 Special hazards arising from the mixture.
Special risks.
Fire can cause thick, black smoke. As a result of thermal decomposition, dangerous products can form: carbon monoxide, carbon dioxide. Exposure to combustion or decomposition products can be harmful to your health.

5.3 Advice for firefighters.
Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways.

Fire protection equipment.
According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and gloves.

SECTION 6: ACCIDENTAL RELEASE MEASURES.

6.1 Personal precautions, protective equipment and emergency procedures.
For exposure control and individual protection measures, see section 8.

6.2 Environmental precautions.
Product dangerous for the environment, in case of large spills or if the product contaminates lakes, rivers, or sewers, inform the responsible authorities according to local legislation. Prevent the contamination of drains, surface or subterranean waters, and the ground.

6.3 Methods and material for containment and cleaning up.
Pick up the spill with non-combustible absorbent materials (soil, sand, vermiculite, diatomite, etc.). Pour the product and the absorbent in an appropriate container. The contaminated area should be immediately cleaned with an appropriate de-contaminator. Pour the decontaminator on the remains in an opened container and let it act various days until no further reaction is produced.

6.4 Reference to other sections.
For exposure control and individual protection measures, see section 8.
For later elimination of waste, follow the recommendations under section 13.

SECTION 7: HANDLING AND STORAGE.

7.1 Precautions for safe handling.
For personal protection, see section 8. Never use pressure to empty the containers. They are not pressure-resistant containers. In the application area, smoking, eating, and drinking must be prohibited. Follow legislation on occupational health and safety. Keep the product in containers made of a material identical to the original.

7.2 Conditions for safe storage, including any incompatibilities.
Store according to local legislation. Observe indications on the label. Store the containers between 5 and 35\textdegree C, in a dry and well-ventilated place, far from sources of heat and direct solar light. Keep far away from ignition points. Keep away from oxidising agents and from highly acidic or alkaline materials. Do not smoke. Prevent the entry of non-authorised persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills. The product is not affected by Directive 2012/18/EU (SEVESO III).

7.3 Specific end use(s).
Not available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

8.1 Control parameters.

-Continued on next page.-
The product does NOT contain substances with Professional Exposure Environmental Limit Values.The product does NOT contain substances with Biological Limit Values.

Concentration levels DNEL/DMEL:

<table>
<thead>
<tr>
<th>Name</th>
<th>DNEL/DMEL</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>boric acid</td>
<td>DNEL (Workers)</td>
<td>Inhalation, Long-term, Systemic effects</td>
<td>8.3 (mg/m³)</td>
</tr>
<tr>
<td>N. CAS: 10043-35-3</td>
<td>N. CE: 233-139-2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

**8.2 Exposure controls.**

**Measures of a technical nature:**
Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

<table>
<thead>
<tr>
<th>Concentration</th>
<th>100 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses</td>
<td>FERTILIZANTE</td>
</tr>
<tr>
<td>Breathing protection:</td>
<td>If the recommended technical measures are observed, no individual protection equipment is necessary.</td>
</tr>
<tr>
<td>Hand protection:</td>
<td>If the product is handled correctly, no individual protection equipment is necessary.</td>
</tr>
<tr>
<td>Eye protection:</td>
<td>If the product is handled correctly, no individual protection equipment is necessary.</td>
</tr>
<tr>
<td>Skin protection:</td>
<td>Work footwear. Characteristics: «CE» marking, category II. CEN standards: EN ISO 13287, EN 20347. Maintenance: This product adapts to the first user's foot shape. That is why, as well as for hygienic reasons, it should not be used by other people. Observations: Work footwear for professional use includes protection elements aimed at protecting users against any injury resulting from an accident</td>
</tr>
</tbody>
</table>

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.**

**9.1 Information on basic physical and chemical properties.**
Appearance: Liquid with characteristic odour and colour
Colour: Marrón oscuro
Odour: N.A./N.A.
Odour threshold: N.A./N.A.
pH: 5,5-6,5 (%)
Melting point: N.A./N.A.
Boiling Point: N.A./N.A.
Flash point: > 60 ºC
Evaporation rate: N.A./N.A.
Inflammability (solid, gas): N.A./N.A.
Lower Explosive Limit: N.A./N.A.
Upper Explosive Limit: N.A./N.A.
Vapour pressure: N.A./N.A.
Vapour density: N.A./N.A.
Relative density: 1,28 g/cm³
Solubility: N.A./N.A.
Liposolubility: N.A./N.A.
Hydrosolubility: N.A./N.A.
Partition coefficient (n-octanol/water): N.A./N.A.
Auto-ignition temperature: N.A./N.A.
Decomposition temperature: N.A./N.A.
Viscosity: N.A./N.A.
Explosive properties: N.A./N.A.
SECTION 10: STABILITY AND REACTIVITY.

10.1 Reactivity.
The product does not present hazards by their reactivity.

10.2 Chemical stability.
Unstable in contact with:
- Bases.

10.3 Possibility of hazardous reactions.
Neutralization can occur on contact with bases.

10.4 Conditions to avoid.
- Avoid contact with bases.

10.5 Incompatible materials.
Avoid the following materials:
- Bases.

10.6 Hazardous decomposition products.
Depending on conditions of use, can be generated the following products:
- Corrosive vapors or gases.

SECTION 11: TOXICOLOGICAL INFORMATION.

