

# TALUNEX® MAPP 15974

**A pellet formulation containing 56% w/w, aluminium phosphide for the control of rabbits, moles and rats outdoors by qualified persons using the Topex® applicator or other equivalent equipment.**

## IMPORTANT INFORMATION

Field of use: FOR USE ONLY AS A VERTEBRATE CONTROL AGENT BY COMPETENT PERSONS  
Situations: all situations (outdoor).

Other specific restrictions:  
This product must be used only by operators trained in the use of aluminium phosphide and familiar with the precautionary measures to be observed.  
See HSE Agriculture Information Sheet No. 22:

Gassing of Rabbits and Vertebrate Pests, and HSE Guidance Note 251: Health and Safety Guidance for Employers and Technicians carrying out Fumigation Operations.

This product must not be used adjacent to water courses.

This product must not be used in wet weather.

This product must not be placed or allowed to remain on the ground surface.

This product must not be used within 10 metres of

human or animal habitation. The container must not be re-used for any purpose.

This product must only be applied via the Topex applicator or other equivalent equipment.

**Read the label before use.**

Using this product in a manner that is inconsistent with the label may be an offence. Follow the code of practice for using plant protection products.

**Always read the label and product information before use.**

Net contents: 100g e (approx. 160 pellets) For Batch Number and Manufacturing Date: see container.

## Risk and Safety information TALUNEX

A pellet formulation containing 56% w/w, aluminium phosphide. Fatal if swallowed. Toxic in contact with skin. Fatal if inhaled. Causes serious eye damage. In contact with water releases flammable gases which might ignite spontaneously. Very toxic to aquatic life. Contact with water liberates toxic gas. Contact with acids liberates very toxic gas. Keep away from any possible contact with water, because of violent reaction and possible flash fire. Protect from moisture. Keep only in original container. Keep cool. Do not breathe dust. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Wear suitable respiratory equipment such as a full face respirator with appropriate gas filter cartridge (which also meets P3 standards for particulates) or SCBA. IF SWALLOWED: Immediately call a POISON CENTRE of doctor/physician. Call a POISON CENTRE of doctor/physician if you feel unwell. Specific treatment see first aid on this label. Brush off loose particles from skin. In case of fire use carbon dioxide (CO<sub>2</sub>), dry sand to extinguish. Store in a dry place. Store in a closed container. Store in a well ventilated area. Store locked up. Dispose of contents/container to an approved waste disposal plant



## READ DIRECTIONS FOR USE ON ENCLOSED LEAFLET THOROUGHLY BEFORE OPENING OR USE

THE (COSHH) CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS MAY APPLY TO THE USE OF THIS PRODUCT AT WORK - UK ONLY

Killgerm Group Ltd., P.O.Box 2, Ossett, West Yorkshire, WF5 9NA, Telephone 0044 (0) 1924 268400,

Fax 0044 (0) 1924 264757, Email Sales@killgerm.com

For technical and non-emergency calls - phone 0044 (0) 1924 268400 For advice on medical emergencies, fires, spillages or chemical hazards ONLY – phone 0870 190 6777 @Talunex and Topex are registered trademarks of Killgerm Chemicals Ltd. Approval Holder: Detia Degesch GmbH, Dr - Werner - Freyberg - Str.11, 69514 Laudenbach, Germany

This product is approved under the Control of Pesticides Regulations 1986

## **SAFETY PRECAUTIONS**

### **Operator protection**

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment;

Operators must wear suitable protective clothing (coveralls), suitable protective gloves and suitable respiratory protective equipment\* when handling the product or applying the product. \*Full facemask to at least EN 136 with a particulate filter to at least EN143 B2P3, or equivalent.

However, engineering controls may replace personal protective equipment if a

COSHH assessment shows they provide an equal or higher standard of protection.

When using do not eat drink or smoke.

Extinguish all naked flames.

Avoid all contact by mouth.

Wash hands and exposed skin before eating, drinking or smoking and after work.

Do not breathe gas.

Open container in a well ventilated space.

In case of accident or if you feel unwell, seek medical advice (show label where possible).

Contact with water liberates very toxic highly flammable gas which is irritating to

the eyes and respiratory system.

### **Environmental protection**

Dangerous to Fish. Do not contaminate surface waters or ditches with chemical or used container.

Search for rodent bodies and dispose of safely (e.g. do not bury). Do not dispose of in refuse sacks or on open rubbish tips.

Badgers are protected animals: Setts must not be gassed. Aluminium phosphide must not be used if there are active badger setts/fox earths in the treatment area.

Care must be taken to avoid gassing non-target animals. Badger and polecat are protected under the Wildlife and Countryside Act 1981 and may use rabbit burrows. Avoid using Talunex in burrows or warren systems where there is evidence of current badger or fox activity or where such systems may be connected to an active sett or earth. Reptiles and the natterjack toad are also protected under the Wildlife and Countryside Act 1981; if these are likely to be present in the burrows, consult Natural England, Scottish Natural Heritage or the Countryside Commission for Wales, as appropriate, before using Talunex. Most bird species are protected under the Wildlife and

Countryside Act 1981. Do not use Talunex in areas and at times of year when adult or juvenile puffins, shearwaters or petrels are occupying burrows; do not use in burrows that may be occupied by other hole-nesting birds such as wheat-ears or shelduck.

### **Storage and disposal**

Keep in original container, tightly closed, under lock and key in a cool well ventilated dry place away from dwellings.

Empty container completely and dispose of safely in accordance with the guidelines given in 'Pesticides: Code of Practice for the safe use of Pesticides on Farms and Holdings and in safety data sheet'.

Keep away from food drink and animal feeding stuffs.

Keep out of reach of children.

This product is approved under the Control of Pesticides Regulations 1986.

## Risk and safety information

### TALUNEX

A pellet formulation containing 56% w/w, aluminium phosphide



Fatal if swallowed

Toxic in contact with skin

Fatal if inhaled

Causes serious eye damage.



In contact with water releases flammable gases which might ignite spontaneously

Very toxic to aquatic life.



