

Safety Data Sheet

according to Regulation (EC) No 1907/2006

PHOSTOXIN Tabletten/Phostoxin Pellets/DETIA-GAS-EX T/DETIA-GAS-EX P

Print date: 29.10.2014

Product code: 62

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**Hazard statements**

H260	In contact with water releases flammable gases which may ignite spontaneously.
H300	Fatal if swallowed.
H330	Fatal if inhaled.
H311	Toxic in contact with skin.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P235	Keep cool.
P403	Store in a well-ventilated place.
P501	This material and its container must be disposed of as hazardous waste. Dispose of waste according to applicable legislation.
P405	Store locked up.
P404	Store in a closed container.
P402	Store in a dry place.
P370+P378	In case of fire: Use Carbon dioxide (CO ₂); Extinguishing powder; Dry sand to extinguish.
P335	Brush off loose particles from skin.
P321	Specific treatment (see first Aid on this label).
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P273	Avoid release to the environment.
P234	Keep only in original container.
P232	Protect from moisture.
P223	Do not allow contact with water.

Special labelling of certain mixtures

EUH029	Contact with water liberates toxic gas.
EUH032	Contact with acids liberates very toxic gas.

Additional advice on labelling

After contact with skin, first remove product with a dry cloth and then wash the skin with plenty of water. The container must be opened outdoors and in dry conditions.

2.3. Other hazards

Fatal if swallowed or if inhaled., Toxic in contact with skin., Very toxic to fish.

SECTION 3: Composition/information on ingredients**3.2. Mixtures**

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Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
244-088-0	aluminium phosphide	56 %
20859-73-8	F - Highly flammable, T+ - Very toxic, N - Dangerous for the environment R15-28-29-32-50	
015-004-00-8	Water-react. 1, Acute Tox. 2, Aquatic Acute 1; H260 H300 H400	
214-185-2	Ammonium carbamat	> 20 %
1111-78-0	Xn - Harmful, Xi - Irritant R22-38-41	
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1; H302 H315 H318	
01-2119493982-22		
232-260-8	phosphine	- %
7803-51-2	F+ - Extremely flammable, T+ - Very toxic, C - Corrosive, N - Dangerous for the environment R12-17-26-34-50	
015-181-00-1	Flam. Gas 1, Acute Tox. 2, Skin Corr. 1B, Aquatic Acute 1; H220 H330 H314 H400	

Full text of R and H phrases: see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Move victim out of danger zone. Call a physician immediately. Remove contaminated clothing immediately and dispose off safely.

After inhalation

If experiencing respiratory symptoms: Call a doctor. Symptoms: Vomiting, Headache, Respiratory complaints, Dizziness. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Provide fresh air. In case of breathing difficulties administer oxygen. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. Call a physician immediately. If unconscious, call emergency physician. Special aids required for First Aid measures: have methyl prednisolon (application by physician) and products for acute treatment following exposition of smoke gas (eg a beclometasone (Ventolair®) spray) available.. Apply cortisone spray at early stage.

After contact with skin

After contact with skin, first remove product with a dry cloth and then wash the skin with plenty of water. Change contaminated clothing. Medical treatment necessary.

After contact with eyes

remove rests of preparation with fluff-free cloth; rinse with plenty of water and apply eye drops only after no more powdery residues are visible. Rinse immediately carefully and thoroughly with eye-bath or water.

After ingestion

Never give anything by mouth to an unconscious person or a person with cramps. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Headache, dizziness, anxiety, difficulty breathing and nausea

4.3. Indication of any immediate medical attention and special treatment needed

If unconscious place in recovery position and seek medical advice. First-aid measures: Methylprednisolon, Ventolair®

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

ABC powder. Dry sand.

Unsuitable extinguishing media

Water. Foam.

5.2. Special hazards arising from the substance or mixture

Combustible. Vapours may form explosive mixtures with air. Risk of selfignition.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protective suit.

Additional information

Do not allow run-off from fire-fighting to enter drains or water courses. Never add water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

immediately leave the danger zone Move victim out of danger zone. The danger areas must be delimited and identified using relevant warning and safety signs. Avoid contact with eyes. Wear a self-contained breathing apparatus and chemical protective clothing. Avoid contact with skin. Remove all sources of ignition. Provide adequate ventilation.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Do not empty into drains; dispose of this material and its container in a safe way. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. Cover drains.

