1. Product and company identification

Common name: Thrive Alive Red
Material uses: Hydroponic nutrients.
Supplier/Manufacturer: Technaflora Plant Products Ltd.
7269 River Place, 101 Mission B.C.
Canada, V4S 0A2
Tel. 604-826-4759 / 1-800-586-1211

2. Hazards identification

Physical state: Liquid.
Odor: Seaweed (Slight.)
Color: Brown. (Dark.)
Hazard status: This material is classified as hazardous under OSHA regulations.
Emergency overview: WARNING!
CAUSES EYE AND SKIN IRRITATION.
MAY BE HARMFUL IF SWALLOWED.
Follow good industrial hygiene practice.

Routes of entry: Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects:
- Eyes: Irritating to eyes.
- Skin: Irritating to skin.
- Inhalation: No known significant effects or critical hazards.
- Ingestion: Harmful if swallowed.

Potential chronic health effects:
- Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.
- Mutagenic effects: Not available.
- Teratogenic effects: Not available.

Medical conditions aggravated by over-exposure:
- Repeated skin exposure can produce local skin destruction or dermatitis. Repeated or prolonged exposure to the substance can produce lung damage. Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to the substance can produce target organ damage.

See toxicological information (section 11)

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>United States</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium Nitrate</td>
<td>6484-52-2</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Potassium nitrate</td>
<td>7757-79-1</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Monopotassium Phosphate</td>
<td>7778-77-0</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

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4. First aid measures

Eye contact: Check for and remove any contact lenses. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if symptoms occur.

Skin contact: Wash with soap and water. Get medical attention if symptoms occur.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms appear.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

Notes to physician: No specific antidote. Medical staff must contact Poison Control Center.

5. Fire-fighting measures

Flammability of the product: Non-flammable.

Extinguishing media:
- Suitable: Use an extinguishing agent suitable for the surrounding fire.
- Not suitable: None known.

Special exposure hazards: No specific hazard.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions: Use suitable protective equipment.

Environmental precautions: Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up:
- For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal.
- For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

7. Handling and storage

Handling: Do not ingest. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Wash thoroughly after handling.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product name</strong></td>
</tr>
<tr>
<td><strong>Exposure limits</strong></td>
</tr>
</tbody>
</table>

**Engineering measures**: No special ventilation requirements. Good general ventilation should be sufficient to control airborne levels. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

**Personal protection**
- **Eyes**: Safety glasses.
- **Skin**: Lab coat.
- **Respiratory**: A respirator is not needed under normal and intended conditions of product use.
- **Hands**: Nitrile rubber.

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9. Physical and chemical properties

Physical state: Liquid.
Color: Brown. (Dark.)
Odor: Seaweed (Slight.)
pH: 3.5 to 4.5 [Acidic.]
Boiling/condensation point: The lowest known value is 100°C (212°F) (Water).
Melting/freezing point: May start to solidify at 0°C (32°F) based on data for: Water.
Relative density: Weighted average: 1.02 (Water = 1)
Vapor pressure: The highest known value is 2.3 kPa (17.5 mm Hg) (at 20°C) (Water).
Vapor density: The highest known value is 0.62 (Air = 1) (Water).
Evaporation rate: 0.36 (Water) compared with Butyl acetate.
Solubility: Highly soluble in water.

10. Stability and reactivity

Stability and reactivity: The product is stable.
Incompatibility with various substances: Reactive with oxidizing materials, reducing materials, organic materials, acids and alkalis. Slightly reactive or incompatible with the following materials: moisture.
Hazardous polymerization: Will not occur.
Conditions of reactivity: None known.