Contact with water liberates toxic gas. Contact with acids liberates very toxic gas. Keep away from any possible contact with water, because of violent reaction and possible flash fire. Protect from moisture. Keep only in original container. Keep cool. Do not breathe dust. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Wear suitable respiratory equipment such as a full face respirator with appropriate gas filter cartridge (which also meets P3 standards for particulates) or SCBA. IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. Call a POISON CENTRE or doctor/physician if you feel unwell. Specific treatment see first aid on this label. Brush off loose particles from skin. In case of fire use carbon dioxide (CO<sub>2</sub>), dry sand to extinguish. Store in a dry place. Store in a closed container. Store in a well ventilated area. Store locked up. Dispose of contents/container to an approved waste disposal plant.

**DANGER**

## IMPORTANT INFORMATION

Field of use: FOR USE ONLY AS A VERTEBRATE CONTROL AGENT BY COMPETENT PERSONS

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Operations.

Fumigation.

This product must not be used adjacent to water courses.

This product must not be used in wet weather.

This product must not be placed or allowed to remain on the ground surface.

This product must not be used within 10 metres of human or animal habitation.

The container must not be re-used for any purpose.

This product must only be applied via the Topex applicator or other equivalent equipment.

**READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.**

45.00 mm

## **DIRECTIONS FOR USE**

IMPORTANT: This information is approved as part of the Product Label. All instructions in this section must be read carefully in order to obtain safe and successful use of this product.

## **RESTRICTIONS/WARNINGS**

Sale and supply of aluminium phosphide is governed by the Poisons Rules 1982\* made under the Poisons Act 1972. It is scheduled as a Part 1 poison.

\*Available from The Stationery Office.

**USE ALL CONTENTS OF FLASK. DO NOT RE-SEAL. EXCEPT WHEN TRANSPORTING EMPTY FLASKS TO WASTE STORAGE AREA. SEE SAFETY DATA SHEET.**

WARNING: Spontaneous combustion can

arise due to sudden release of phosphine gas if a flask having been opened once is then re-opened.

Open the pack out of doors/in a well ventilated place

Work sideways on to the wind.

DO NOT spill pellets on the ground.

DO NOT use in rain or heavy mist.

DO NOT use when the ground is very dry or waterlogged.

Take the empty container off the Topex Applicator. Tap the applicator to clear any dust. Repack and transport in the original Topex Container.

NEVER clean the applicator with water.

## **PESTS CONTROLLED**

Talunex may be used only against rabbits, moles and rats in woodland, on grassland, on arable and horticultural land (in the open air), on sports fields and on lawns. Application must not be made adjacent to watercourses. Talunex must not be used within 10 metres of human or animal habitation.

## **Mode of action**

Talunex reacts with moisture in the soil and air to release the toxic gas, phosphine. The gas is fatal to rabbits, moles and rats.

## **Method**

Talunex is inserted into rabbit burrows, mole tunnels and rat holes by means of the Topex Applicator or other equivalent equipment.

### Loading the Topex® applicator

Work in the open air, sideways to the wind. With gloved hands, carefully unscrew the closure from the Talunex container. Invert the Topex Applicator and screw the full container of Talunex into the orifice at the end of the handle. The applicator is now loaded ready for use.

### PEST SPECIFIC INFORMATION

#### Moles

A plot of land where moles are present should ideally be treated in its entirety as a single unit.

#### Locating active sites

Places where moles are active can be located by harrowing or rolling the old molehills and tunnels about a week before

treatment. Short vegetation makes this operation easier and helps to produce good results. Pay extra attention to the boundaries of the site because areas in or near hedges, fences, banks, ditches or verges are favourite places for nests.

Concentrate the treatment on the molehills and deeper tunnels at approximately 25cm depth. Do not treat tunnels less than 10cm below the surface.

#### Treatment

1. Using the metal probe, pierce a small hole into the mole run or molehill.
2. With the loaded Topex Applicator insert two to five pellets into the tunnel or molehill
3. After the pellets have been deposited in

the hole, seal the hole with earth or turf, vegetation side down, immediately after treatment.

4. Treat at a number of points where moles are active, approximately one per 4 sq. metres.
5. If fresh mole activity is noticed after a few days repeat the treatment until no further activity is visible.

NOTE: A clear access hole to the pellets placement point must be made before inserting the delivery tube of the Topex Applicator. Holes must **not** be pierced with the delivery tube of the Topex Applicator.



45.00 mm



## **Rabbits**

The most effective time for treatment for control of rabbits is from November to March, when the rabbit population is at its lowest and the burrows are most accessible. Before treatment ensure that rabbits lying out in the surrounding area are driven to ground.

### **Treatment**

1. With the loaded Topex Applicator insert five pellets (four pellets may be used in smaller burrows or when applying to heavier, moist soils) as far into each hole as practicable, usually 30cm is adequate.

2. As soon as the pellets have been deposited in the hole, seal the hole with turf, grass side down taking care not to cover pellets with soil.
3. Ensure all burrow entrances are treated and sealed.
4. If fresh rabbit activity is noticed after a few days, repeat the treatment until no further activity is visible.

## **Rats**

Talunex may be used for the control of rats in agricultural situations. Do not use inside buildings. Do not apply within 10 metres of human or animal habitation.

### **Treatment**

1. With the loaded Topex Applicator insert one to two pellets of Talunex as far as possible into each rat hole. (The lower dose may be used in smaller burrows or when applying to heavier, moist soils).
2. Seal the hole with earth or turf, grass side down, immediately after treatment.
3. If there are fresh signs of rat activity after a few days repeat the treatment until there is no further activity.

### **SPILLAGES**

In the event of spillage or accidental trigger release, do not attempt to recover the pellets for re-loading. Bury spilled pellets immediately with at least 15cm soil cover.



## **SYMPTOMS OF POISONING FOLLOWING INHALATION**

These may include nausea, vomiting, headache, weakness, faintness, pain in the chest, cough, chest tightness and difficulty in breathing.

## **FIRST AID**

If any of the above symptoms occur or if poisoning is suspected: STOP WORK.

Remove patient into fresh air. Prevent all exertion. Keep patient warm. Call doctor AT ONCE and show him this label. If breathing stops or shows signs of failing, administer artificial respiration using oxygen and a suitable mechanical device such as a bag and mask. **Do not use mouth-to-mouth resuscitation.**

## **GUIDE TO DOCTOR**

No specific antidote is known. Treatment for suspected poisoning should be symptomatic and supportive care. Further advice from nearest National Poisons Information Centre (health care professionals only) Tel (UK Only ) 08448920111. Other persons, tel NHS 111 England and Wales tel:08454647



NHS 24 in Scotland tel:084542424  
Republic of Ireland tel:018092166.

