



Preparation Date 10-May-2015

Revision date 03-Jan-2019

Revision Number: 5

# Safety Data Sheet

## 1. Identification of the Substance/Preparation and of the Company/Undertaking

### Product identifier

**Product Description:** WEEVIL-CIDE Gas Bags

### Other means of identification

**Product code** 12U-142B  
**UN/ID no.** UN1397  
**Registration number(s)** 70506-15

### Recommended use of the chemical and restrictions on use

**Recommended use** Restricted Use Pesticide. The use of his product is STRICTLY PROHIBITED on single family and multi-family residential properties, nursing homes, schools (except athletic fields), daycare facilities and hospitals.  
**Uses advised against** Activities contrary to label recommendation  
Non labeled activities

### Details of the Supplier of the Safety Data Sheet

**Supplier Address**  
UPL NA Inc.  
630 Freedom Business Center  
Suite 402  
King of Prussia, PA 19406

### Emergency telephone number

**Company Phone Number** 1-800-438-6071  
**Emergency telephone number** Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887  
Medical: Rocky Mountain Poison Control Center  
(866) 673-6671 (24hrs)

## 2. Hazards Identification

### Classification

#### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 2
Acute toxicity - Inhalation (Gases)	Category 1
Acute toxicity - Inhalation (Vapors)	Category 1
Substances or mixtures which, in contact with water, emit flammable gases	Category 1

### Label elements

#### **EMERGENCY OVERVIEW**

**DANGER**

#### **Hazard Statements**

Fatal if inhaled  
FATAL IF SWALLOWED  
Harmful in contact with skin  
In contact with water releases flammable gases which may ignite spontaneously



**Appearance** Bag

**Physical state** solid

**Odor** Sulfurous Pure phosphine gas is odorless but a garlic odor might be detected due to a contaminant. Since odor may not be detected under certain circumstances, the absence of a garlic odor does not mean that phosphine gas is absent.

#### Precautionary Statements - Prevention

Do not eat, drink or smoke when using this product  
 Do not handle until all safety precautions have been read and understood  
 Protect from moisture  
 Wear eye/face protection  
 Wear protective gloves  
 Wash hands thoroughly after handling

#### IF INHALED

Immediately call a POISON CENTER or doctor/physician  
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 Rinse mouth

#### Precautionary Statements - Storage

Store locked up  
 Store in a well-ventilated place. Keep container tightly closed

#### Precautionary Statements - Disposal

Refer to manufacturer/supplier for information on recovery/recycling

#### Hazards Not Otherwise Classified (HNOC)

##### OTHER INFORMATION

- Very toxic to aquatic life
- May be harmful in contact with skin

### 3. Composition/information on Ingredients

Chemical name	CAS No	Weight-%
Aluminum phosphide	20859-73-8	60

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

### 4. First aid measures

#### FIRST AID MEASURES

##### Eye contact

Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Immediate medical attention is required.

##### Skin contact

Brush or shake off material. Wash contaminated skin with soapy water in a well ventilated area.  
 Do not leave contaminated clothing in occupied or confined areas such as car or van.  
 Brush or shake off clothes. Allow clothes to aerate prior to laundering. Remove and wash

contaminated clothing before re-use.

<b>Inhalation</b>	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Keep warm and make sure person can breathe freely.
<b>Ingestion</b>	Call a physician or poison control center immediately. Do not induce vomiting without medical advice. Vomiting may off-gas and release phosphine, which could pose a risk of secondary contamination. Never give anything by mouth to an unconscious person.
<b>Protection of First-aiders</b>	Use personal protective equipment.

### **Most Important Symptoms and Effects, Both Acute and Delayed**

<b>Most Important Symptoms and Effects</b>	Headache. Dizziness. Nausea. Difficulty in breathing. Diarrhea.
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### **Indication of Any Immediate Medical Attention and Special Treatment Needed**

<b>Notes to physician</b>	<p>Aluminum phosphide- This product reacts with moisture from air, water, acids and many other liquids to release hydrogen phosphide (phosphine) gas. Symptoms of severe poisoning may occur within a few hours to several days. Phosphine poisoning may result in pulmonary edema, liver elevated serum GOT, LDH and alkaline phosphatase, reduced prothrombin, hemorrhage and jaundice, and kidney hematuria and anuria. Pathology is characterized by hypoxia.</p> <p>Mild inhalation exposure causes malaise, ringing of ears, fatigue, nausea, and pressure in the chest, which is relieved by removal to fresh air. Moderate poisoning causes weakness, vomiting, and pain just above the stomach, chest pain, diarrhea and dyspnea. Symptoms of severe poisoning may occur within a few hours to several days, resulting in pulmonary edema and may lead to dizziness, cyanosis, unconsciousness and death.</p> <p>In sufficient quantity, phosphine affects the liver, kidneys, lungs, nervous system, and circulatory system. Inhalation can cause lung edema, and hyperemia. Ingestion can cause lung and brain symptoms but damage to the viscera is more common. Phosphine poisoning may result in (1) pulmonary edema, (2) liver elevated serum GOT, LDH and alkaline phosphatase, reduced prothrombin, hemorrhage and jaundice and (3) kidney hematuria and anuria. Pathology is characterized by hypoxia. Frequent exposure to subacute concentrations over a period of days or weeks may cause poisoning. Treatment is symptomatic.</p>
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## **5. Fire-fighting measures**

