
COOPERS ENVIRONMENTAL SCIENCE (PTY) LTD.



Material Safety Data Sheet

Revised on: 1 June 2014

Revision number 2

1. Substance/preparation and company identification

QUICKPHOS BAGS, TABLETS, PELLETS

Use: Stored grain fumigation

Company:

Coopers Environmental Science (Pty) Ltd.

Reg. No. 2000/023667/07

P.O. Box 14374

BREDELL 1623

SOUTH AFRICA

TEL: (011) 979-4246/7

Emergency contact numbers

Tygerberg Poison Center: +2721 931 6129

Griffon Poison Information Centre - 082 446 8946

2. Composition/information on ingredients

Chemical nature

Hazardous ingredients

Aluminium Phosphide

Content (W/W): 57 %

CAS Number: [20859-73-8]

R-phrases: 15/29

26/28

32

21

50

3. Hazard identification

R15/29 –Contact with water liberates toxic, extremely flammable gas.

R26/28 –Very toxic by inhalation and if swallowed

R32 – Contact with acids liberates very toxic gas.

R21 –Harmful in contact with skin.

R50 –Very toxic to aquatic organisms

Inhalation:

Short term exposure: Irritation, nausea, vomiting, diarrhea, difficulty breathing, headache and dizziness.



Long term exposure: Kidney and liver damage.

Skin contact:

Short exposure: Irritation

Long term exposure: Irritation

Eyes contact:

Short exposure: Irritation

Long term exposure: Irritation

Ingestion:

Short term exposure: nausea, vomiting, diarrhea, difficulty, breathing, headache, dizziness

Long term exposure: Kidney and liver damage

4. First-aid measures

Inhalation:

Do not enter contaminated area, otherwise wear a suitable respiratory device.

Remove patient to fresh air, keep warm and at rest.

Apply supportive measures if necessary.

Do not give mouth-to-mouth resuscitation.

Eye contact:

Rinse affected eye with clean running water, or normal saline solution occasionally lifting upper and lower lids, until no evidence of chemical remains.

Seek medical attention immediately.

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 washing. Wash affected area with warm soapy water

Seek medical attention.

Ingestion:

Contact local poison center. Do not induce vomiting.

If conscious give patient ½ liter of water to drink.

Seek medical attention.

5. Fire-fighting measures

Suitable extinguishing media:

Carbon dioxide, sand, lime, soda ash or dry powder. DO NOT use water.

Specific hazards:

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Fires containing phosphine may produce phosphoric acid and phosphorous oxide.

6. Accidental release measures

Personal precautions:

Use personal protective clothing and a self-contained breathing apparatus (SCBA). Avoid contact with the skin, eyes and clothing.

Remove contaminated clothes, undergarments and shoes immediately.



Environmental precautions:

Do not discharge into the subsoil/soil.
Do not discharge into drains/surface waters/groundwater.

Notify authorities if the product enters sewers and public waters.

Methods for cleaning up or taking up:

Prevent dispersion and 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 and local regulations.

7. Handling and storage

Handling:

Open containers outdoors immediately before use ensure that it is pointing away from you.

Storage:

Store in original container in a cool dry, ventilated place out the reach of children and away from food, drink and animal feeding stuffs.

8. Exposure controls and personal protection

Work place exposure limit is for phosphine is 0.14mg/m^3 long term exposure (8 hour time weighted average) and 0.28mg/m^3 short term exposure (15 minutes reference period)

Personal protective equipment

Respiratory protection:

Suitable respiratory protection such as a full-face mask respirator with appropriate gas filters.

Hand protection:

Suitable chemical resistant safety gloves also with prolonged, direct contact
E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit.

9. Physical and chemical properties

Form:	Formulations include dark grey to yellow pellets, tablets and white bags.
Density:	2.3g/m^3
Specific gravity:	2.85 (25 °C)
Flash point:	N/A Highly flammable
Melting point:	$>1000\text{ }^{\circ}\text{C}$

Solubility in water: Product decomposes on contact with water. Phosphine: 26ml/100ml at 17°C.



10. Stability and reactivity

Stable at normal temperature and pressure. Reacts violently with water to generate toxic and or flammable gas.

Conditions to avoid

Avoid extremes of temperatures. Do not use in wet weather as contact with water will liberate phosphine gas.

Materials to avoid

Avoid contact with water and dilute strong acids. Phosphine is considered to be corrosive to copper, copper alloys, silver and gold.

11. Toxicological information (active ingredient)

LD ₅₀ /oral/rat/male/female:	8.7 mg/kg
LC ₅₀ /by inhalation/rat/male/female:	0.015 mg/l / 4 h
LD ₅₀ /dermal/rat/male/female:	500 - 1000 mg/kg
Skin irritant:	Not classified as a skin irritant.
Sensitization/guinea pig:	Contains no known skin sensitizers.
Eye irritant:	Contact with water liberates very toxic highly flammable gas which is irritating to the eyes.

12. Ecological information

LD ₅₀ /oral/rat/male/female:	8.7 mg/kg
LC ₅₀ /by inhalation/rat/male/female:	0.015 mg/l / 4 h
LD ₅₀ /dermal/rat/male/female:	500 - 1000 mg/kg
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Eye irritant:	Contact with water liberates very toxic highly flammable gas which is irritating to the eyes.

13. Disposal considerations

Disposal of waste product:



This product is dangerous for the environment. Do not discharge to sewers or drains. This product must be disposed of according to local regulations.

Disposal of waste containers:

Handle and store empty containers as if they still contain the product. Flasks must never be rinsed or cleaned but collected in a secure place, and left in the open air for several days. Large numbers of empty containers should be moved to a deep open pit until any phosphine evolution is complete. The containers should then be disposed in accordance with local regulations.

14. Transport information

UN No.	1397
Transport category:	1
ADR:	Class 4.3
Packing group:	1
IMDG:	Class 4.3

15. Regulatory information

Safety phrases:

S7/8, S3/9/49, S22, S28, S30, S35, S36/37, S38, S43, S45, S57, S61

Risk Phrases:

R12, R15/16, R 17, R 22, R26, R28, R32, R34, R50

16. Other information

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Consult the label for directions for use.

THIS INFORMATION CONCERNS ONLY THE PRODUCT AS CONFORMING TO ITS
SPECIFICATIONS AND LIMITED TO THE USES HEREIN STATED.

This sheet complements the technical sheet of use but does not replace it. The information contained on this sheet is based on knowledge of the product on the date of publication. It is given in good faith.

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