This label is compliant with the CPA Voluntary Initiative Guidance

**Section 6 of the Health and Safety at Work Act - UK ONLY**

**Additional Product Safety Information**  
(This section does not form part of the product label under the Control of Pesticide Regulations 1986)

The product label provides information on a specific pesticidal use of the product; do not use otherwise, unless you have assessed any potential hazard involved, the safety measures required and that the particular use has "off-label" approval or is otherwise permitted under the Control of Pesticides Regulations.

The information on this label is based on the best available information including data from test results.

## **Section 1: Identification of substance/mixture and of company/undertaking**

**1.1 Product identifier** TALUNEX **1.2 Relevant identified uses of the substance or mixture and uses advised against** **1.2.1 Relevant identified uses** A vertebrate control agent for professional use. Spherical tablets supplied in an aluminium flask. The phosphine gas, which is produced when the tablets come into contact with moisture has a garlic or carbide odour. **1.2.2 Uses advised against** No additional information available. **1.3 Details of the supplier of the safety data sheet** Killgerm Chemicals Limited, P.O. Box 2, Ossett, West Yorkshire, WF5 9NA Telephone: +44 (0)1924 268400 Telefax: +44 (0)1924 264757 Email: sales@killgerm.com. **1.4 Emergency telephone number** +44 (0)1342 833022 IRELAND (REPUBLIC OF) National Poisons Information Centre Beaumont Hospital PO Box 1297 Beaumont Road Dublin 9 Emergency telephone number +353 1 809 2166 UNITED KINGDOM National Poisons Information Service (Birmingham Centre) City Hospital Dudley Road Birmingham B18 7QH

For advice on medical emergencies, fires, spillages or chemical hazards ONLY - telephone number 0870 190 6777

## **Section 2: Hazard identification**

**2.1 Classification of the substance or mixture** Classification according to Regulation (EC) No 1272/2008 [CLP]. For classification, danger symbols and signal words please refer to the label. Classification according to Directive (EC) 67/548/EEC (DSD) or 1999/45/EC (DPD). For classification, danger symbols and indication of danger please refer to the label. Adverse physicochemical, human health and environmental effects No additional information available. **2.2 Label elements** For classification, danger symbols and signal words please refer to the label. **2.3 Other hazards** No additional information available.

## **Section 3: Composition/Information on ingredients**

**3.1 Substance** Not applicable **3.2 Mixture** Aluminium phosphide 50 - 75 % (CAS No) 20859-73-8 (EC no) 244-088-0 (EC index

no) 015-004-00-8 F; R15  
R29 T+; R26/28 R32 N; R50 Xn; R21 Water-react. 1, H260  
Acute Tox. 2 (Oral), H300 Acute Tox. 3 (Dermal), H311 Acute  
Tox. 1 (Inhalation:dust,mist), H330  
Aquatic Acute 1, H400 (M=100). Aluminium hydroxide (reaction  
product on contact with moisture)  $\geq 50$  % (CAS No) 21645-  
51-2 (EC no) 244-492-7 Not classified  
Phosphine / Hydrogen phosphide (reaction product on contact  
with moisture) 25 – 50 % CAS No) 7803-51-2 (EC no) 232-  
260-8 (EC index no) 015-181-00-1 F+; R12  
F; R17 T+; R26 C; R34 N; R50 Flam. Gas 1, H220 Press. Gas  
Acute Tox. 2 (Inhalation), H330 Skin Corr. 1B, H314 Aquatic  
Acute 1, H400, Ammonium Carbamate  $\geq 10$  % (CAS No) 1111-  
78-0 (EC no) 214-185-2 Xn; R22 Xi; R38 Xi; R41 Acute Tox.  
4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Ammonia  
(reaction product on contact with moisture) 2.5 – 10 % (CAS No)  
7664-41-7 (EC no) 231-635-3 (EC index no) 007-001-00-5  
Not classified (67/548/EEC) Flam. Gas 2, H221 Compressed

gas, H280 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Inhala-  
tion:gas), H331 Skin Corr. 1A, H314 Aquatic Acute 1, H400

#### **Section 4: First Aid Measures**

**4.1 Description of first aid measures** First-aid measures after  
inhalation Do not enter contaminated atmosphere, otherwise  
wear self contained breathing apparatus. Remove patient to  
fresh air, keep warm and at rest. Apply supportive measures if  
necessary. DO NOT give mouth-to-mouth resuscitation. Seek  
medical advice immediately. First-aid measures after skin contact  
Remove immediately, brush or shake any residues from clothing  
and skin in a well-ventilated area. Allow clothes to aerate for a  
number of hours prior to machine washing. Seek medical advice  
immediately. First-aid measures after eye contact Rinse imme-  
diately with plenty of water. Obtain medical attention. First-aid  
measures after ingestion Immediately call a POISON CENTER or  
doctor/physician. **4.2 Most important symptoms, both acute  
and delayed** Symptoms/injuries MISUSE OF THIS PRODUCT

CAN BE FATAL. There is no effective treatment for phosphine poisoning. Less than one sixth of a 3g tablet (0.5g) is a fatal dose for a 70kg human, ingested or inhaled. Phosphine directly inhibits cytochrome oxidase in an action similar to that of cyanide. Symptoms of poisoning include epigastric burning vomiting thirst cardiovascular collapse acidosis and hypokalemia (potassium deficiency). IDLH (Immediately Dangerous to Life and Health) = 50ppm Phosphine. **4.3 Indication of any immediate medical attention and special treatment needed** Further information on all Rentokil Initial formulations is lodged with the local National Poisons Information Service.

## **Section 5 Fire fighting measures**

**5.1 Extinguishing media** Suitable extinguishing media Sand. Dry powder. Carbon dioxide. Unsuitable extinguishing media Do not use extinguishing media containing water. **5.2 Special hazards arising from the substance or mixture** Fire hazard In case of fire hazardous combustion gases are formed, caustic

phosphoric acid aerosols (phosphide pentoxide). **5.3 Advice for fire fighters** Protection during firefighting Do not enter fire area without proper protective equipment, including respiratory protection

## **Section 6 Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures** General measures Wear suitable personal protective equipment.

