

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name PLASMA FUSION
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 SAFE WORK AUSTRALIA CRITERIA

GHS classification(s) Skin Corrosion/Irritation: Category 2
 Serious Eye Damage/Eye Irritation: Category 1
 Toxic to Reproduction: Category 1B
 Aquatic Toxicity (Chronic): Category 2

2.2 Label elements

Signal word DANGER
Pictogram(s)



Hazard statement(s)

H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H360 May damage fertility or the unborn child.
 H411 Toxic to aquatic life with long lasting effects.

Prevention statement(s)

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P264 Wash thoroughly after handling.
 P273 Avoid release to the environment.
 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.
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.
 P310 Immediately call a POISON CENTER or doctor/physician.

P321 Specific treatment is advised - see first aid instructions.
 P362 Take off contaminated clothing and wash before re-use.
 P391 Collect spillage.

Storage statement(s)

P405 Store locked up.

Disposal statement(s)

P501 Dispose of contents/container in accordance with relevant regulations.

2.3 Other Hazards

No information provided.

3. COMPOSITION / INFORMATION ON INGREDIENTS
3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
PHOSPHORIC ACID	7664-38-2	231-633-2	<15%
ZINC SULPHATE MONOHYDRATE	7446-19-7	616-096-8	5 to 10%
DISODIUM OCTABORATE TETRAHYDRATE	12280-03-4	602-894-3	<2%
DISODIUM TETRABORATE DECAHYDRATE	1303-96-4	215-540-4	<0.2%
NON HAZARDOUS INGREDIENTS	Not Available	Not Available	Remainder

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. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

Ingestion For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once).

First aid facilities Eye wash facilities should be available.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

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 if strongly heated.

5.3 Advice for firefighters No fire or explosion hazard exists.

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.
- 6.2 Environmental precautions** Prevent product from entering drains and waterways.
- 6.3 Methods of cleaning up** Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for 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.
- 7.3 Specific end use(s)** No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Borates, tetra, sodium salts (decahydrate)	SWA (AUS)	--	5	--	--
Phosphoric acid	SWA (AUS)	--	1	--	3

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. Maintain vapour levels below the recommended exposure standard.

PPE

Eye / Face

Wear splash-proof goggles.

Hands

Wear PVC or rubber gloves.

Body

When using large quantities or where heavy contamination is likely, wear coveralls.

Respiratory

Not required under normal conditions of use.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	TRANSLUCENT 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	2.2 to 2.8 (1% solution)
Vapour density	NOT AVAILABLE
Specific gravity	1.421 to 1.441
Solubility (water)	SOLUBLE
Vapour Pressure	NOT AVAILABLE
Upper Explosion Limit	NOT RELEVANT
Lower Explosion Limit	NOT RELEVANT
Partition Coefficient	NOT AVAILABLE
Autoignition Temperature	NOT AVAILABLE
Decomposition Temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive Properties	NOT AVAILABLE
Oxidising Properties	NOT AVAILABLE
Odour Threshold	NOT AVAILABLE

9.2 Other information

Density @ 20°C	1.42 kg/L to 1.44 kg/L
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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 combustible materials, and reducing agents (e.g. sulphites).
10.6 Hazardous decomposition products	May evolve toxic gases if heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met. Ingestion of large quantities may result in nausea, vomiting, abdominal pain and diarrhoea.

Information available for the ingredient(s) :

Ingredient	Oral Toxicity (LD50)	Dermal Toxicity (LD50)	Inhalation Toxicity (LC50)
PHOSPHORIC ACID	1530 mg/kg (rat)	2740 mg/kg (rabbit)	--
ZINC SULPHATE MONOHYDRATE	1891 mg/kg	--	--
DISODIUM TETRABORATE DECAHYDRATE	2000 mg/kg (mouse)	--	--

Skin

Irritating to the skin. Contact may result in irritation, redness, rash and dermatitis.

Eye

Causes serious eye damage. Contact may result in irritation, lacrimation, pain, redness and possible permanent damage.

Sensitisation

Not classified as causing skin or respiratory sensitisation.

Mutagenicity

Not classified as a mutagen.

Carcinogenicity

Not classified as a carcinogen.

Reproductive

May damage fertility or the unborn child. Animal studies have shown that exposure to high concentrations of borates may effect the developing fetus and the testes.

STOT – single exposure

Over exposure may result in irritation of the nose and throat, with coughing.

STOT – repeated exposure

Not classified as causing organ damage from repeated exposure.

Aspiration

Not classified as causing aspiration.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

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

Plant nutrients may be beneficial to plants at low levels, however high levels may cause reduced growth or burns in sensitive species. Excess may be washed through soil to waterways. Nutrients released to waterways may cause algal blooms, with potential for toxic effects on aquatic organisms.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal

Dispose of to an approved landfill or waste processing site. Contact the manufacturer/supplier for additional information (if required).

Legislation

Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD (IN ACCORDANCE WITH IATA AND IMDG ONLY)

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	None Allocated	3082	3082
14.2 Proper Shipping Name	None Allocated	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
14.3 Transport hazard class	None Allocated	9	9
14.4 Packing Group	None Allocated	III	III
14.5 Environmental hazards	Marine Pollutant		
14.6 Special precautions for user			
Hazchem code	None Allocated		
EMS	F-A, S-F		
Other information	Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the Australian Dangerous Goods Code when transported by road or rail in; (a) packagings; (b) IBCs; or (c) any other receptacle not exceeding 500 kg(L). - Australian Special Provisions (SP AU01) - ADG Code 7th Ed. Labels Required: MISCELLANEOUS.		

15. REGULATORY INFORMATION

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

Poison schedule	A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).	
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	N	Dangerous for the environment
	Repr.	Reproductive toxin
	Xi	Irritant
Risk phrases	R38	Irritating to eyes and skin.
	R41	Risk of serious damage to eyes.
	R51/53	Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
	R60	May impair fertility.
	R61	May cause harm to the unborn child.
Safety phrases	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
	S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
	S53	Avoid exposure - obtain special instructions before use.
	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
EXPOSURE STANDARDS - TIME WEIGHTED AVERAGES:

Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: Strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, 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: form of product; 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 (highly 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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End of SDS