

### Section 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

**1.1 Product identifier: Dual Fuel 2**

**1.1.1 Mixture**

**1.1.2 Other means of identification: Green Planet Dual Fuel 2**

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

**1.2.1 Relevant identified uses:**

Complete fertilizer to be used with Green Planet Dual Fuel 1 for: soil, soilless, coco coir, hydroponic or any other growing media application.

**1.2.2 Uses advised against:**

Mixing the product in concentrate with other fertilizer products.

Reasons: formation of precipitate, sediment, or insoluble components.

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

**Supplier:**

**Green Planet**

15374 – 103A Ave.

Surrey, BC

Canada

V3R 7A2

Tel: (604)-580-1287 Fax: (604)-580-2375

E-Mail : [info@mygreenplanet.com](mailto:info@mygreenplanet.com)

**1.4 EMERGENCY TELEPHONE NUMBER: 1-866-913-4769**

### Section 2: HAZARD IDENTIFICATION

**2.1. Classification of the substance or mixture:**

*Classification*

Skin Irrit. 3 – H316

Eye Irrit. 2B –H320

**2.2 Label elements**

**Hazard pictograms:**

N/A

**Signal word:**

Warning

**Hazard statements:**

H316

Causes mild skin irritation.

H320

Causes eye irritation.

**Precautionary statements:**

P101

If medical advice is needed, have product container or label on hand.

P102

Keep out of reach of children.

P103

Read label before use.

P264

Wash hands thoroughly after handling.

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.



### 2.3 Other hazards

**REACTIVITY:** Not reactive.

**SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE:** The most significant routes of overexposure for this product are by contact with skin and eyes.

**ACUTE:**

**INHALATION:** No data available.

**CONTACT WITH SKIN:** Exposure may cause mild skin irritation.

**EYE CONTACT:** Contact can cause eye irritation.

**INGESTION:** Ingestion of large quantities may cause abdominal cramps, nausea, vomiting, diarrhea.

## Section 3: COMPOSITION AND INFORMATION ON INGREDIENTS

### 3.1 Mixtures

#### 3.1.1 Description of the mixture:

Aqueous solution of Magnesium Sulfate, Potassium Phosphate, Potassium Sulfate.

#### 3.1.2 Ingredients:

| Substance name                     | CAS No.   | INDEX No. | EC No.    | Concentration | Classification |
|------------------------------------|-----------|-----------|-----------|---------------|----------------|
| Water                              | 7732-18-5 |           | 231-791-2 | 30-70%        | Not Classified |
| Magnesium Sulfate                  | 7487-88-9 |           | 231-298-2 | 10-30%        | Not Classified |
| Potassium Dihydrogenorthophosphate | 7778-77-0 |           | 231-913-4 | 10-20%        | Not Classified |
| Potassium Sulfate                  | 7778-80-5 |           | 231-915-5 | 10-20%        | Not Classified |

#### 3.1.3 Additional information:

This mixture does not contain further substances fulfilling the criteria of hazard class acute toxicity according to CLP regulation.

## Section 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

#### 4.1.1 Following inhalation:

If breathing becomes difficult, move the person to fresh air. If not breathing, or breathing becomes irregular, provide artificial respiration or oxygen by trained personal. Seek medical attention.

#### 4.1.2. Following skin contact:

Rinse the affected area with plenty of water. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder before reuse.

#### 4.1.3. Following eye contact:

If product enters the eyes, open eyes while under gentle running water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. Seek medical attention.

#### 4.1.4 Following ingestion:

Wash out mouth with plenty of water. Do not induce vomiting unless instructed to do so by medical personal. Seek medical attention.

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

**Symptoms:** Irritant. May cause skin and eye irritation. Effects of exposure to substance may be delayed.

#### 4.2.1 Inhalation:

May cause respiratory irritation if inhaled. Symptoms may be delayed.

#### 4.2.2. Skin contact:

Contact may cause irritation.