### **Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>). Aquatic. Foam.

Aluminum phosphide is not flammable; however, it reacts with water to produce hydrogen phosphide (phosphine) gas which may ignite spontaneously at concentrations above the LEL of 1.8% v/v.

**Unsuitable extinguishing media** Aquatic.

### **Specific hazards arising from the chemical**

Thermal decomposition can lead to release of irritating gases and vapours.

Metal phosphides: Hydrogen phosphide (phosphine)/air mixtures at concentrations above the lower flammable limit may ignite spontaneously. Ignition of high concentrations of hydrogen phosphide can produce a very energetic reaction. Explosions can occur under these conditions and may cause personal injury. NEVER allow build up of hydrogen phosphide to exceed explosive concentrations. Containers of metal phosphides should be opened in open air and never in a flammable atmosphere. Do not confine spent or partially spent dust as slow release of hydrogen phosphide may result in formation of an explosive atmosphere. Spontaneous ignition may occur if large quantities of aluminum phosphide are piled in contact with liquid water. Fires containing metal phosphides or hydrogen phosphide will produce phosphoric acid by the following reaction:  $2PH_3 + 4O_2 = H_2O + P_2O_5 = 2H_3PO_4$ .

**Hazardous combustion products** Phosphine gas.

### **Explosion data**

### **Protective equipment and precautions for firefighters**

Use personal protective equipment. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions** Avoid contact with skin and eyes. An accidental spill/release of material may produce high levels of gas. A NIOSH/MSHA approved full face gas mask with phosphine cartridge or SCBA must be employed during wet deactivation of partially spent material. Wear protective gloves and clothing. Wear protective gloves/protective clothing and eye/face protection.

### Environmental Precautions

**Environmental precautions** Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

### Methods and material for containment and cleaning up

**Methods for Clean-Up** Damaged aluminum foil pouches should be transferred to a sound dry metal container and immediately seal and properly label as aluminum phosphide. Do not use water at any time during clean-up. Damaged aluminum flasks should be transferred to a sound dry metal container and immediately seal and properly label as aluminum phosphide.

## 7. Handling and Storage

### Precautions for safe handling

#### Handling

Use of this product is STRICTLY PROHIBITED on single and multifamily residential properties and nursing homes, schools (except athletic fields) daycare facilities and hospitals. Keep out of reach of children. Do not eat, drink or smoke when using this product. Remove all sources of ignition. Wear personal protective equipment. It is recommended that the gas-tight, aluminum flask be opened in open air or near a fan, which exhausts outside immediately. Never open in a flammable atmosphere as the product may, although rare, flash. When opening, point container away from the face and body. These precautions will reduce the applicators potential for exposure to hydrogen phosphide (phosphine) gas. Do not expose product to atmospheric moisture any longer than is necessary.

### Conditions for safe storage, including any incompatibilities

#### Storage

Keep out of the reach of children. Protect from moisture. Store in original container.

#### incompatible materials

Aquatic. Hydrogen phosphide may react with certain metals (gold, silver, brass, other precious metals and their alloys) and cause corrosion especially at high temperatures and relative humidities. Small electric detectors, brass sprinkler heads, batteries and battery chargers, forklifts, temperature monitoring systems, electrical switch gear, communication devices, computers, calculators, watches and other electronic equipments should be protected or removed before fumigation.

## 8. Exposure Controls/Personal Protection

#### Exposure guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### Engineering controls

Ensure adequate ventilation, especially in confined areas. Measurements of the concentration Aluminium phosphide in the air must be provided and used to verify the concentration in the atmosphere.

### Personal protective equipment

**Eye/Face Protection** Use eye protection to avoid eye contact. Where there is potential for eye contact have eye flushing equipment available. Safety glasses with side-shields.  
**Skin protection** Wear protective gloves/clothing. Socks and footwear.  
**Respiratory protection**

A NIOSH/MESA approved full face mask with approved canister for phosphine may be employed for concentrations up to 15 ppm. At concentrations above that level, or when concentrations are unknown, NIOSH/MESA approved SCBA or equivalent must be worn.