6.3. Methods and material for containment and cleaning up

Take up carefully when dry. Treat the recovered material as prescribed in the section on waste disposal. Dispose contaminated material as waste according to item 13. Ensure adequate ventilation. Do not flush with water or aqueous cleaning agents. Use suitable containers for disposal. Avoid dust formation. This material and its container must be disposed of as hazardous waste.

6.4. Reference to other sections

8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Observe the Ordinance on Hazardous Substances (GefStoffV) and TRGS 500. These include general hygiene measures such as - Do not smoke, eat and eat in the working areas. - Wear protective gloves / protective clothing / eye protection. - Take contaminated clothing and protective equipment off before entering areas in which is eaten. - Avoid dust formation. If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust. Avoid contact with water. Never add water to this product.

Advice on protection against fire and explosion

Wear a self-contained breathing apparatus and chemical protective clothing. Keep away from sources of ignition. - No smoking. Keep away from: Water. Acid

Further information on handling

Keep away from: Water Acid Humidity.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container dry. Keep container tightly closed. Keep locked up. Store in a place accessible by

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authorized persons only. Keep container in a well-ventilated place. Keep only in the original container in a cool, well-ventilated place away from acids. Keep away from: Water.

Advice on storage compatibility

Do not store together with: Acid. Water

Further information on storage conditions

Keep locked up and out of the reach of children.

7.3. Specific end use(s)

Plant protection products, biocides ; TRGS 512

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7803-51-2	Phosphine	0.1	0.14		TWA (8 h)	WEL
		0.2	0.28		STEL (15 min)	WEL

Additional advice on limit values

Odour threshold for hydrogen phosphide: 0.02 up to 3 ppm, depending on the sensitivity 1b) Apply to TRGS 402

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

Eye/face protection

wear safety goggles according to EN 166:2001.

Hand protection

suitable gloves for example Nitril or Latex gloves (AQL: 1.5) tested according to EN- 374-2 and EN374-3

Skin protection

suitable protective clothing according to BGR 189 (ATL: "Rules for the use of protective clothing")

Respiratory protection

respiratory equipment according to DIN EN 141, Type B, code colour grey

Environmental exposure controls

6, 7

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state: solid . developed with humidity, gaseous phosphine
Colour: grey
Odour: garlic-like

Test method

pH-Value: Test not required.

Changes in the physical state

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Melting point:	> 500 °C
Initial boiling point and boiling range:	Test not required.
Sublimation point:	Test not required.
Softening point:	No data available
:	No data available

Flammability

Solid:	No data available
Gas:	No data available

Explosive properties

This information is not available.

Lower explosion limits:	1,8
Upper explosion limits:	This information is not available.
Ignition temperature:	This information is not available.

Auto-ignition temperature

Solid:	This information is not available.
Gas:	This information is not available.

Vapour pressure:	34,6 hPa
Density:	2,0147 g/cm ³
Viscosity / dynamic:	not applicable
Viscosity / kinematic:	not applicable
Flow time:	not applicable
Vapour density:	not applicable
Solvent separation test:	This information is not available.

9.2. Other information

No data available

SECTION 10: Stability and reactivity**10.1. Reactivity**

In contact with water, a toxic and extremely flammable gas is developed. In contact with acids, a very toxic gas is developed.

10.2. Chemical stability

Handle under inert gas.

10.3. Possibility of hazardous reactions

Contact with acids liberates very toxic gas. Contact with water liberates toxic gas. Do not allow uncontrolled discharge of product into the environment.

10.4. Conditions to avoid

see section 7

10.5. Incompatible materials

Protect against: moisture. Never add water to this product. Keep away from: Material, rich in oxygen, oxidizing. Keep away from: acid. Reacts violently with water, liberating extremely flammable gases. Contact with acids liberates toxic gas.

10.6. Hazardous decomposition products

Phosphorus hydride, phosphorus pentoxide, phosphoric acid, see also section 5.3

SECTION 11: Toxicological information

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11.1. Information on toxicological effects**Acute toxicity**

Very toxic. Acute toxicity, oral. Acute toxicity, inhalant. Acute toxicity, dermal.

CAS No	Chemical name	Exposure routes	Method	Dose	Species	Source
20859-73-8	aluminium phosphide	oral	ATE	5 mg/kg		
1111-78-0	Ammonium carbamat	oral	LD50	>681-<1470 mg/kg	Ratte	
7803-51-2	phosphine	inhalative vapour	ATE	0,5 mg/l		
		inhalative aerosol	ATE	0,05 mg/l		

Irritation and corrosivity

Irritating to eyes.