#### 4.2.3. Eye contact:

Contact may cause irritation.

#### 4.2.4 Ingestion:

Ingestion of large quantities may cause abdominal cramps, nausea, vomiting, diarrhea.

## Section 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media:

Suitable extinguishing media: Fire can be extinguished with water, carbon dioxide, powder or foam. Use extinguishing media appropriate for the surrounding fire.

Unsuitable extinguishing media: None are known.

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

Hazardous combustion products: None are known.

### 5.3 Advice for fire-fighters:

Wear appropriate protective equipment and a Self-Containing Breathing Apparatus (SCBA). Isolate the materials not yet involved in the fire and protect personal. Move the containers from the fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

## Section 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

#### 6.1.1 For non-emergency personnel:

Protective equipment: Wear safety glasses, use an appropriate respirator when ventilation is inadequate, wear chemical resistant gloves before handling the product.

Emergency procedures: Do not touch or walk through spilled material without suitable training.

#### 6.1.2 For emergency responders:

Personal protective equipment: For complete personal protection, see section 8.

### 6.2 Environmental precautions

If possible, prevent entry into sewers, storm drains, surface waters, and soils. If contamination occurs, inform the relevant authorities if the product has caused environmental pollution.

### 6.3 Methods and material for containment and cleaning up

#### 6.3.1 For containment:

Stop leaks if possible without risk. Move containers away from spill area. Cover drains, storm, and sewer entrances.

#### 6.3.2 For cleaning up:

Spilled liquid should be removed immediately as to avoid formation of dust from dried preparation. Rinse the area with water and mop up the remainder of the residue. **DO NOT USE BLEACH.**

## Section 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

#### 7.1.1 Protective measures:

To prevent skin and eye contact, wear appropriate protective clothing and safety eye ware. Avoid spills and keep away from drains. Keep the container tightly closed when not in use.

#### 7.1.2 Advice on general occupational hygiene:

Do not eat, drink or smoke when handling the material. Wash hands and face after handling the material. Remove contaminated clothing and personal protective equipment.

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

#### Technical measures and storage conditions:

Keep the container tightly closed, in a well ventilated area, away from direct sources of heat or ignition. Do not store in direct sunlight. Keep between 0-35 °C (32-95 °F). Do not store unlabelled containers. Do not store opened containers on its side.

#### Requirements for storage rooms and vessels:

Ambient temperature, humidity and pressure.

### 7.3 Specific end uses:

Recommendations: liquid fertilizer for hydroponic, soilless, soil and coco coir media.

### Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

#### 8.1 Control parameters Occupational exposure limits:

| Limit value type<br>(country of<br>origin) | Substance<br>name | Occupational exposure<br>limit value |            | EC-No. | CAS-No. | Monitoring and<br>observation processes | Peak limitation | Source |
|--------------------------------------------|-------------------|--------------------------------------|------------|--------|---------|-----------------------------------------|-----------------|--------|
|                                            |                   | Long term                            | Short term |        |         |                                         |                 |        |
| n/a                                        |                   |                                      |            |        |         |                                         |                 |        |

#### 8.1.2 Exposure limits at intended use:

None available.

#### 8.2 Exposure controls

##### 8.2.1 Appropriate engineering controls:

Sufficient ventilation should always be provided to control worker exposure to airborne contaminants. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure controls.

##### 8.2.2 Personal protective equipment:

###### 8.2.2.1 Eye / Face protection:

Suitable eye protection: Face shield. Chemical safety goggles.

Other eye protection measures: Face shield if sufficient risk of splashing is present. Refer to U.S. OSHA 29 CFR 1910.133 or the European Standard EN166.

###### 8.2.2.2 Skin protection:

Hand protection: Chemical resistant neoprene or polyvinyl alcohol gloves.

Body protection: Use body protection appropriate for the task. Chemical resistant suit and boots. Do not wear sandals, shorts, or cut of t-shirts.