**6.1.1. For non-emergency personnel** Protective equipment Wear suitable and use suitable personal protective clothing and equipment including self contained breathing apparatus (SCBA). All clothing and equipment should be machine washed immediately after use. **6.1.2 For emergency responders** Protective equipment Wear suitable and use suitable personal protective clothing and equipment including self contained breathing apparatus (SCBA). All clothing and equipment should be machine washed immediately after use. **6.2 Environmental precautions**

Avoid release to the environment. Notify authorities if product enters sewers or public waters. **6.3 Methods and material for containment and cleaning up** Evacuate the spillage area and ensure the area is well ventilated. Wear and use suitable protective clothing and equipment using SCBA. Prevent dispersion. Clean up the remainder carefully. DO NOT USE WATER FOR CLEANING. The area should be kept secure and aerated until checked for zero gas concentration using appropriate gas sampling equipment. Remove as hazardous waste according to National or local legislation **6.4 Reference to other sections** See also sections 8 and 13.

## **Section 7: Handling and storage**

**7.1 Precautions for safe handling** Precautions for safe handling Open the flask outdoors immediately before use and ensure it is pointing away from you. Read the product label carefully for further instructions about handling and usage. **7.2 Conditions for safe storage including any incompatibilities** Storage conditions

Store in original flask in a cool dry ventilated place out of reach of children and away from food drink and animal feeding stuffs. USE ALL CONTENTS OF THE FLASK. DO NOT RE-SEAL. Spontaneous combustion can arise due to sudden release of phosphine gas if a flask having been opened once is then re-opened. **7.3 Specific end use(s)** No additional information available

## **Section 8 Exposure Control/personal protection**

**8.1 Control parameters** Ammonia (reaction product on contact with moisture) (7664-41-7) Ammonia, anhydrous EU IOELV TWA (mg/m<sup>3</sup>) 14 mg/m<sup>3</sup> EU IOELV TWA (ppm) 20ppm EU IOELV STEL (mg/m<sup>3</sup>) 36 mg/m<sup>3</sup> EU IOELV STEL (ppm) 50 ppm Ireland OEL (8 hours ref) (mg/m<sup>3</sup>) 14 mg/m<sup>3</sup> Ireland OEL (8 hours ref) (ppm) 20 ppm Ireland OEL (15 min ref) (mg/m<sup>3</sup>) 36 OEL mg/m<sup>3</sup> Ireland OEL (15 min ref) (ppm) 50 ppm Notes (IE) IOELV UK WEL TWA (mg/m<sup>3</sup>) 18 mg/m<sup>3</sup> UK WEL TWA (ppm) 25 ppm WEL STEL (mg/m<sup>3</sup>) 25 mg/m<sup>3</sup> UK

WEL STEL (ppm) 35 ppm Iceland Notes (IS) H Aluminium phosphide (20859-73-8) Phosphine EU  
IOELV TWA (mg/m<sup>3</sup>) 14 mg/m<sup>3</sup> EU IOELV STEL (mg/m<sup>3</sup>) 0.28mg/m<sup>3</sup>

**8.2 Exposure controls** Appropriate engineering controls Where exposure may occur, engineering controls, rather than the provision of Personal Protective Equipment (PPE) should be employed. On completion of a risk assessment, the following PPE may be required: Hand protection Wear gloves Eye Protection When opening the flask, point away from face and other people. Wear a full-face respirator with appropriate filter cartridge (which also meets P3 standard for particulates) or SCBA (Contact your PPE supplier for advice on suitable PPE and RPE). Skin and body protection Wear suitable protective clothing. Respiratory protection Suitable respiratory protective protection such as a full face respirator with appropriate filter cartridge (which also meets P3 standard for particulates) or SCBA (Contact your PPE supplier for advice on suitable PPE and RPE). Environmental

exposure controls Avoid release to the environment. Refer to special instructions/safety data sheets.

## Section 9 Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

Physical state solid Colour grey Odour garlic-like Odour threshold pH No data available Relative evaporation rate (butylacetate=1) No data available Melting point No data available Freezing point No data available Boiling point -87.4 °C Phosphine No data available Flash point No data available Auto-ignition temperature No data available Decomposition temperature No data available Flammability (solid, gas) Extremely flammable gas Vapour pressure No data available Relative vapour density at 20 °C 1.2 Phosphine Relative density No data available Density 2.3 g/cm<sup>3</sup> aluminium phosphide Solubility No data available Log Pow No data available Viscosity, kinematic No data available Viscosity, dynamic No data available Explosive properties No data available

Oxidising properties No data available Explosive limits 1.79 - 1.89 vol % Hydrogen phosphide 9.2 Other information No additional information available

## Section 10 Stability and reactivity

**10.1 Reactivity** Highly reactive when in contact with water or acids, produces extremely flammable and very toxic hydrogen phosphide (phosphine), ammonia and carbon dioxide. **10.2**

**Chemical stability** Avoid contact with water and acids as this will cause aluminium phosphide to decompose in a violent reaction into extremely flammable and very toxic hydrogen phosphide ammonia and carbon dioxide. **10.3 Possibility of hazardous reactions** Avoid contact with water and acids as this will cause aluminium phosphide to decompose in a violent reaction into extremely flammable and very toxic hydrogen phosphide ammonia and carbon dioxide. **10.4 Conditions to avoid** Avoid contact with water acids and ambient humidity. Phosphine gas is considered to be corrosive to copper copper alloys silver and

gold. **10.5 Incompatible materials** Avoid contact with water and acids as this will cause aluminium phosphide to decompose in a violent reaction into extremely flammable and very toxic hydrogen phosphide ammonia and carbon dioxide.

**10.6 Hazardous decomposition products** Hydrogen phosphide, phosphoric pentoxide and phosphoric acid.

## Section 11 Toxicological Information

**11.1 Information on toxicological effects** vAcute toxicity Fatal if swallowed. Toxic in contact with skin. Fatal if inhaled.