**General hygiene considerations**

Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product.

**9. Physical and Chemical Properties**

**Information on basic physical and chemical properties**

<b>Physical state</b>	solid	<b>Odor</b>	Sulphurous Pure phosphine gas is odorless but a garlic odor might be detected due to a contaminant. Since odor may not be detected under certain circumstances, the absence of a garlic odor does not mean that phosphine gas is absent.
<b>Appearance</b>	Bag		
<b>color</b>	light Gray to white		

<u>Property</u>	<u>VALUES</u>	<u>Remarks/ • Method</u>
pH	No information available	
Melting point/freezing point	no data available	
Boiling Point/Range	No information available	
Flash Point	No information available	
Evaporation Rate	No information available	
Flammability (solid, gas)		Contact with water or acids liberates flammable gases.
<b>Flammability limit in air</b>		
Upper Flammability Limit	No information available	
Lower Flammability Limit	No information available	
vapor pressure	No information available	
Vapor Density	No information available	
Specific gravity	2.85	
Water solubility	No information available	
Solubility in Other Solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	no data available	
Decomposition temperature	No information available	
Viscosity, kinematic	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

**OTHER INFORMATION**

Softening point	No information available
molecular weight	No information available
VOC Content	No information available
Liquid Density	No information available

## 10. Stability and Reactivity

### Reactivity

Water reactive

### Chemical stability

Stable under recommended storage conditions.

Reacts with water to form hydrogen phosphide (phosphine) gas.

### Possibility of hazardous reactions

None under normal processing.

#### **Hazardous polymerization**

Hazardous polymerisation does not occur.

### Conditions to avoid

Exposure to moisture. Protect from water.

### incompatible materials

Aquatic. Hydrogen phosphide may react with certain metals (gold, silver, brass, other precious metals and their alloys) and cause corrosion especially at high temperatures and relative humidities. Small electric detectors, brass sprinkler heads, batteries and battery chargers, forklifts, temperature monitoring systems, electrical switch gear, communication devices, computers, calculators, watches and other electronic equipments should be protected or removed before fumigation.

### Hazardous decomposition products

Phosphine gas.

## 11. Toxicological Information

### Information on Likely Routes of Exposure

<b>Inhalation</b>	Respiratory, gastrointestinal, and nervous system symptoms were noted in workers exposed to mean phosphine concentrations less than 10 ppm. Fatal if inhaled.
<b>Eye contact</b>	Irritating to eyes.
<b>Skin contact</b>	Reacts, PH <sub>3</sub> generated is slightly soluble. Harmful in contact with skin.
<b>Ingestion</b>	MAY BE FATAL IF SWALLOWED.

### **Component Information**

Aluminum phosphide -  
 Acute oral LD<sub>50</sub> = 11.5 mg/kg  
 Acute dermal LD<sub>50</sub> = >5,000 mg/kg (1 hr exposure)  
 Sensitization = Not a sensitizer Hydrogen phosphide (phosphine) gas -  
 Inhalation = LC<sub>50</sub> 190 ppm (1 hour)

### Information on Toxicological Effects

**Symptoms** No information available.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Sensitization** No information available.  
**Mutagenic effects** no data available.  
**Carcinogenicity** Aluminum phosphide:  
 Chronic effects = Not expected to produce target organ effects  
 Mutagenicity = No data  
 Carcinogenicity = Not classified as a carcinogen by IARC, OSHA, or NTP  
 Reproductive and Developmental Effects = Not expected to produce reproductive or developmental effects. Hydrogen phosphide (phosphine) gas -  
 Chronic effects = In a 2-year study, rats were exposed to 48-90 g/m<sup>3</sup> of feed and no overt systemic toxicity was noted.

Mutagenicity = Increased frequency of cells with structural chromosomal aberrations noted in an invitro cytogenetic assay with Chinese hamster ovary cells.  
 Carcinogenicity = Not classified as a carcinogen by IARC, OSHA or NTP  
 Reproductive and developmental effects = Not expected to product reproductive or developmental effects.  
 Not Available.  
 no data available.  
 no data available.  
 Respiratory System, EYES, skin.  
 No information available.

**Reproductive effects**  
**STOT - Single Exposure**  
**STOT - Repeated Exposure**  
**Target organ effects**  
**Aspiration hazard**

**Numerical Measures of Toxicity - Product information**

mg/l  
**LD50 Oral** 11.5 mg/kg (rat)  
**LD50 Dermal** > 5000 mg/kg (rat)  
**LC50 Inhalation** Inhalation LC50 190 ppm

**12. Ecological Information**

**ecotoxicity**

Highly toxic to wildlife

**Persistence/Degradability**

no data available.