Other skin protection measures: If deemed necessary, refer to U.S. OSHA 29 CFR 1910.136/138, or the European Standard DIN EN 374

###### 8.2.2.3 Respiratory protection:

Not required in properly ventilated areas.

###### 8.2.2.4 Thermal hazards

None applicable.

#### 8.2.3 Environmental exposure controls:

Refer to "Section 6" for environmental containment and clean up.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

#### 9.1.1 Appearance

**Physical state:** Liquid

**Colour:** Colourless

**Odour:** Odourless

|                                                     | value    | temperature | pressure                   |
|-----------------------------------------------------|----------|-------------|----------------------------|
| <i>pH</i>                                           | 3.9      |             | Ambient                    |
| <i>Melting point/freezing point</i>                 | -5.0°C   |             | Ambient                    |
| <i>Initial boiling point/boiling range</i>          | 100°C    |             | Ambient                    |
| <i>Flash point</i>                                  |          |             | Not Available              |
| <i>Evaporation rate</i>                             |          |             | Not Applicable             |
| <i>Flammability (solid, gas)</i>                    |          |             | Not Available              |
| <i>Upper/lower flammability or explosive limits</i> |          |             | Not Available              |
| <i>Upper explosive limits</i>                       |          |             | Not Available              |
| <i>Lower explosive limits</i>                       |          |             | Not Available              |
| <i>Vapour pressure</i>                              |          |             | Not Available              |
| <i>Vapour density</i>                               |          |             | Not Applicable             |
| <i>Relative density</i>                             | 1.2 g/ml |             | Ambient                    |
| <i>Solubility(ies)</i>                              |          |             | Complete in water          |
| <i>Partition coefficient: n-octanol/water</i>       |          |             | Not available              |
| <i>Auto-ignition temperature</i>                    |          |             | Not available              |
| <i>Decomposition temperature</i>                    |          |             | Not available              |
| <i>Viscosity</i>                                    |          |             | Not Applicable             |
| <i>Viscosity, dynamic</i>                           |          |             | Not Applicable             |
| <i>Viscosity, cinematic</i>                         |          |             | Not Applicable             |
| <i>Explosive properties</i>                         |          |             | Not considered explosive   |
| <i>Oxidising properties</i>                         |          |             | Not considered an oxidizer |

## Section 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available.

### 10.2 Chemical stability

No hazardous reactions when handled and stored according to provisions.

### 10.3 Possibility of hazardous reactions

None are known.

### 10.4 Conditions to avoid:

Freezing. Evaporation until dryness. High temperatures. Exposure to sunlight.

### 10.5 Incompatible materials:

None are known.

### 10.6 Hazardous decomposition products:

No known hazardous decomposition products.

## Section 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### 11.1.1 Mixture

##### Acute toxicity

Based on available data, the classification criteria are not met.

##### Skin corrosion/irritation

**Practical experience / human evidence:** May cause mild skin irritation.

**Assessment / Classification:** Category 3 Skin Irritant

### Eye damage/irritation

**Practical experience / human evidence:** May cause eye irritation.

**Assessment / Classification:** Category 2B Eye Irritant

### Sensitization to the respiratory tract/skin

Based on available data, the classification criteria are not met.

### Sensitization to the respiratory tract

Based on available data, the classification criteria are not met.

### Skin sensitization

Based on available data, the classification criteria are not met.

### **CMR effects (carcinogenetic, mutagenicity and toxicity for reproduction)**

#### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

#### Carcinogenicity

Based on available data, the classification criteria are not met.

#### Reproductive toxicity

Based on available data, the classification criteria are not met.

#### **Overall assessment on CMR properties:**

Ingredients within this product are not found on the following lists: OSHA Subpart Z, EPA IRIS, IARC, NTP, CalEPA; and therefore are not considered to be, nor suspected to be, cancer causing by these agencies.

#### **Specific target organ toxicity (single exposure)**

##### STOT SE 1 and 2

Based on available data, the classification criteria are not met.