LD50 oral rat 8.7 mg/kg Aluminium phosphide LD50 oral 11.5 mg/kg For product LD50 dermal rat 500 - 1000 mg/kg Aluminium phosphide LC50 inhalation rat (mg/l) 0.015 mg/l/4h Hydrogen phosphide (phosphine) LC50 inhalation rat (ppm) 11 ppm/4h Hydrogen phosphide (phosphine) ATE CLP (oral) 8.700 mg/kg bodyweight ATE CLP (dermal) 500.000 mg/kg bodyweight ATE CLP (gases) 11.000 ppmv/4h ATE CLP (vapours) 0.015 mg/l/4h ATE CLP (dust,mist) 0.015



45.00 mm



mg/l/4h Ammonia (reaction product on contact with moisture) (7664-41-7)

LC50 inhalation rat (ppm) 2000 ppm/4h ATE CLP (gases)

2000.000 ppmv/4h ATE CLP (vapours) 3.000 mg/l/4h ATE CLP (dust,mist) 0.500 mg/l/4h Aluminium phosphide (20859-73-8)

LD50 oral 8.7 mg/kg LD50 dermal 900 mg/kg ATE CLP (gases)

5.000 mg/kg bodyweight ATE CLP (vapours) 300.000 mg/kg

bodyweight ATE CLP (dust,mist) 0.005 mg/l/4h Ammonium

Carbamate (1111-78-0) LD50 oral 681 - 1470 mg/kg

ATE CLP (oral) 500.000 mg/kg bodyweight Phosphine /

Hydrogen phosphide (reaction product on contact with moisture)

(7803-51-2) ATE CLP (gases) 100.000 ppmv/4h ATE CLP (va-

pours) 0.500 mg/l/4h ATE CLP (dust,mist) 0.500 mg/l/4h Skin

corrosion/irritation Not classified Serious eye damage/irritation

Causes serious eye damage. Respiratory or skin sensitisation

Not classified Germ cell mutagenicity Not classified

Carcinogenicity Not classified Reproductive toxicity Not classi-

fied Specific target organ toxicity (single exposure) Not classified

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Specific target organ toxicity (repeated exposure) Not classified

Aspiration hazard Not classified

## Section 12 Ecological information

**12.1 Toxicity** LC50 fishes 1 0.0097 ppm EC50 Daphnia 1

0.2 mg/l Ammonia (reaction product on contact with moisture)

(7664-41-7) LC50 other aquatic organisms 1 25.4 mg/l Alu-

minium phosphide (20859-73-8) LC50 fishes 1 0.0097 ppm

**12.2 Persistence and degradability** Persistence and degrada-

bility Phosphine decomposes in the atmosphere within 5-28h.

**12.3 Bioaccumulative potential** Bioaccumulative potential This

product is not expected to bioaccumulate. **12.4 Mobility in soil**

No additional information available **12.5 Results of PBT abd vPvB**

**assessment** No additional information available **12.6 Other**

**adverse effects** No additional information available.



## Section 13 Disposal considerations

**13.1 Waste treatment methods** Waste treatment methods All pesticides must be disposed of as hazardous waste. Never wash out empty flasks with water. Once pest control activity has been completed, ensure that all residues of product are removed. Empty the flasks completely at site of use by upending and tapping the flask so that any remaining powder residue is deposited in the treatment burrow or run. Check that the flask is visibly empty. If residue remains repeat upending and tapping until fully removed. Ensure that the empty flask is kept dry. Tap out any residues from the applicator at the site of use as for the flasks. Disposal of waste flasks: Handle and store empty flasks as if they still contained product. Flasks must never be rinsed or cleaned. Screw the cap back onto the empty flask loosely (this action should only be carried out prior to transporting to designated storage area, flasks should not be re-capped if they still contain tablets, ensure that all product is used during the pest control treatment), this will help to ensure that any gas generated within the flask during transport

from the treatment area is contained. Place the flask into a suitable bag. Label the bag and place the written confirmation that the waste treatment methods have been completed, date and sign. Seal the bag using tie wraps. Once at designated storage area and prior to waste collection, whilst wearing a full-face respirator with appropriate gas filter cartridge (which also meets P3 standard for particulates) or SCBA (contact your PPE supplier for advice on suitable PPE and RPE) and whilst wearing suitable gloves and skin protection such as rubber/PVC gloves and coveralls, remove the flask from the sealed bag. Remove caps, taking care and pointing flask away from face and other people, as any generated gas may be present. Invert the flasks on a mesh shelf in a secure caged area until all gas has vented from the flask. We recommend venting the flasks for 48 hours. Once venting is complete, re-cap flask and replace into and seal the plastic bag. Record on the written confirmation that the flasks have been vented. Store in a designated secure storage area until collection by a licensed waste-disposal contractor. Disposal of used PPE (gloves, coveralls,

respirators): Place used PPE in plastic bags and seal. Dispose of as hazardous waste, EWC code 15 02 02\*. Disposal of unusable product: Pack and seal, using tie wraps any flasks and/or cartons containing the product, which has been subject to damage or is otherwise unusable into a clear plastic bag. Consult Killgerm for advice on disposal. Disposal of applicators: Exposure to atmospheric moisture should be sufficient to ensure that applicators will not be contaminated. However, do not carry or keep contaminated applicators in confined spaces. If the applicator is to be disposed, place in a plastic bag and seal with tie wraps. Dispose of the applicator as hazardous waste EWC code 15 01 10\*.

## Section 14 Transport Information

In accordance with ADR / RID / IMDG / IATA / AND. **14.1 UN No** UN-No. (ADR, IATA, IMDG, ADN) 1397 **14.2 UN Proper Shipping Name**

UN Proper shipping Name (ADR, IATA, IMDG, ADN) ALUMINIUM PHOSPHIDE Transport document description (ADR) UN

1397 ALUMINIUM PHOSPHIDE (MIXTURE), 4.3 (6.1), I, (E) **14.3 Transport Hazard Class(es)** Class (ADR, IATA, IMDG, ADN)

4.3 Classification code (ADR, ADN) WT2 Subsidiary risk (ADR, IMDG) 6.1 Hazard labels ((ADR, IATA, IMDG, ADN) 4.3, 6.1 Division (IATA) 4.3 **14.4 Packing Group** Packing group (ADR, IATA, IMDG, ADN) I **14.5 Environmental Hazards**

Dangerous for the environment Yes Marine Pollutant Yes Other information No supplementary information available **14.6**