11. Toxicological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Route</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium Nitrate</td>
<td>LD50</td>
<td>2217 mg/kg</td>
<td>Oral</td>
<td>Rat</td>
</tr>
<tr>
<td>Potassium nitrate</td>
<td>LD50</td>
<td>3000 mg/kg</td>
<td>Dermal</td>
<td>Rabbit</td>
</tr>
<tr>
<td>Monopotassium Phosphate</td>
<td>LD50</td>
<td>&gt;2000 mg/kg</td>
<td>Oral</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td>LD50</td>
<td>&gt;4640 mg/kg</td>
<td>Dermal</td>
<td>Rabbit</td>
</tr>
</tbody>
</table>

Acute Effects

- Eyes: Irritating to eyes.
- Skin: Irritating to skin.
- Inhalation: No known significant effects or critical hazards.
- Ingestion: Harmful if swallowed.
- Potential chronic health effects: Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH. Mutagenic effects: Not available. Teratogenic effects: Not available.
12. Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Species</th>
<th>Period</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium Nitrate</td>
<td>Fish (LC50)</td>
<td>96 hour(s)</td>
<td>&gt;9100 mg/l</td>
</tr>
<tr>
<td>Potassium nitrate</td>
<td>Poecilia reticulata (LC50)</td>
<td>96 hour(s)</td>
<td>180 mg/l</td>
</tr>
<tr>
<td></td>
<td>Poecilia reticulata (LC50)</td>
<td>96 hour(s)</td>
<td>188 mg/l</td>
</tr>
<tr>
<td></td>
<td>Poecilia reticulata (LC50)</td>
<td>96 hour(s)</td>
<td>191 mg/l</td>
</tr>
<tr>
<td></td>
<td>Poecilia reticulata (LC50)</td>
<td>96 hour(s)</td>
<td>200 mg/l</td>
</tr>
</tbody>
</table>

Environmental precautions: No known significant effects or critical hazards.
Octanol/water partition coefficient: The product is more soluble in water.
Bioconcentration factor: Not available.
Products of degradation: These products are nitrogen oxides, phosphates. Some metallic oxides.

13. Disposal considerations

Waste disposal: Dispose of according to all federal, state and local applicable regulations.

14. Transport information

NAERG: Not applicable.
Regulatory information

UN/IMDG/IATA/DOT: Not regulated.

15. Regulatory information

United States
HCS Classification: Irritating material
U.S. Federal regulations:
- TSCA: All components listed.
- SARA 302/304/311/312 extremely hazardous substances: No products were found.
- SARA 302/304 emergency planning and notification: No products were found.
- SARA 302/304/311/312 hazardous chemicals: Ammonium Nitrate; Potassium nitrate
- SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Ammonium Nitrate: Fire hazard, reactive; Potassium nitrate: Fire hazard, Delayed (chronic) health hazard.
- Clean Water Act (CWA) 307: No products were found.
- Clean Water Act (CWA) 311: No products were found.
- Clean Air Act (CAA) 112 accidental release prevention: No products were found.
- Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
- Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

SARA 313
Form R - Reporting requirements:
- Ammonium Nitrate: 6484-52-2 1 - 5
- Potassium nitrate: 7757-79-1 1 - 5
Supplier notification:
- Ammonium Nitrate: 6484-52-2 1 - 5
- Potassium nitrate: 7757-79-1 1 - 5

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.
State regulations:
- Pennsylvania RTK: Ammonium Nitrate: (environmental hazard, generic environmental hazard); Potassium nitrate: (generic environmental hazard)
- Massachusetts RTK: Ammonium Nitrate; Potassium nitrate
- New Jersey: Ammonium Nitrate; Potassium nitrate

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California prop. 65: No products were found.

International lists: This product, (and its ingredients) is (are) listed on national inventories, or is (are) exempted from being listed, Australia (AICS), in Europe (EINECS/ELINCS), in Korea (TCCL), in Japan (METI), in the Philippines (RA6969).

16. Other information

Label requirements (U.S.A.): CAUSES EYE AND SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED.

Hazardous Material Information System (U.S.A.):

<table>
<thead>
<tr>
<th>HMIS RATING</th>
<th>HAZARD RATINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>4- Extreme</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>3- Serious</td>
</tr>
<tr>
<td>Physical Hazard</td>
<td>2- Moderate</td>
</tr>
<tr>
<td>Personal protection</td>
<td>1- Slight</td>
</tr>
</tbody>
</table>

National Fire Protection Association (U.S.A.):

- Flammability
- Health
- Reactivity
- Special

References:
- Manufacturer’s Material Safety Data Sheet.
- 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG.

Date of issue: 09/02/2011
Date of previous issue: 08/31/2006
Date of previous issue: 06/30/2004
Version: 3

Notice to reader:
To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.