1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier
   Product name: PLASMA POWER LIQUID FERTILISER
   Synonym(s): LIQUID FERTILISER

1.2 Uses and uses advised against
   Use(s): LIQUID FERTILISER

1.3 Details of the supplier of the product
   Supplier name: RURAL LIQUID FERTILISERS PTY LTD
   Address: 1/61 Dowd Street, Welshpool, WA, 6106, AUSTRALIA
   Telephone: (08) 9334 8700, 1800 753 000
   Fax: (08) 9334 8711
   Email: info@rlf.com.au
   Website: http://www.ruralliquidfertilisers.com

1.4 Emergency telephone number(s)
   Emergency: Poisons Information Centre: 13 11 26

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
   CLASSIFIED AS HAZARDOUS ACCORDING TO AUSTRALIAN WHS REGULATIONS
   GHS classification(s): Skin Corrosion/Irritation: Category 2
                          Serious Eye Damage / Eye Irritation: Category 2A

2.2 Label elements
   Signal word: WARNING
   Pictogram(s):

   Hazard statement(s)
   H315 Causes skin irritation.
   H319 Causes serious eye irritation.

   Prevention statement(s)
   P264 Wash thoroughly after handling.
   P280 Wear protective gloves/protective clothing/eye protection/face protection.

   Response statement(s)
   P302 + P352 IF ON SKIN: Wash with plenty of soap and 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.
   P321 Specific treatment is advised - see first aid instructions.
   P332 + P337 + P313 If skin or eye irritation occurs: Get medical advice/attention.
   P362 Take off contaminated clothing and wash before re-use.

   Storage statement(s) None allocated.
   Disposal statement(s) None allocated.

2.3 Other Hazards
   No information provided.
3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EC Number</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHOSPHORIC ACID</td>
<td>7664-38-2</td>
<td>231-633-2</td>
<td>&lt;25%</td>
</tr>
<tr>
<td>NON HAZARDOUS INGREDIENTS</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Remainder</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1 Description of first aid measures

**Eye**
If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

**Inhalation**
If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

**Skin**
If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

**Ingestion**
For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

**First aid facilities**
Eye wash facilities should be available.

4.2 Most important symptoms and effects, both acute and delayed
Irritating to the eyes and skin.

4.3 Immediate medical attention and special treatment needed
Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media
Use an extinguishing agent suitable for the surrounding fire.

5.2 Special hazards arising from the substance or mixture
Non flammable. May evolve toxic gases (phosphorus oxides) when heated to decomposition. Contact with most metals may evolve flammable hydrogen gas.

5.3 Advice for firefighters
Treat as per requirements for surrounding fires. Evacuate area and contact emergency services. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use water fog to cool intact containers and nearby storage areas.

5.4 Hazchem code
None allocated.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.

6.2 Environmental precautions
Prevent product from entering drains and waterways.

6.3 Methods of cleaning up
Contain spillage, then cover / absorb spill with sodium bicarbonate or 50-50 mixture of sodium carbonate and calcium hydroxide. Collect for complete neutralisation and appropriate disposal.

6.4 Reference to other sections
See Sections 8 and 13 for exposure controls and disposal.
7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well ventilated area, removed from incompatible substances and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Large storage areas should have appropriate ventilation systems.

7.3 Specific end use(s)
No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Reference</th>
<th>TWA ppm</th>
<th>TWA mg/m³</th>
<th>STEL ppm</th>
<th>STEL mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>SWA (AUS)</td>
<td></td>
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<td></td>
<td>3</td>
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</tbody>
</table>

Biological Limits
No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls
Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard.

PPE
- Eye / Face
  Wear splash-proof goggles.
- Hands
  Wear PVC or rubber gloves.
- Body
  Wear coveralls.
- Respiratory
  Where an inhalation risk exists, wear a Type B (Inorganic gases and vapours) respirator. If spraying, with prolonged use, or if in confined areas, wear an Air-line respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- Appearance: TRANSLUCENT BLUE/GREEN LIQUID
- Odour: CHARACTERISTIC PHOSPHATE ODOUR
- Flammability: NON FLAMMABLE
- Flash point: NOT RELEVANT
- Boiling point: NOT AVAILABLE
- Melting point: NOT AVAILABLE
- Evaporation rate: NOT AVAILABLE
- pH: 2.0 to 2.6 (1% solution)
- Vapour density: NOT AVAILABLE
- Specific gravity: 1.618 to 1.639
9.2 Other information
Density 1.62 to 1.64 kg/L @ 20°C

10. STABILITY AND REACTIVITY
10.1 Reactivity
Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability
Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions
Polymerization is not expected to occur.

10.4 Conditions to avoid
Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials
Incompatible with oxidising agents (e.g. hypochlorites), alkalis (e.g. sodium hydroxide) and metals.

10.6 Hazardous decomposition products
May evolve toxic gases (phosphorus oxides) when heated to decomposition.

11. TOXICOLOGICAL INFORMATION
11.1 Information on toxicological effects

Acute toxicity
Information available for the product:
Based on available data, the classification criteria are not met.