**Special precautions for user** **14.6.1. Overland transport** Classification code (ADR) WT 2 Special provisions (ADR) 507 Transport category (ADR) 1 Tunnel restriction code (ADR) E Limited quantities (ADR) 0 Excepted quantities (ADR) E0 EAC code 4W

**14.6.1 Transport by Sea** Limited quantities (IMDG) 0 Excepted quantities (IMDG) E0

Packing instructions (IMDG) P403 Special packing provisions (IMDG) PP31 EmS-No. (Fire) F-G EmS-No. (Spillage) S-N

Stowage category (IMDG) E Stowage and segregation (IMDG) Under deck in a mechanically ventilated space.? Clear of living

quarters.?Separated from acids Properties and observations (IMDG) Crystals or powder. Reacts with acids or decomposes slowly in contact with water or damp air, evolving phosphine, a spontaneously flammable and highly toxic gas. Reacts violently with oxidizing substances.?Toxic if swallowed, by skin contact or by inhalation.

**14.6.3. Air transport** CAO packing instructions (IATA) 487 CAO max net quantity (IATA) 15 kg PCA packing instructions (IATA) Forbidden

PCA Limited quantities (IATA) Forbidden PCA limited quantity max net quantity (IATA) Forbidden PCA max net quantity (IATA) Forbidden PCA Excepted quantities (IATA) E0 ERG code (IATA) 4PW

**14.6.4.Inland waterway transport** Special provisions (ADN) 57, 82 Limited quantities (ADN) 0 Excepted quantities (ADN) E0 Equipment required (ADN) PP, EP, EX, TOX, A Ventilation (ADN) VE01, VE02 Provisions for handling and stowage of the cargo (ADN) HA08 Number of blue cones/lights (ADN) 2 Carriage prohibited (ADN) No **14.7 Transport in bulk** according to Annex

II of MARPOL 73/78 and the IBC Code Not applicable

## Section 15 Regulatory Information

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

**15.1.1. EU-Regulations** No REACH Annex XVII restrictions Contains no substance on the REACH candidate list Seveso Information **15.1.2.National regulations** No additional information available **15.2 Chemical Safety Assessment** No additional information available

## Section 16 Other information

Full text of R-, H- and EUH-phrases:

Acute Tox. 1 (Inhalation:dust,mist) Acute toxicity (inhalation:- dust,mist) Category 1, Acute Tox. 2 (Inhalation) Acute toxicity (inhal.), Category 2 Acute Tox. 2 (Oral) Acute toxicity (oral), Category 2 Acute Tox. 3 (Dermal) Acute toxicity (dermal), Category 3 Acute Tox. 3 (Inhalation) Acute toxicity (inhal.), Category

3 Acute Tox. 3 (Inhalation:gas) Acute toxicity (inhalation:gas)  
 Category 3 Acute Tox. 4 (Oral) Acute toxicity (oral), Category 4  
 Aquatic Acute 1 Hazardous to the aquatic environment – Acute  
 Hazard, Category 1 Compressed gas Gases under pressure :  
 Compressed gas Eye Dam. 1 Serious eye damage/eye irritation,  
 Category 1 Flam. Gas 1 Flammable gases, Category 1 Flam.  
 Gas 2 Flammable gases, Category 2 Press. Gas Gases under  
 pressure Skin Corr. 1A Skin corrosion/irritation, Category 1A  
 Skin Corr. 1B Skin corrosion/irritation, Category 1B Skin Irrit. 2  
 Skin corrosion/irritation, Category 2 Water-react. 1 Substances  
 and Mixtures which, in contact with water,  
 emit flammable gases, Category 1 H220 Extremely flamma-  
 ble gas H221 Flammable gas H260 In contact with water  
 releases flammable gases which may ignite spontaneously H280  
 Contains gas under pressure; may explode if heated H300 Fatal  
 if swallowed H302 Harmful if swallowed H311 Toxic in contact  
 with skin H314 Causes severe skin burns and eye damage H315  
 Causes skin irritation H318 Causes serious eye damage H330

Fatal if inhaled H331 Toxic if inhaled H400 Very toxic to aquatic  
 life R12 Extremely flammable R15 Contact with water liberates  
 extremely flammable gases R17 Spontaneously flammable in air  
 R21 Harmful in contact with skin R22 Harmful if swallowed R26  
 Very toxic by inhalation R26/28 Very toxic by inhalation and if  
 swallowed R29 Contact with water liberates toxic gas R32 Con-  
 tact with acids liberates very toxic gas R34 Causes burns R38  
 Irritating to skin R41 Risk of serious damage to eyes R50 Very  
 toxic to aquatic organisms C Corrosive F Highly flammable F=  
 Extremely flammable N Dangerous for the environment T+ Very  
 toxic Xi Irritant Xn Harmful

**Before using any product, ensure that you read and under-stand its label.**

The information contained in this safety data sheet is, to the best  
 of our knowledge and belief, accurate and reliable at the time of  
 publication. The information relates only to the specific material  
 designated in this safety data sheet and may not be valid for such  
 material if it is used in combination with any other material(s) or

any other use than that specified herein. Neither Killgerm Chemicals nor any of its subsidiaries accepts any liability for the use of this product for any other purpose than that described in this safety data sheet. This does not affect your statutory rights. It is the user's responsibility to satisfy him/herself as to the suitability in completeness of such information for his/her own particular use.

Killgerm code: CO114-C0078-UK  
Version: May 2015

**DISCLAIMER OF LIABILITY** The information in this label was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected

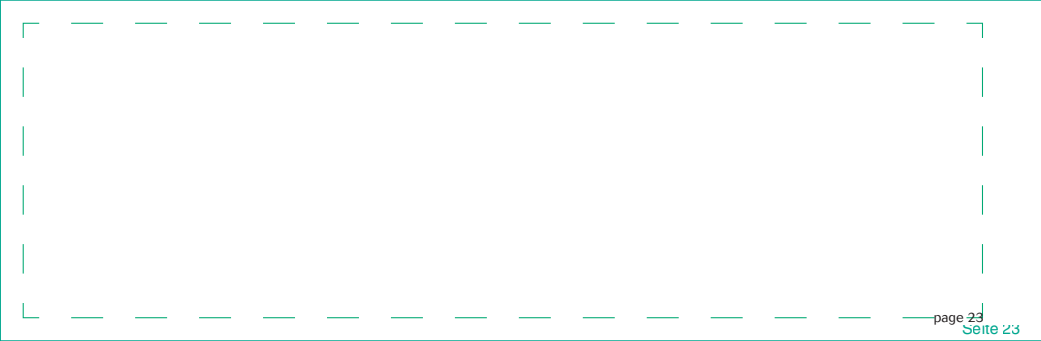
with the handling, storage, use or disposal of the product. This label was prepared and is to be used only for this product. If the product is used as a component in another product, this label information may not be applicable.

