

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 12.02.2019

Revision: 12.02.2019

### 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name: PHOSTOXIN**
- **Authorisation No.:** 1143
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Plant protection product
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Detia Freyberg GmbH  
Dr. Werner-Freyberg-Str. 11  
D-69514 LAUDENBACH  
DEUTSCHLAND
- **Further information obtainable from:**  
Detia Freyberg GmbH - Regulatory Affairs  
telephone: +49-6201-708-0  
e-mail: sicherheitsdatenblaetter@Detia-Freyberg.de
- **Emergency telephone number:**  
Medical Emergency information in case of poisoning: Poison Information Center Mainz - Phone: +49 (0) 6131 19240 (advisory service 24/7 in German or English language)

### 2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Water-react. 1 H260 In contact with water releases flammable gases which may ignite spontaneously.



GHS06 skull and crossbones

Acute Tox. 2 H300 Fatal if swallowed.  
Acute Tox. 2 H310 Fatal in contact with skin.  
Acute Tox. 1 H330 Fatal if inhaled.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 12.02.2019

Revision: 12.02.2019

**Trade name: PHOSTOXIN**

(Contd. of page 1)

**Hazard pictograms**


GHS02 GHS06 GHS09

**Signal word** Danger

**Hazard-determining components of labelling:**

 aluminium phosphide  
 ammonium carbamate

**Hazard statements**

H260 In contact with water releases flammable gases which may ignite spontaneously.  
 H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.  
 H319 Causes serious eye irritation.  
 H400 Very toxic to aquatic life.

**Precautionary statements**

P223 Do not allow contact with water.  
 P232 Protect from moisture.  
 P234 Keep only in original container.  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER.  
 P321 Specific treatment (see on this label).  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P312 Call a POISON CENTER/doctor if you feel unwell.  
 P335 Brush off loose particles from skin.  
 P370+P378 In case of fire: Use for extinction: CO<sub>2</sub>, sand, extinguishing powder.  
 P402+P404 Store in a dry place. Store in a closed container.  
 P405 Store locked up.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Additional information:**

EUH029 Contact with water liberates toxic gas.  
 EUH032 Contact with acids liberates very toxic gas.  
 EUH070 Toxic by eye contact.  
 To avoid risks to human health and the environment, comply with the instructions for use.

**Other hazards**
**Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

**Chemical characterisation: Mixtures**
**Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

CAS: 20859-73-8	aluminium phosphide	56.0%
EINECS: 244-088-0	Water-react. 1, H260;  Acute Tox. 2, H300; Acute Tox. 3, H311; Acute Tox. 1, H330;  Aquatic Acute 1, H400	

(Contd. on page 3)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 12.02.2019

Revision: 12.02.2019

**Trade name: PHOSTOXIN**

(Contd. of page 2)

CAS: 1111-78-0	ammonium carbamate	21.0%
EINECS: 214-185-2	☠ Eye Dam. 1, H318; ☠ Acute Tox. 4, H302; Skin Irrit. 2, H315	
CAS: 8002-74-2	Paraffin waxes and Hydrocarbon waxes	3.0%
EINECS: 232-315-6	☠ Eye Irrit. 2, H319; STOT SE 3, H335	

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

#### 4 First aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.  
Remove breathing equipment only after contaminated clothing have been completely removed.  
In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Do not induce vomiting; call for medical help immediately.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

#### 5 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

Extinguishing powder. Do not use water.  
CO<sub>2</sub>. Do not use water.  
Sand. Do not use water.  
Special powder for metal fires. Do not use water.  
CO<sub>2</sub>, sand, extinguishing powder. Do not use water.  
Use fire extinguishing methods suitable to surrounding conditions.

· **For safety reasons unsuitable extinguishing agents:** Water

· **Special hazards arising from the substance or mixture** No further relevant information available.

· **Advice for firefighters**

· **Protective equipment:** Mouth respiratory protective device.

#### 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.  
Wear protective equipment. Keep unprotected persons away.

(Contd. on page 4)

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 12.02.2019

Revision: 12.02.2019

**Trade name: PHOSTOXIN**

(Contd. of page 3)

· **Environmental precautions:**

Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents

· **Reference to other sections**

See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Thorough dedusting.  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.

· **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.  
Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Do not store together with acids.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

**20859-73-8 aluminium phosphide**

WEL Long-term value: 2 mg/m<sup>3</sup>

**8002-74-2 Paraffin waxes and Hydrocarbon waxes**

WEL Short-term value: 6 mg/m<sup>3</sup>

Long-term value: 2 mg/m<sup>3</sup>

- **Additional information:** The lists valid during the making were used as basis.

(Contd. on page 5)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 12.02.2019

Revision: 12.02.2019

**Trade name: PHOSTOXIN**

(Contd. of page 4)

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing  
 Wash hands before breaks and at the end of work.  
 Store protective clothing separately.  
 Avoid contact with the eyes.  
 Avoid contact with the eyes and skin.

