



4 Farmers ... For Farmers  
Printing date 30.09.2016

# SAFETY DATA SHEET

According to Safe Work Australia

Revision: 30.09.2016

## 1. IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

**Product Name: ALUMINIUM PHOSPHIDE 56% TABLET**

**Other Means of Identification:** Mixture

**Recommended Use of the Chemical and Restriction on Use:** Fumigant

**Details of Manufacturer or Importer:**

4Farmers Australia Pty Ltd  
70 McDowell Street  
Welshpool WA 6106

**Phone Number:** +61 8 9356 3446

**Emergency telephone number:** National Poison Information Centre: 13 11 26

## 2. HAZARDS IDENTIFICATION

### Hazardous Nature:

Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition).



flame

Water-react. 2      H261 In contact with water releases flammable gases.



skull and crossbones

Acute Toxicity (Oral) 2      H300 Fatal if swallowed.



environment

Aquatic Acute 1      H400 Very toxic to aquatic life.

Aquatic Chronic 1      H410 Very toxic to aquatic life with long lasting effects.

**Signal Word** Danger

### Hazard Statements

H261 In contact with water releases flammable gases.

H300 Fatal if swallowed.

H410 Very toxic to aquatic life with long lasting effects.

### Precautionary Statements

P223 Do not allow contact with water.

P231+P232 Handle under inert gas. Protect from moisture.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P273 Avoid release to the environment.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P321 Specific treatment (see on this label).

P330 Rinse mouth.

P370+P378 In case of fire: Use for extinction: CO2, sand, extinguishing powder.

P335+P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

(Contd. on page 2)

# SAFETY DATA SHEET

## According to Safe Work Australia

Printing date 30.09.2016

Revision: 30.09.2016

**Product Name: ALUMINIUM PHOSPHIDE 56% TABLET**

(Contd. of page 1)





P391 Collect spillage.  
 P405 Store locked up.  
 P402+P404 Store in a dry place. Store in a closed container.  
 P501 Dispose of contents/container in accordance with local/regional/national regulations.

**Additional Information**

AUH029 Contact with water liberates toxic gas.  
 AUH032 Contact with acids liberates very toxic gas.

### 3 . COMPOSITION AND INFORMATION ON INGREDIENTS

**Chemical Characterization: Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.**Hazardous Components:**

20859-73-8	Aluminium phosphide	≥56%
	 Water-react. 2, H261;  Acute Toxicity (Oral) 2, H300;  Aquatic Acute 1, H400;  Aquatic Chronic 1, H410	

### 4 . FIRST AID MEASURES

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. DO NOT apply mouth-to-mouth resuscitation, use a proper respiratory device. Seek medical attention if breathing problems develop.

**Skin Contact:**

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

**Eye Contact:**

In case of eye contact, hold eyelids open and rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.

**Ingestion:**

If swallowed, do not induce vomiting. DO NOT administer anything orally. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

**Symptoms Caused by Exposure:**

Inhalation: May be harmful if inhaled.  
 Ingestion: Fatal if swallowed.

**Medical Attention and Special Treatment:**

If swallowed give gastric lavage with 0.1% potassium permanganate solution and then administer a slurry of medicinal charcoal with water (1g charcoal per kg bodyweight).

### 5 . FIRE FIGHTING MEASURES

**Suitable Extinguishing Media:** Dry sand, clay, dry chemical powder or carbon dioxide. DO NOT use water.

**Specific Hazards Arising from the Chemical:**

This product is not flammable. However, contact with incompatible materials may generate hydrogen phosphide gas which is extremely flammable and toxic.

Hydrogen phosphide vapours may travel considerable distances to a source of ignition where they can ignite, flashback, or explode.

Closed containers may explode when exposed to extreme heat. Containers close to fire should be removed if safe to do so.

(Contd. on page 3)

# SAFETY DATA SHEET

According to Safe Work Australia

Printing date 30.09.2016

Revision: 30.09.2016

**Product Name: ALUMINIUM PHOSPHIDE 56% TABLET**

(Contd. of page 2)

**Special Protective Equipment and Precautions for Fire Fighters:**

When fighting a major fire wear self-contained breathing apparatus and protective equipment.

**6 . ACCIDENTAL RELEASE MEASURES****Personal Precautions, Protective Equipment and Emergency Procedures:**

Wear approved dust/particulate filter respirator and full protective clothing. Evacuate all non-essential personnel from affected area. Do not breathe dust. Ensure adequate ventilation. Avoid generating dust.

**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 sweep product into a pile and shovel into drums for subsequent disposal. Avoid generating dust. Provide adequate ventilation. Thoroughly scrub the spill area with a strong detergent and rinse well with water.

This product can be deactivated as follows:

Prepare a solution of 2% low sudsing detergent in water (~4 cups detergent in 130 L of water). Use ~70 L of solution for 25 kg of product.