**CONDITIONS OF SUPPLY:** The Seller warrants that the goods shall at the time of delivery to the Buyer conform to the Seller's standard specification but all other conditions and warranties, whether express or implied by statute or custom of the trade or otherwise and whether as to condition, quality, performance, merchantability, fitness for any purpose or otherwise, are expressly excluded and, subject as aforesaid, the Seller shall be under no liability whatsoever, in contract or in tort, for or in respect of any loss or damage whatsoever resulting from or arising out of the goods or supply or use thereof, whether caused by the negligence of the Seller or otherwise. The Seller shall be under no liability in respect of the warranty given above unless the Buyer allows the Seller reasonable opportunity of inspecting the goods where practicable. A consumers statutory rights are not affected.



45.00 mm









# TALUNEX

## IMPORTANT INFORMATION:

Contains 56% w/w aluminium phosphide

**Please note:**

MAPP 15974 and MAPP 17001 both apply to the use of this product and the following additional requirements listed on page 1 of this label tag now also apply to its agricultural and horticultural uses.

MAPP 15974 applies to the non-agricultural /biocidal uses of this product when used against vertebrate pests (other than rodents), and the restrictions listed on the **flask label applies for this use.**

UK-2016-1044-0002 applies to the non-agricultural /biocidal uses of this product when used as a rodenticide, and the restrictions on page 2-10 of this label tag applies for these uses.

Maximum individual dose: 5 pellets / 3-5m tunnel length (light soils) 5 pellets / 8-10m tunnel length (all other soils).

Maximum number of treatments 4 per year. Crops must not be planted for at least 7 days after a treatment. This product must not be used in burrows within 10m of surface waters or ditches. Water voles are protected under the Wildlife and Countryside Act 1981 and Phostoxin must not be used in their burrows or any water systems where there is evidence of current vole activity.

This information forms part of the authorised label. Read the full label and enclosed information thoroughly before use.

Degesch  
TALUNEX

Active ingredient: Aluminium phosphide releasing phosphine (56.0% w/w)  
Contains Ammonium carbamate (CAS 1111-78-0, EC number 214-185-2)  
Authorisation number: UK-2016-1044-0002

A ready-to-use- gas generating product containing Aluminium Phosphide releasing phosphine (56.0 % w/w) for use as a rodenticide by trained professionals with demonstrated competence.

For the control of brown rats (*Rattus norvegicus*). For use outdoors in rodent burrows away from human habitation. For use in all types of non agricultural areas where rodent burrows can cause damage (e.g. railway embankments, tracks, gravel edges, border routes, dams and flood dikes, sport venues (golf courses), gardens and parks, port traffic areas, airfields and other kinds of technical areas).



**DANGER**

**In contact with water releases flammable gases which may ignite spontaneously.** Fatal if swallowed. Toxic in contact with skin. Fatal if inhaled. Causes serious eye damage. Causes skin irritation. Very toxic to aquatic life. Contact with water liberates toxic gas. Contact with acids liberates very toxic gas. Keep away from **any possible contact with water, because of violent reaction and possible flash fire. Protect from moisture. Keep only in original container. Avoid release to the environment. Wear protective gloves / protective clothing / eye protection / face protection. IF SWALLOWED: Immediately call a POISON CENTRE or doctor / physician. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Brush off loose particles from skin. In case of fire: use dry sand or powder then use CO2 for extinction. Store in a dry place. Store in a closed container. Store locked up. To avoid risks to man and the environment comply with the instructions for use.**



UN 1397 Aluminium  
Phosphide mixture

#### USE SPECIFIC INSTRUCTIONS FOR USE

The required amount is applied using the relevant tablet/pellet applicator. Apply 5 x 0.6g pellets every 3-5m burrow length (light soils), or 5 x 0.6g pellets every 8-10m burrow length (all other soils). The product should be used when burrows/holes appear. It must not be used within 10m of human or non-target animal habitation. Use should be avoided where there is evidence of non-target animal activity (badger, fox reptiles etc).

FOR USE ONLY AS A RODENTICIDE. FOR OUTDOOR USE ONLY.

To be used only by professional users holding accredited qualifications in the use of metallic phosphides in the UK. A list of approved qualifications and training bodies can be found at the Register of Accredited Metallic Phosphide Standards in the UK (RAMPS) ([www.ramps-uk.org](http://www.ramps-uk.org)).

Read the label before use. Using this product in a manner that is inconsistent with the label may be an offence. Refer to HSE Guidance Note 251: Health and Safety guidance for employers and technicians carrying out fumigation operations and the RAMPS UK Code of Good Practice (or equivalent) for guidance.

When this product is supplied to a user for the control of rodents it shall only be supplied to a professional user holding accredited qualifications in the use of metallic phosphides in the UK.

The COSHH (Control of Substances Hazardous to Health) Regulations 2002 (as amended) apply to the use of this product at work.

WEAR SUITABLE protective clothing (coveralls) suitable protective gloves and suitable respiratory protective equipment\* when applying the product.

\*Full face mask to at least EN140 with a B2 P3 filter to at least EN 14387B1 or equivalent.

(Eye protection with a full face mask is indicated above to protect from local effects of eye irritation because of the additive ammonium carbamate.)

However engineering controls may replace personal protective equipment if a COSHH assessment shows that they provide an equal or higher standard of protection.

In case of incidental contact to the biocidal product protective gloves shall be recommended for precautionary reasons (e.g. clearing soil from the outlet of the delivery tube).

Avoid any unnecessary contact with the product. Misuse may cause adverse effects on health.

Use only with applicator supplied for use with the pellets of this biocidal product.