- **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

**Form:** Solid in various forms

**Colour:** Grey

- **Odour:** Characteristic

- **Odour threshold:** Not determined.

- **pH-value:** Not applicable.

- **Change in condition**

**Melting point/freezing point:** Undetermined.

(Contd. on page 6)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 12.02.2019

Revision: 12.02.2019

Trade name: PHOSTOXIN

(Contd. of page 5)

<b>Initial boiling point and boiling range:</b> Undetermined.	
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gas):</b>	Contact with water liberates extremely flammable gases.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Not determined.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapour pressure:</b>	Not applicable.
· <b>Density at 20 °C:</b>	2.01505 g/cm <sup>3</sup>
· <b>Bulk density:</b>	1,983 kg/m <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with water:</b>	Insoluble.
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	56.0 %
<b>VOC (EC)</b>	0.00 %
<b>Solids content:</b>	100.0 %
· <b>Other information</b>	No further relevant information available.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions**  
Contact with water releases flammable gases.  
Contact with water releases toxic gases.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**  
Fatal if swallowed, in contact with skin or if inhaled.

(Contd. on page 7)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 12.02.2019

Revision: 12.02.2019

Trade name: PHOSTOXIN

(Contd. of page 6)

**LD/LC50 values relevant for classification:**
**ATE (Acute Toxicity Estimates)**

Oral	LD50	0.71 mg/kg (rat)
Dermal	LD50	536 mg/kg
Inhalative	LC50/4 h	0.00893 mg/l

**20859-73-8 aluminium phosphide**

Oral	LD50	0.4 mg/kg (rat)
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**1111-78-0 ammonium carbamate**

Oral	LD50	1,400 mg/kg (rat)
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**Primary irritant effect:**

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**  
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Danger to drinking water if even extremely small quantities leak into the ground.  
Very toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 8)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.02.2019

Revision: 12.02.2019

**Trade name: PHOSTOXIN**

(Contd. of page 7)

**· European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 12	Release of an acute toxic gas
HP 14	Ecotoxic

**· Uncleaned packaging:**
**· Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

**· UN-Number**
**· ADR, IMDG, IATA** UN1397
**· UN proper shipping name**
**· ADR** 1397 ALUMINIUM PHOSPHIDE,  
ENVIRONMENTALLY HAZARDOUS  
**· IMDG** ALUMINIUM PHOSPHIDE, MARINE POLLUTANT  
**· IATA** ALUMINIUM PHOSPHIDE
**· Transport hazard class(es)**
**· ADR**

**· Class**

4.3 Substances which, in contact with water, emit flammable gases.

**· Label**

4.3+6.1

**· IMDG**

**· Class**

4.3 Substances which, in contact with water, emit flammable gases.

**· Label**

4.3/6.1

**· IATA**

**· Class**

4.3 Substances which, in contact with water, emit flammable gases.

**· Label**

4.3 (6.1)

**· Packing group**
**· ADR, IMDG, IATA** I
**· Environmental hazards:**
**· Marine pollutant:** Yes  
Symbol (fish and tree)

(Contd. on page 9)



## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 12.02.2019

Revision: 12.02.2019

Trade name: PHOSTOXIN

(Contd. of page 8)

· <b>Special marking (ADR):</b>	Symbol (fish and tree)
· <b>Special precautions for user</b>	Warning: Substances which, in contact with water, emit flammable gases.
· <b>Danger code (Kemler):</b>	-
· <b>EMS Number:</b>	F-G,S-N
· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
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· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	0
· <b>Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
· <b>Transport category</b>	1
· <b>Tunnel restriction code</b>	E
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· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	0
· <b>Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
· <b>UN "Model Regulation":</b>	UN 1397 ALUMINIUM PHOSPHIDE, 4.3 (6.1), I, ENVIRONMENTALLY HAZARDOUS

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**  
H1 ACUTE TOXIC  
O3 Substances or mixtures with hazard statement EUH029  
E1 Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 20 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 40
- **National regulations:**
- **Information about limitation of use:**  
Employment restrictions concerning juveniles must be observed.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**  
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.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.

(Contd. on page 10)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 12.02.2019

Revision: 12.02.2019

**Trade name: PHOSTOXIN**

(Contd. of page 9)

H319 Causes serious eye irritation.  
H330 Fatal if inhaled.  
H335 May cause respiratory irritation.  
H400 Very toxic to aquatic life.

- **Department issuing SDS:** Regulatory Affairs
- **Contact:** sicherheitsdatenblaetter@detia-freyberg.de

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Water-react. 1: Substances and mixtures which in contact with water emit flammable gases – Category 1

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 1: Acute toxicity – Category 1

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

- **\* Data compared to the previous version altered.**