In a well ventilated area, while wearing respiratory protection, slowly add the spilt product to the solution while stirring. Keep the product completely submerged for at least 36 hours. DO NOT cover the container. Dispose of solution according to local regulations.

**7 . HANDLING AND STORAGE****Precautions for Safe Handling:**

Use of safe work practices are recommended to avoid eye or skin contact and inhalation of dust or gas.

Hydrogen phosphide gas may buildup in containers over time. When opening, point containers away from the face and body.

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 water, acids, oxidising agents and certain metals (including gold, silver and brass). Shelf-life is over three years if stored correctly. Store locked up. Do not store in buildings inhabited by people or animals.

**8 . EXPOSURE CONTROLS AND PERSONAL PROTECTION****Exposure Standards:****20859-73-8 Aluminium phosphide**WES TWA: 2 mg/m<sup>3</sup>  
as Al**7803-51-2 Phosphine**WES STEL: 1.4 mg/m<sup>3</sup>, 1 ppm  
TWA: 0.42 mg/m<sup>3</sup>, 0.3 ppm

Contact with incompatible materials may generate phosphine gas.

**Engineering Controls:**

Maintain air concentration below occupational exposure standards, providing adequate ventilation.

**Respiratory Protection:**

Use approved vapour respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapour, inadequate ventilation, development of respiratory tract

(Contd. on page 4)

# SAFETY DATA SHEET

## According to Safe Work Australia

Printing date 30.09.2016

Revision: 30.09.2016

### Product Name: ALUMINIUM PHOSPHIDE 56% TABLET

(Contd. of page 3)

irritation) and engineering controls are not feasible. See Australian Standards AS/NZS 1715 and 1716 for more information.

#### Skin Protection:

PVC, PVA, nitrile, neoprene, rubber or vinyl gloves. See Australian/New Zealand Standard AS/NZS 2161 for more information. When selecting gloves for use against certain chemicals, the degradation resistance, permeation rate and permeation breakthrough time should be considered.

Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing). See Australian/New Zealand Standard AS/NZS 4501 for more information.

#### Eye and Face Protection:

Eye and face protectors for protection against splashing materials or liquids. See Australian/New Zealand Standard AS/NZS 1337 for more information.

## 9 . PHYSICAL AND CHEMICAL PROPERTIES

#### Appearance:

<b>Form:</b>	Solid tablets.
<b>Colour:</b>	Grey
<b>Odour:</b>	Garlic-like odour
<b>Odour Threshold:</b>	No information available
<b>pH-Value at 20 °C:</b>	9.20 ± 0.04
<b>Melting point/Melting range:</b>	>1000 °C
<b>Initial Boiling Point/Boiling Range:</b>	No information available
<b>Flash Point:</b>	No information available
<b>Flammability:</b>	Product is not flammable. Contact with water liberates extremely flammable gases.
<b>Auto-ignition Temperature:</b>	>620 °C
<b>Decomposition Temperature:</b>	No information available
<b>Explosion Limits:</b>	
<b>Lower:</b>	No information available
<b>Upper:</b>	No information available
<b>Vapour Pressure:</b>	No information available
<b>Bulk Density at 20 °C:</b>	1.0398 ± 0.055 g/mL
<b>Vapour Density:</b>	No information available
<b>Evaporation Rate:</b>	No information available
<b>Solubility in Water:</b>	Contact with water liberates toxic and extremely flammable gas.
<b>Partition Coefficient (n-octanol/water):</b>	No information available

## 10 . STABILITY AND REACTIVITY

#### Possibility of Hazardous Reactions:

Contact with water liberates toxic gas.  
Contact with water liberates extremely flammable gases.  
Contact with acids liberates very toxic gas.

#### Chemical Stability:

Stable at ambient temperature and under normal conditions of use. Shelf-life is over three years if stored correctly.

**Conditions to Avoid:** No further relevant information available.

(Contd. on page 5)

# SAFETY DATA SHEET

According to Safe Work Australia

Printing date 30.09.2016

Revision: 30.09.2016

**Product Name: ALUMINIUM PHOSPHIDE 56% TABLET**

(Contd. of page 4)

**Incompatible Materials:**

Water, acids, oxidising agents and certain metals (including gold, silver and brass).  
This product may corrode metals, particularly at high temperatures and humidity.

**Hazardous Decomposition Products:**

Contact with incompatible materials may generate hydrogen phosphide gas.

