PHOZSTART ZZ

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	Phozstart ZZ
Other Means of Identification	-
Other Names	-
Product Use	Fertiliser
Company Name	AgroBest Australia Pty Ltd
Address	9 Palings Court Nerang QLD 4211
Telephone Number	07 5596 0622
Emergency Telephone	0419 758 458

2. HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Corrosion

H314 - Causes severe skin burns and eye damage.
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Skin Corrosion/Irritation - Danger - Hazard Category 1A

GHS Label Elements Including Precautionary Statements
Prevention:
Do not breathe vapours.
Wash hands and eyes thoroughly after handling.
Wear protective gloves/protective clothing, eye protection/face protection.

Response:
If swallowed rinse mouth. Do not induce vomiting.
If on skin (or hair) remove immediately all contaminated clothing. Rinse skin with water.
Wash contaminated clothing before reuse.
If inhaled remove victim to fresh air and keep at rest in a position comfortable for breathing.
Immediately call a Poison Information Center or doctor.
If in eyes rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

Storage:
Store locked up.

Disposal:
Dispose of contents/container according to applicable local and state government regulations.

Other hazards which do not result in classification No information available.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Characterisation **Mixture**

Ingredient (Common Name)	CAS No	Concentration
Phosphoric acid	7664-38-2	30-60%
Water	7732-18-5	10-30%
Potassium hydroxide	1310-58-3	10-30%
Urea	57-13-6	<10%
Zinc oxide	1314-13-2	<10%
Humic acid	1415-93-6	<10%

This is a commercial product whose exact concentration of ingredients may vary slightly.

4. FIRST AID MEASURES

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek immediate medical attention.

Ingestion Wash mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Skin In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. Seek medical attention if symptoms occur.

Eyes In case of eye contact, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention if symptoms occur.

5. FIRE FIGHTING MEASURES

For major fires call the Fire Brigade. Ensure that an escape path is available from any fire.

Suitable Extinguishing Media Use fire extinguishing media suitable to surrounding fire conditions.

Hazardous Combustion Products Oxides of phosphorous and nitrogen and ammonia.

Special Protective Equipment and Precautions for Fire Fighters Wear Safe Work Australia approved self-contained breathing apparatus and full protective clothing.

Unusual Fire or Explosion Hazards Product does not present an explosion hazard.

Hazchem Code 2R

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures Wear Safe Work Australia approved self-contained breathing apparatus and full protective clothing. Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation.

Environmental Precautions	In the event of a major spill, prevent spillage from entering drains or water courses.
Methods and Materials for Containment and Cleaning Up	Stop leak if safe to do so and absorb spill onto sand, earth, vermiculite or some other inert absorbent material. Collect the spilled material and place into a suitable container for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling	Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours. Ensure adequate ventilation. Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.
Conditions for Safe Storage	Store in a cool, dry and well ventilated area. Keep container tightly closed when not in use. Keep away from combustible materials, herbicides and fungicides.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters - Exposure Standards (Safe Work Australia)	**Phosphoric acid:** TWA: - ppm / 1 mg/m^3 STEL: - ppm / 3 mg/m^3 **Potassium hydroxide:** TWA: - ppm / 2 mg/m^3 Peak limitation STEL: - ppm / - mg/m^3 **Zinc oxide (fume):** TWA: - ppm / 5 mg/m^3 STEL: - ppm / 10 mg/m^3 **Zinc oxide (dust):** TWA: - ppm / 10 mg/m^3 STEL: - ppm / - mg/m^3
Engineering Controls	Provide adequate ventilation to maintain air concentrations below exposure standards. While good natural ventilation may be adequate in most cases, local exhaust ventilation may be required.

Personal Protective Equipment (PPE)

Respiratory Protection	In case of intensive or longer exposure use self-contained respiratory protective device. See Australian Standards AS/NZS 1715 and 1716 for more information.
Eye/Face Protection	Full face shield. See Australian Standards AS/NZS 1336 and 1337 for more information.
Skin Protection	Protective PVC gloves, protective overall, waterproof apron and safety boots. See Australian Standards AS/NZS 2161, 2210.1 and 2210.2 for more information.
Thermal Hazards	Not applicable.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light brown liquid
Odour	No information available
Odour Threshold	No information available
pH	1.6 – 2.2
Melting Point / Freezing Point	No information available
Initial Boiling Point / Range	>100°C
Flash Point	Not applicable
Evaporation Rate	No information available
Flammability	Non flammable
Lower Flammability or Explosive Limit	Not applicable
Upper Flammability or Explosive Limit	Not applicable
Vapour Pressure	No information available
Vapour Density	No information available
Relative Density (Specific Gravity)	1.42
Solubility in Water	Soluble
Partition coefficient: n-octanol/water	No information available
Ignition Temperature	No information available
Decomposition Temperature	No information available
VOC	No information available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable at ambient temperature and under normal conditions of use
Possibility of Hazardous Reactions	No hazardous reactions will occur.
Conditions to Avoid	No information available.
Incompatible Materials	Combustible materials.
Hazardous Decomposition Products	Oxides of phosphorous and nitrogen and ammonia.