##### STOT SE 3

#### **Irritation to respiratory tract:**

May cause respiratory irritation – inhalation

#### **Narcotic effects**

Based on available data, the classification criteria are not met.

#### **Specific target organ toxicity (repeated exposure)**

##### STOT RE 1 and 2

Based on available data, the classification criteria are not met.

#### **Aspiration hazard**

Based on available data, the classification criteria are not met.

## Section 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity:

#### 12.1.1 Aquatic toxicity

##### **Acute (short-term) fish toxicity**

|                          | Effect dose/<br>Concentration | Test Duration | Species             | Result/<br>Evaluation | Method     | Remark                                               |
|--------------------------|-------------------------------|---------------|---------------------|-----------------------|------------|------------------------------------------------------|
| <i>Magnesium Sulfate</i> | 19,000 mg/l                   | 24 h          | Lepomis macrochirus | LC50                  | unmeasured | <i>J. Water Pollut. Control Fed.37(9): 1308-1316</i> |

##### **Chronic (long-term) fish toxicity**

|                                      | Effect dose/<br>Concentration | Test duration           | Species             | Result/<br>Evaluation | Method     | Remark                                                      |
|--------------------------------------|-------------------------------|-------------------------|---------------------|-----------------------|------------|-------------------------------------------------------------|
| <i>Magnesium Sulfate</i>             | 8,000,000 – 11,000,000 ug/L   | 2 E x WK<br>1-6 week(s) | Oncorhynchus mykiss | Mortality             | unmeasured | <i>M.S.Thesis, University of Wyoming, Laramie, WY:59 p.</i> |
| <i>Potassium Dihydrogenphosphate</i> | Diet: 6.14 %                  | 27 weeks                | Oncorhynchus mykiss | Mortality<br>32.3 %   | unmeasured | <i>Nippon Suisan Gakkaishi59(8): 1395-1400</i>              |

### Acute (short-term) toxicity to crustacean

|                          | Effect dose/<br>Concentration | Test Duration | Species          | Result/<br>Evaluation | Method     | Remark                                                       |
|--------------------------|-------------------------------|---------------|------------------|-----------------------|------------|--------------------------------------------------------------|
| <i>Magnesium Sulfate</i> | 2,180 – 2,500<br>mg/L         | 24 h          | Daphnia<br>magna | LC50                  | unmeasured | <i>Environ.<br/>Toxicol.<br/>Chem. 16(10):<br/>2009-2019</i> |

### Chronic (long-term) toxicity to crustacean

|                                          | Effect dose/<br>Concentration | Test Duration     | Species                | Result/<br>Evaluation | Method     | Remark                                                  |
|------------------------------------------|-------------------------------|-------------------|------------------------|-----------------------|------------|---------------------------------------------------------|
| <i>Magnesium Sulfate</i>                 | 360 mg/L                      | 3 x WK<br>3 weeks | Daphnia<br>magna       | Mortality             | unmeasured | <i>Hydrobiologia 10<br/>8:25-31</i>                     |
| <i>Potassium<br/>Dihydrogenphosphate</i> | Diet: 6.14 %                  | 27 weeks          | Oncorhynchus<br>mykiss | Mortality<br>32.3 %   | unmeasured | <i>Nippon Suisan<br/>Gakkaishi 59(8):<br/>1395-1400</i> |

### 12.2 Persistence and degradability

#### Biodegradation:

#### Assessment / Classification:

Readily biodegradable (according to OECD Guideline 302B).

### 12.3 Bioaccumulative potential

#### Assessment / Classification:

The product completely dissociates in water. Based on physiochemical properties (high water solubility), the product has a low potential for bioaccumulation.

### 12.4 Mobility in soil

#### Assessment / Classification:

The product has a low potential for adsorption. Portion not taken up by the plants, can leach into ground water.