## 11 . TOXICOLOGICAL INFORMATION

**Toxicity:****LD<sub>50</sub>/LC<sub>50</sub> Values Relevant for Classification:****20859-73-8 Aluminium phosphide**

Oral	LD <sub>50</sub>	25 mg/kg (rat)
Dermal	LD <sub>50</sub>	1852.83 mg/kg (rat)
Inhalation	LC <sub>50</sub>	38.945 ppm (rat)

**Acute Health Effects**

**Inhalation:** May be harmful if inhaled.

**Skin:** No irritating effect.

**Eye:** No irritating effect.

**Ingestion:** Fatal if swallowed.

**Skin Corrosion / Irritation:** Based on classification principles, the classification criteria are not met.

**Serious Eye Damage / Irritation:** Based on classification principles, the classification criteria are not met.

**Respiratory or Skin Sensitisation:** Based on classification principles, the classification criteria are not met.

**Germ Cell Mutagenicity:** Based on classification principles, the classification criteria are not met.

**Carcinogenicity:** This product does NOT contain any IARC listed chemicals.

**Reproductive Toxicity:** Based on classification principles, the classification criteria are not met.

**Specific Target Organ Toxicity (STOT) - Single Exposure:**

Based on classification principles, the classification criteria are not met.

**Specific Target Organ Toxicity (STOT) - Repeated Exposure:**

Based on classification principles, the classification criteria are not met.

**Aspiration Hazard:** Based on classification principles, the classification criteria are not met.

**Chronic Health Effects:** No information available

**Existing Conditions Aggravated by Exposure:** No information available

**Additional toxicological information:** No information available

## 12 . ECOLOGICAL INFORMATION

**Ecotoxicity:**

Toxicity to earthworms:

LC50/14 d: 257.3 mg/kg soil

**Aquatic toxicity:** Very Toxic to aquatic life with long lasting effects.

**Persistence and Degradability:** No further relevant information available.

**Bioaccumulative Potential:** No further relevant information available.

**Mobility in Soil:** No further relevant information available.

(Contd. on page 6)

# SAFETY DATA SHEET

According to Safe Work Australia

Printing date 30.09.2016

Revision: 30.09.2016

**Product Name: ALUMINIUM PHOSPHIDE 56% TABLET**

(Contd. of page 5)

**Other adverse effects:** No further relevant 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

<b>UN Number ADG, IMDG, IATA</b>	UN3048
<b>Proper Shipping Name ADG</b>	ALUMINIUM PHOSPHIDE PESTICIDE, ENVIRONMENTALLY HAZARDOUS
<b>IMDG</b>	ALUMINIUM PHOSPHIDE PESTICIDE (ALUMINIUM PHOSPHIDE), MARINE POLLUTANT
<b>IATA</b>	ALUMINIUM PHOSPHIDE PESTICIDE
<b>Dangerous Goods Class ADG Class:</b>	6.1 Toxic substances.
<b>Packing Group: ADG, IMDG, IATA</b>	I
<b>Marine pollutant:</b>	Yes Symbol (fish and tree)
<b>EMS Number:</b>	F-A,S-A
<b>Hazchem Code:</b>	4W
<b>Special Provisions:</b>	153
<b>Limited Quantities:</b>	0
<b>Packagings &amp; IBCs - Packing Instruction:</b>	P002, IBC07
<b>Packagings &amp; IBCs - Special Packing Provisions:</b>	B1
<b>Portable Tanks &amp; Bulk Containers - Instructions:</b>	T6
<b>Portable Tanks &amp; Bulk Containers - Special Provisions:</b>	TP33

## 15 . REGULATORY INFORMATION

**Australian Inventory of Chemical Substances:**

20859-73-8 Aluminium phosphide

**Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:**

Poisons Schedule: 7

## 16 . OTHER INFORMATION

**Date of Preparation or Last Revision:** 30.09.2016**Prepared by:** MSDS.COM.AU Pty Ltd[www.msds.com.au](http://www.msds.com.au)**Abbreviations and acronyms:**

ADG: Australian Dangerous Goods

IMDG: International Maritime Code for Dangerous Goods

(Contd. on page 7)

# SAFETY DATA SHEET

## According to Safe Work Australia

Printing date 30.09.2016

Revision: 30.09.2016

**Product Name: ALUMINIUM PHOSPHIDE 56% TABLET**

(Contd. of page 6)

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC<sub>50</sub>: Lethal concentration, 50 percentLD<sub>50</sub>: Lethal dose, 50 percent

IARC: International Agency for Research on Cancer

STEL: Short Term Exposure Limit

TWA: Time Weighted Average

NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)

Water-react. 2: Substances and mixtures, which in contact with water, emit flammable gases. Hazard Category 2

Acute Toxicity (Oral) 2: Acute toxicity – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment, short-term (Acute). Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment, long-term (Chronic). Category 1

**Disclaimer**

This SDS is prepared in accord with the Safe Work Australia document “Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - December 2011”

The information contained in this safety data sheet is provided in good faith and is believed to be accurate at the date of issuance. 4Farmers Australia Pty Ltd makes no representation of the accuracy or comprehensiveness of the information and to the full extent allowed by law excludes all liability for any loss or damage related to the supply or use of the information in this material safety data sheet. MSDS.COM.AU Pty Ltd is not in a position to warrant the accuracy of the data herein. The user is cautioned to make their own determinations as to the suitability of the information provided to the particular circumstances in which the product is used.