11. TOXICOLOGICAL INFORMATION

Toxicity

Phosphoric acid:
Oral LD_{50} (rat) = 1530 mg/kg
Dermal LD_{50} (rabbit) = 2740 mg/kg
Inhalation LC_{50} (rat) = 850 mg/m3 – 1 hour
Draize test, rabbit, eye = 119 mg - Severe
Draize test, rabbit, skin = 595 mg/24hour - Severe
Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Severe over-exposure can result in death. Harmful if ingested. Causes irritation and burns of the gastrointestinal (tract. Inflammation of the eye is characterized by redness, watering, and itching. Skin contact may produce burns.
The substance may be toxic to blood, liver, skin, eyes, bone

marrow. Repeated or prolonged exposure to the substance can produce target organs damage.

Potassium hydroxide:

Oral LD_{50} (rat) = 273 mg/kg

Draize test, rabbit, skin = 50 mg/24hour - Severe

Causes severe eye and skin burns. May cause irreversible eye injury. Harmful if swallowed. May cause circulatory system failure and severe digestive tract burns with abdominal pain, vomiting, and possible death. Harmful if inhaled. Irritation may lead to chemical pneumonitis and pulmonary oedema. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma.

Zinc oxide:

Oral LD_{50} (mouse) = 7950 mg/kg

Inhalation LC_{50} (mouse) = 2500 mg/kg

Draize test, rabbit, skin = 500 mg/24hour - Mild

Draize test, rabbit, eye = 500 mg/24hour - Mild

Inhalation of fumes may cause metal fume fever, characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count. Effects may be delayed. Ingestion may cause gastrointestinal irritation with nausea, vomiting and diarrhea.

Urea:

Oral LD_{50} (rat) = 8471 mg/kg

Oral LD_{50} (mouse) = 11000 mg/kg

Hazardous in case of skin and eye contact (irritant), ingestion, and inhalation. The substance may be toxic to blood and cardiovascular system. Repeated or prolonged exposure to the substance can produce target organs damage.

Humic acid:

Irritating to eyes, respiratory system and skin.

Acute Health Effects

Routes of exposure	Inhalation:	May cause severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma. Irritation may lead to chemical pneumonitis and pulmonary oedema.
	Ingestion:	May cause severe pain, nausea, vomiting, diarrhoea, and shock. May cause corrosion and tissue destruction of the oesophagus and digestive tract.
	Eye:	Causes eye damage.
	Skin:	Causes severe skin burns.
Skin Corrosion/Irritation	Causes severe skin burns and eye damage.	
Serious Eye Damage/Irritation	Causes severe skin burns and eye damage.	
Respiratory or Skin Sensitisation	No information available.	
Germ Cell Mutagenicity	No information available.	
Carcinogenicity	This product does NOT contain any IARC listed chemicals.	
Reproductive Toxicity	No information available.	
Specific Target Organ Toxicity (STOT) - Single Exposure	No information available.	

Specific Target Organ Toxicity (STOT) - Repeated Exposure	No information available.
Aspiration Hazard	No information available.
Chronic Health Effects	No information available.
Existing Conditions Aggravated by Exposure	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity	No information available.
Persistence and Degradibility	No information available.
Bioaccumulative Potential	No information available.
Mobility in Soil	No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods and containers	Dispose according to applicable local and state government regulations.
Special precautions for landfill or incineration	Please consult your state Land Waste Management Authority for more information.

14. TRANSPORT INFORMATION

Classified as a dangerous good according to the Australian Code for the Transport of Dangerous goods by road or rail (ADG 7).

UN Number	1805
Proper Shipping Name	PHOSPHORIC ACID, SOLUTION
Dangerous Goods Class	8
Subsidiary Risk	Not applicable
Hazchem Code	2R
Packing Group	III
Special Provisions	223
Limited Quantities	5L
Packagings & IBCs - Packing Instruction	P001, IBC03,LP01
Packagings & IBCs - Special Packing Provisions	Not applicable
Portable Tanks & Bulk Containers – Instructions	T4
Portable Tanks & Bulk Containers – Special Provisions	TP1

15. REGULATORY INFORMATION

Phosphoric acid, water, potassium hydroxide, urea, zinc oxide and humic acid are listed in the Australian Inventory of Chemical Substances (AICS).

Poisons Schedule: 6

16. OTHER INFORMATION

Last Revision of MSDS	Rev 1.1 09/01/2017
Abbreviations Used	GHS: Globally Harmonised System of Classification and Labeling of Chemicals IARC: International Agency for Research on Cancer STEL: Short term exposure limit TWA: Time weighted average

Emergency Contacts

AgroBest Australia Pty Ltd	**07 5596 0622**
AgroBest Australia Pty Ltd – Emergency Number	**0419 758 458**
Police and Fire Brigade	**000**
Poisons Information Centre	**13 11 26**