### 12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

## Section 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### 13.1.1 Product / Packaging disposal:

Disposal should be in accordance with applicable federal and state laws.

#### 13.1.2 Other disposal recommendations:

Agricultural producers disposing of waste from their own use are exempt from hazardous waste requirements as long as (1) they triple rinse the emptied containers in accordance with the labeling to facilitate removal of the chemical from the container, and (2) they dispose of the residue on their own agricultural establishment in a manner consistent with the disposal instructions in accordance with the federal and state laws.

#### 13.2 Additional information:

Irrigation return flows are not considered hazardous waste.

The product is not listed as dangerous waste in the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

The product does not have an EPA Hazardous Waste Number.

## Section 14: TRANSPORT INFORMATION

|                                        | Land transport<br>(ADR/RID) | Inland waterway<br>transport (ADN) | Sea transport<br>(IMDG) | Air transport (ICAO-TI /<br>IATA-DGR) |
|----------------------------------------|-----------------------------|------------------------------------|-------------------------|---------------------------------------|
| <b>14.1 UN No.</b>                     | Non dangerous good          |                                    |                         |                                       |
| <b>14.2 UN Proper shipping name</b>    | Not applicable              |                                    |                         |                                       |
| <b>14.3 Transport hazard class(es)</b> | Not applicable              |                                    |                         |                                       |
| <b>Hazard label(s)</b>                 | Not applicable              |                                    |                         |                                       |
| <b>14.4 Packing group</b>              | Not applicable              |                                    |                         |                                       |
| <b>14.5 Environmental hazards</b>      | Not applicable              |                                    |                         |                                       |

### 14.6 Special precautions for user: None

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

**14.8 Additional information****14.8.1 All transport carriers****14.8.2 Land transport (ADR/RID)**

Limited quantity: Not applicable

Special provisions: None

Tunnel restriction code: Not applicable

Classification code: Not applicable

Transport category: Not applicable

Hazard identification number (Kemler No.): Not applicable

Remark: Non dangerous good

**14.8.3 Inland waterway transport (ADN)**

Limited quantity: Not applicable

Special provisions: None

Category: Not applicable

Remark: Non dangerous good

**14.8.4 Sea transport (IMDG)**

Limited quantity: Not applicable

Special provisions: None

Marine pollutant: No

Segregation group: Not applicable

Remark: Non dangerous good

**14.8.5 Air transport (ICAO-TI / IATA-DGR)**

Limited quantity: Not applicable

Special provisions: None

Remark: Non dangerous good

**Section 15: REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the mixture****15.1.1 US Federal****SARA Title III Rules****Section 313 Toxic Chemicals**

This product does not contain any chemicals which are subject to reporting requirements of the Act and 40 CFR Part 372.

**Section 311/312 Hazard Classes**

Acute Health Hazard: None

Chronic Health Hazard: None

Fire Hazard: None

Release of Pressure: None

Reactive Hazard: None

**15.1.2 US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals

**15.1.3 Canada****WHIMIS Classification**

Not classified

This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

**15.1.4 European Union****Classification according to the Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

No additional information available.

**15.2 Chemical Safety Assessment:**

No additional information available.



## **Section 16: OTHER INFORMATION**

**16.1 Indication of changes**

Version No.: 1.0 - 19/07/2016

**16.2 Disclaimer:**

The information provided on this SDS is believed to be accurate to the best of our knowledge, but is not warranted to be so. The information provided is intended to present guidance for safe handling, use, processing, storage, transport, disposal, and discharge; it is not intended to be a guarantee or quality specification. Green Planet LLC assumes no responsibility for injury to vendee or third party person proximately caused by the material if safety procedure are not adhered to as stipulated in the SDS. Furthermore, Green Planet LLC assumes no responsibility for injury caused by abnormal use of the product even if reasonable safety procedures are followed. It is the responsibility of the recipient of this SDS to ensure that information given here is read and understood by all who use, handle, dispose of, or in any way come in contact with the product.