If an applicator is used, it shall be cleaned after use. The cleaning shall be performed outdoors preferably in light winds (observe the wind direction) and with careful avoidance of exposure to humans and animals to product dusts and/or phosphine.

**Once the flasks have had any remaining dust residue tapped from them and whilst still wearing full PPE, including full face respirator with a minimum B2 P3 filter, repeat this initial cleaning process with the empty applicator whilst operating the trigger mechanism for a number of times to remove any dust or particles that may still be present. Ensure you then transport the applicator together with the empty flasks in a sealed container( 300 gauge plastic bag would suffice), in an unoccupied compartment on the vehicle well away from the driver's cab, to a suitable place where all of these items can be**

safely vented and aired ( whilst again wearing PPE/RPE ) until no further phosphine is liberated. Do not allow the applicator or the flasks to become wet at any time."

'As a precautionary measure a risk area must be respected which will include a safety distance of at least 25 metres from the fumigation area to the edge of the surrounding area. If by organisational measures ( signposting, barrier tape, written agreement with the owners or authorised users etc. ) it can be ensured that no person or farm and / or domestic animals are present in the surrounding areas, the safety distance (and therefore the risk area) may be reduced. **The specifications for this risk area and the duration of the control measures remain unaffected.**

The concentration of phosphine outside the 25 metre wide risk area ( or less, if applicable ) has to be below 0.01 ppm.

Re-entry for persons into the risk area other than the operator should only be allowed if a clearance is granted and the concentration of phosphine is below 0.01 ppm, (corresponding to 0.014 g/m<sup>3</sup>.)

Suitable portable gas detectors such as Dräger Pac® 7000 should be used to detect levels of phosphine gas air concentrations at 0.01 ppm or above. Further information can be found at the Register of Accredited Metallic Phosphide Standards in the UK (RAMPS) (<http://www.ramps-uk.org>).

Inhabitants and/or authorised users of premises directly adjacent or in a distance of up to 25m to the fumigated area shall be informed adequately at least one week before fumigation in writing about the risk posed by the biocidal product. The information includes at least: a) The name of the fumigant b) the authorisation number c) the name of the active substance d) information about the route of exposure (inhalation) e) the limited sensory perception of phosphine **through impurities (carbide- or garlic-like, foul smelling fish)** f) **the request to leave immediately the area after olfactory perception (the smell is often only perceptible about health-based limits)** g) description of disease symptoms of **intoxication after inhalation** h) **description of recommended first aid measures** i) further sources of information (manufacturer of the biocidal product, name and telephone number of the user, competent poison control centre).

If the danger area is accessible for the general public, farm and/or domestic animals, it has to be secured before beginning of fumigation and for two consecutive days, at least: a) by an appropriate cordon (e.g. red/white barrier tape) b) a warning sign: acute toxicity symbol (skull and cross bones) with the following features: i) "Danger because of soil fumigation. Very toxic gases! Danger to life! No trespassing!" ii) the name of the biocidal product as well as the date and time of the fumigation, the address of the responsible person as well as adequate emergency telephone numbers.

The product must not be used within 10 metres of human or non-target animal habitation.

It has to be ensured that treated burrows do not meet cellars or other parts of housings.

Safely close the hole in which pellets are applied, with a plug.

The product must be applied to all burrow entrances in order to prevent target animals from escaping via untreated burrows.

The treated area has to be inspected at appropriate intervals to ensure that all burrows have remained blocked and not re-opened by any target organisms.

If use of this product does not result in complete control of large rat infestations, further treatment with other control methods may be required to fully control the population.

Use all contents of flask in one operation.

Empty flasks can be re-sealed only for transport to waste storage area.

To avoid risks to man and the environment, comply with the instructions for use.

Areas where other burrowing animals can be expected must not be treated.

Avoid uncontrolled release to the environment.

Do not contaminate water with product or its container.

This product must not be used in burrows within 10m of surface waters or ditches.

This product must not be used in wet weather.

This product must not be placed or allowed to remain on the ground surface.

#### FIRST AID:

**Symptoms of Poisoning following inhalation** These may include nausea, vomiting, headache, weakness, faintness, pain in chest, cough, chest tightness and difficulty in breathing.

**First aid measures** If any of the mentioned symptoms occurs or if poisoning is suspected: STOP WORK IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, seek medical advice immediately. Symptoms of

phosphine poisoning include faintness and a feeling of constriction in the chest.

Remove patient into fresh air. Prevent all exertion. Keep patient warm. Call doctor AT ONCE and show him this label. If breathing stops or shows signs of failing administer artificial respiration using oxygen and a suitable mechanical device such as a bag and mask. Do not use mouth-to-mouth resuscitation. Please refer to the Safety Data Sheet for further information.

**Guide to doctor** No specific antidote is known. Treatment for suspected poisoning should be symptomatic and supportive care. Further advice should be sought from the National Poisons Information Service (<http://www.npis.org/>)

**After eye contact:** Remove powdery residues using a lint-free cloth. Rinse with plenty of water only when no more powdery residues are visible.

**After skin contact:** Remove powdery residue by brushing. Rinse with plenty of water only when no more powdery residues are visible.

#### DISPOSAL

For active substances, biocidal product and residues waste code 061301 according to Guideline 2001/118/EEC is applied.

It is recommended that only degassed material should be disposed of under observation of the prevailing regulations (waste code 060316 according to Guideline 2001/118/EEC).

In the UK: The product and /or its container must be disposed of to a licensed hazardous waste disposal contractor or collection site except for empty cleaned containers which can be disposed of as non hazardous waste.

#### STORAGE INSTRUCTIONS

Keep cool. Protect from moisture. Store in a dry place. Store in a closed container. Store in a well ventilated place. Place away from water or moisture. **Keep only in the original container. Do not store or reseal part-used flasks. Store locked up.** Shelf life: 5 years.

#### OTHER INFORMATION

Information for UK suppliers: Aluminium phosphide is a Regulated Substance under the Control of Poisons and Explosives Precursors Regulations 2015. Information on the responsibilities of suppliers is given at <https://www.gov.uk/government/publications/supplying-explosives-precursors/supplying-explosives-precursors-and-poison>. Sale and supply of aluminium phosphide is governed by the Poisons Rules 1982\* made under the Poisons Act 1972. It is scheduled as a Part 1 Poison.

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