**Bioaccumulation/ Accumulation**

Does not bioaccumulate.

**Other Adverse Effects**

no data available

**13. Disposal Considerations**

**Waste Treatment Methods**

**Waste Disposal Method** Follow label for proper disposal instructions.

**Contaminated packaging** Refer to product label.

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Aluminum phosphide		P006		

**14. Transport Information**

**DOT**

When shipped in bulk or internationally the marine pollutant marking must also be added to the package.

Aluminum flasks are covered under DOT special permit DOT -SP 13307 the following description is to be used:

UN3048  
 Aluminum phosphide pesticides  
 6.1  
 PG I

**UN/ID no.**

When shipped in cases the following description is to be used:  
 UN1397

Hazard class	4.3
Subsidiary class	6.1
Packing group	PG I
Reportable Quantity (RQ):	100 lbs

**TDG**

UN/ID no.	UN1397
Proper shipping name	Aluminum phosphide
Hazard class	4.3
Subsidiary class	6.1
Packing group	PG I

**IATA**

UN/ID no.	UN1397
Proper shipping name	Aluminum phosphide
Hazard class	4.3
Subsidiary class	6.1
Packing group	PG I
Description	Forbidden by passenger aircraft

**IMDG**

UN/ID no.	UN1397
Proper shipping name	Aluminum phosphide
Hazard class	4.3
Subsidiary class	6.1
Packing group	PG I
EmS No.	F-G, S-N
Environmental hazards	Marine pollutant

## 15. Regulatory Information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

**signal word** DANGER

**Ventilation Control** PESTICIDE APPLICATORS & WORKERS THESE WORKERS MUST REFER TO PRODUCT LABELING AND DIRECTIONS FOR USE IN ACCORDANCE WITH EPA WORKER PROTECTION STANDARD 40 CFR PART 170.

**Restricted Use Pesticide. Due to inhalation toxicity of phosphine gas. Keep out of Reach of Children. May be fatal if swallowed. May be fatal if inhaled. Toxic to wildlife.**

**The use of this product is STRICTLY PROHIBITED on single family and multi family residential properties, nursing homes, schools (except athletic fields), daycare facilities and hospitals.**

**Granules or dust can be fatal if swallowed. When sealed container is opened, allowing material to come in contact with moisture, water or acids, toxic phosphine gas will be released. Phosphine may ignite spontaneously at levels above its lower flammable limit of 1.8% v/v, it is important not to exceed this concentration. Ignition of high concentrations of phosphine can produce a very energetic reaction. NEVER ALLOW build up of phosphine to exceed concentrations. Do not confine spent or partially spent granules, as the slow release of phosphine may result in formation of an explosive atmosphere. Opening pouches in open air may produce a flash due to phosphine build up.**

**International Inventories**

USINV	Present
DSL/NDL	Present
EINECS/	Present



<b>ELINCS</b>	
<b>ENCS</b>	Not Present
<b>China</b>	Present
<b>KECL</b>	Present
<b>PICCS</b>	Present
<b>AICS</b>	Present
<b>TSCA</b>	Present

- **TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
- ENCS** - Japan Existing and New Chemical Substances
- IECSC** - China Inventory of Existing Chemical Substances
- KECL** - Korean Existing and Evaluated Chemical Substances
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- AICS** - Australian Inventory of Chemical Substances

**Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

**CERCLA**

Not applicable

Chemical name	RQ	CERCLA EHS RQs	RQ
Aluminum phosphide 20859-73-8	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ

**CERCLA**

Component	RQ
Aluminum phosphide 20859-73-8 ( 60 )	100 lb

**SARA Product RQ** 0

Component	CERCLA EHS RQs
Aluminum phosphide 20859-73-8 ( 60 )	100 lb

**RCRA**

Component	RCRA - D Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Aluminum phosphide 20859-73-8 ( 60 )		P006	

**Pesticide Information**

Component	FIFRA - Restricted Use	FIFRA - Pesticide Product Other Ingredients	FIFRA - Listing of Pesticide Chemicals	California Pesticides - Restricted Materials
Aluminum phosphide 20859-73-8 ( 60 )	Under further evaluation as sole active ingredient for agricultural crop uses No mixtures registered.			

**State Regulations**

**State Right-to-Know**

Not applicable

**International regulations**

**U.S. EPA Label information**

**EPA Pesticide registration number** 70506-15

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**16. Other Information**

**NFPA**                      **HEALTH 4**                      **flammability 4**                      **Instability 2**                      **Physical hazard W/**

**Preparation Date**                      10-May-2015

**Revision date**                      03-Jan-2019

**Revision Summary**

Update logo Update section 1 Update Section 16\*\*\*

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**End of SDS**