11.1 Information on toxicological effects.
There are no tested data available on the product.
Repeated or prolonged contact with the product can cause the elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.
Splatters in the eyes can cause irritation and reversible damage.

a) acute toxicity;
Not conclusive data for classification.

b) skin corrosion/irritation;
Not conclusive data for classification.

c) serious eye damage/irritation;
Based on available data, the classification criteria are not met.

d) respiratory or skin sensitisation;
Not conclusive data for classification.

e) germ cell mutagenicity;
Not conclusive data for classification.

f) carcinogenicity;
Not conclusive data for classification.

 g) reproductive toxicity;
Based on available data, the classification criteria are not met.
h) STOT-single exposure;
Not conclusive data for classification.

i) STOT-repeated exposure;
Not conclusive data for classification.

j) aspiration hazard;
Not conclusive data for classification.

SECTION 12: ECOLOGICAL INFORMATION.

12.1 Toxicity.
No information is available regarding the ecotoxicity of the substances present.

12.2 Persistence and degradability.
No information is available about persistence and degradability of the product.

12.3 Bioaccumulative potential.
No information is available regarding the bioaccumulation of the substances present.

12.4 Mobility in soil.
No information is available about the mobility in soil.
The product must not be allowed to go into sewers or waterways.
Prevent penetration into the ground.

12.5 Results of PBT and vPvB assessment.
No information is available about the results of PBT and vPvB assessment of the product.

12.6 Other adverse effects.
No information is available about other adverse effects for the environment.

SECTION 13 DISPOSAL CONSIDERATIONS.

13.1 Waste treatment methods.
Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.

SECTION 14: TRANSPORT INFORMATION.

Transportation is not dangerous. In case of road accident causing the product’s spillage, proceed in accordance with point 6.

14.1 UN number.
Transportation is not dangerous.

14.2 UN proper shipping name.
Description:
ADR: Transportation is not dangerous.
IMDG: Transportation is not dangerous.
ICAO: Transportation is not dangerous.

14.3 Transport hazard class(es).
Transportation is not dangerous.

14.4 Packing group.
Transportation is not dangerous.
14.5 Environmental hazards.
Transportation is not dangerous.

14.6 Special precautions for user.
Transportation is not dangerous.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code.
Transportation is not dangerous.

### SECTION 15: REGULATORY INFORMATION.

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

The product is not affected by Directive 2012/18/EU (SEVESO III).
The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.
The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles:

<table>
<thead>
<tr>
<th>Designation of the substance, of the group of substances or of the mixture</th>
<th>Conditions of restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Reproductive toxicant category 1A adverse effects on sexual function and fertility or on development (Table 3.1) or reproductive toxicant category 1 with R60 (May impair fertility) or R61 (May cause harm to the unborn child) (Table 3.2) listed in Appendix 5</td>
<td>1. Shall not be placed on the market, or used, - as substances, - as constituents of other substances, or, - in mixtures, for supply to the general public when the individual concentration in the substance or mixture is equal to or greater than: - either the relevant specific concentration limit specified in Part 3 of Annex VI to Regulation (EC) No 1272/2008, or, - the relevant concentration specified in Directive 1999/45/EC where no specific concentration limit is set out in Part 3 of Annex VI to Regulation (EC) No 1272/2008.</td>
</tr>
<tr>
<td>- Reproductive toxicant category 1B adverse effects on sexual function and fertility or on development (Table 3.1) or reproductive toxicant category 2 with R60 (May impair fertility) or R61 (May cause harm to the unborn child) (Table 3.2) listed in Appendix 6</td>
<td>Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the packaging of such substances and mixtures is marked visibly, legibly and indelibly as follows: ‘Restricted to professional users’.</td>
</tr>
<tr>
<td>(a) medicinal or veterinary products as defined by Directive 2001/82/EC and Directive 2001/83/EC; (b) cosmetic products as defined by Directive 76/768/EEC; (c) the following fuels and oil products: - motor fuels which are covered by Directive 98/70/EC, - mineral oil products intended for use as fuel in mobile or fixed combustion plants, - fuels sold in closed systems (e.g. liquid gas bottles); (d) artists’ paints covered by Directive 1999/45/EC; (e) the substances listed in Appendix 11, column 1, for the applications or uses listed in Appendix 11, column 2. Where a date is specified in column 2 of Appendix 11, the derogation shall apply until the said date.</td>
<td></td>
</tr>
</tbody>
</table>

15.2 Chemical safety assessment.
There has been no evaluation a chemical safety assessment of the product.
SECTION 16: OTHER INFORMATION.

Complete text of the H phrases that appear in section 3:

H302 Harmful if swallowed.
H318 Causes serious eye damage.
H360FD May damage fertility. May damage the unborn child.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Classification codes:

Acute Tox. 4 [Oral] : Acute toxicity (Oral), Category 4
Aquatic Acute 1 : Acute toxicity to the aquatic environment, Category 1
Aquatic Chronic 1 : Chronic effect to the aquatic environment, Category 1
Aquatic Chronic 3 : Chronic effect to the aquatic environment, Category 3
Eye Dam. 1 : Serious eye damage, Category 1
Repr. 1B : Reproductive toxicant, Category 1B

It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

Abbreviations and acronyms used:
CEN: European Committee for Standardization.
DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.
DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.
PPE: Personal protection equipment.

Key literature references and sources for data:
http://eur-lex.europa.eu/homepage.html
http://echa.europa.eu/


The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.