Information available for the ingredient(s):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Oral Toxicity (LD50)</th>
<th>Dermal Toxicity (LD50)</th>
<th>Inhalation Toxicity (LD50)</th>
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</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>1530 mg/kg (rat)</td>
<td>2740 mg/kg (rabbit)</td>
<td>--</td>
</tr>
</tbody>
</table>

Skin
Contact may result in irritation, redness, rash and dermatitis. Prolonged or repeated contact may result in burns.

Eye
Contact may result in irritation, lacrimation, pain and redness. May result in burns with prolonged contact.

Sensitization
Not classified as causing skin or respiratory sensitisation.

Mutagenicity
Not classified as a mutagen.

Carcinogenicity
Not classified as a carcinogen.

Reproductive
Not classified as a reproductive toxin.

STOT – single exposure
Over exposure may result in irritation of the nose and throat, with coughing. High level exposure may result in breathing difficulties.

STOT – repeated exposure
Not classified as causing organ damage from repeated exposure. Adverse effects are generally associated with single exposure.

Aspiration
Not classified as causing aspiration.
12. ECOLOGICAL INFORMATION

12.1 Toxicity
No information provided.

12.2 Persistence and degradability
No information provided.

12.3 Bioaccumulative potential
No information provided.

12.4 Mobility in soil
No information provided.

12.5 Other adverse effects
Phosphoric acid is hazardous to aquatic life at high concentrations. While acidity may be reduced by natural water minerals, the phosphate may persist indefinitely. When spilled onto soil, it will permeate downward, and may dissolve some of the soil matter, especially carbonate-based materials. Some acid will be neutralised, however significant amounts will remain for transport to groundwater.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal
Wearing the protective equipment detailed above, neutralise to pH 6-8 by SLOW addition to a saturated sodium bicarbonate solution or similar basic solution. Dilute with excess water and flush to drain. Waste disposal should only be undertaken in a well ventilated area.

Legislation
Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA

<table>
<thead>
<tr>
<th></th>
<th>LAND TRANSPORT (ADG)</th>
<th>SEA TRANSPORT (IMDG / IMO)</th>
<th>AIR TRANSPORT (IATA / ICAO)</th>
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<td>None Allocated</td>
</tr>
<tr>
<td>14.3 Transport hazard class</td>
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<td>None Allocated</td>
<td>None Allocated</td>
</tr>
<tr>
<td>14.4 Packing Group</td>
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<tr>
<td>14.5 Environmental hazards</td>
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<tr>
<td>14.6 Special precautions for user</td>
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<td></td>
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<tr>
<td>Hazchem code</td>
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</tr>
</tbody>
</table>
15. REGULATORY INFORMATION

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

Poison schedule
Classified as a Schedule 5 (S5) Standard for the Uniform Scheduling of Medicines and Poisons (USMP).

Classifications
Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.
The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Hazard codes
Xi Irritant

Risk phrases
R36/38 Irritating to eyes and skin.

Safety phrases
S23 Do not breathe gas/fumes/vapour/spray (where applicable).
S24/25 Avoid contact with skin and eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 After contact with skin, wash immediately with plenty of water.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S60 This material and its container must be disposed of as hazardous waste.
S61 Avoid release to the environment. Refer to special instructions/safety data sheets.

Inventory listing(s)
AUSTRALIA: AICS (Australian Inventory of Chemical Substances)
All components are listed on AICS, or are exempt.

16. OTHER INFORMATION

Additional information
ACIDS:
When mixing acids with water (diluting), caution must be taken as heat will be generated which causes violent spattering. Always add a small volume of acid to a large volume of water, NEVER the reverse.

RESPIRATORS:
In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.
### Abbreviations

- **ACGIH**: American Conference of Governmental industrial Hygienists
- **CAS #**: Chemical Abstract Service number - used to uniquely identify chemical compounds
- **CNS**: Central Nervous System
- **EC No.**: EC No - European Community Number
- **EMS**: Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
- **GHS**: Globally Harmonized System
- **GTEPG**: Group Text Emergency Procedure Guide
- **IARC**: International Agency for Research on Cancer
- **LC50**: Lethal Concentration, 50% / Median Lethal Concentration
- **LD50**: Lethal Dose, 50% / Median Lethal Dose
- **mg/m³**: Milligrams per Cubic Metre
- **OEL**: Occupational Exposure Limit
- **pH**: relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
- **ppm**: Parts Per Million
- **STEL**: Short-Term Exposure Limit
- **STOT-RE**: Specific target organ toxicity (repeated exposure)
- **STOT-SE**: Specific target organ toxicity (single exposure)
- **SUSMP**: Standard for the Uniform Scheduling of Medicines and Poisons
- **SWA**: Safe Work Australia
- **TLV**: Threshold Limit Value
- **TWA**: Time Weighted Average

### Disclaimer

This document has been prepared by Rural Liquid Fertilisers (RLF), and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue.

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Revision: 8
SDS Date: 29 February 2016
End of SDS