Sensitising effects

no danger of sensitization.

Severe effects after repeated or prolonged exposure

-

Carcinogenic/mutagenic/toxic effects for reproduction

No indications of human germ cell mutagenicity exist. No indications of human reproductive toxicity exist. Longterm experiments do not indicate carcinogenic effects.

Specific effects in experiment on an animal

Very toxic by inhalation, in contact with skin and if swallowed.

Additional information on tests

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

Practical experience**Observations relevant to classification**

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

SECTION 12: Ecological information**12.1. Toxicity**

Very toxic to aquatic life.

12.2. Persistence and degradability

Decomposes in contact with water.

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

12.4. Mobility in soil

The product decomposes spontaneously in water. Ecological information therefore only describes the effects of the decomposition products.

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Other adverse effects

Effects on soil microorganisms

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Further information

Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products

061301 WASTES FROM INORGANIC CHEMICAL PROCESSES; wastes from inorganic chemical processes not otherwise specified; inorganic plant protection products, wood-preserving agents and other biocides.
Classified as hazardous waste.

Waste disposal number of contaminated packaging



060316 WASTES FROM INORGANIC CHEMICAL PROCESSES; wastes from the MFSU of salts and their solutions and metallic oxides; metallic oxides other than those mentioned in 06 03 15

Contaminated packaging

Avoid contact with water. Dispose of waste according to applicable legislation.

SECTION 14: Transport information



Land transport (ADR/RID)

14.1. UN number:	UN1397
14.2. UN proper shipping name:	ALUMINIUM PHOSPHIDE
14.3. Transport hazard class(es):	4.3+6.1
14.4. Packing group:	I
Hazard label:	4.3+6.1
	 
Classification code:	WT2
Special Provisions:	507
Limited quantity:	0
Transport category:	1
Tunnel restriction code:	E

Other applicable information (land transport)

Limited quantity: E0. Mailing: not allowed. Warning board: starting 20 kg net weight

Inland waterways transport (ADN)

14.1. UN number:	UN1397
14.2. UN proper shipping name:	ALUMINIUM PHOSPHIDE
14.3. Transport hazard class(es):	4.3+6.1
14.4. Packing group:	I
Hazard label:	4.3+6.1
	 
Classification code:	WT2

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Special Provisions: 507 802
Limited quantity: 0

Other applicable information (inland waterways transport)

Limited quantity: E0

Marine transport (IMDG)

14.1. UN number: UN1397
14.2. UN proper shipping name: ALUMINIUM PHOSPHIDE
14.3. Transport hazard class(es): 4.3+6.1
14.4. Packing group: I
Hazard label: 4.3+6.1



Special Provisions: -
Limited quantity: 0
EmS: F-G, S-N
Segregation group: chlorites

Other applicable information (marine transport)

Limited quantity: E0

Air transport (ICAO)

14.1. UN number: UN1397
14.2. UN proper shipping name: ALUMINIUM PHOSPHIDE
14.3. Transport hazard class(es): 4.3+6.1
14.4. Packing group: I
Hazard label: 4.3+6.1



Limited quantity Passenger: Forbidden
IATA-packing instructions - Passenger: Forbidden
IATA-max. quantity - Passenger: Forbidden
IATA-packing instructions - Cargo: 487
IATA-max. quantity - Cargo: 15 kg

Other applicable information (air transport)

Limited quantity: E0
: Forbidden
Cargo Aircraft only

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes

**14.6. Special precautions for user**

Keep away from food, drink and animal feeding stuffs. Avoid contact with water.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

not applicable

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SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

Water contaminating class (D): 2 - water contaminating

SECTION 16: Other information**Full text of R phrases referred to under Sections 2 and 3**

12	Extremely flammable.
15	Contact with water liberates extremely flammable gases.
15/29	Contact with water liberates toxic, extremely flammable gas.
17	Spontaneously flammable in air.
21	Harmful in contact with skin.
22	Harmful if swallowed.
26	Very toxic by inhalation.
26/28	Very toxic by inhalation and if swallowed.
28	Very toxic if swallowed.
29	Contact with water liberates toxic gas.
32	Contact with acids liberates very toxic gas.
34	Causes burns.
38	Irritating to skin.
41	Risk of serious damage to eyes.
50	Very toxic to aquatic organisms.

Full text of H statements referred to under Sections 2 and 3

H220	Extremely flammable gas.
H260	In contact with water releases flammable gases which may ignite spontaneously.
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.
H400	Very toxic to aquatic life.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)