

## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 5.1 Revision Date 25.09.2013

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : Phosphorus pentabromide

Product Number : 226734

Brand : Aldrich

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

CAS-No. : 7789-69-7

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Laboratory chemicals, Manufacture of substances

**1.3 Details of the supplier of the safety data sheet**

Company : Sigma-Aldrich Chemie GmbH  
Riedstrasse 2  
D-89555 STEINHEIM

Telephone : +49 89-6513-1444

Fax : +49 7329-97-2319

E-mail address : eurtechserv@sial.com

**1.4 Emergency telephone number**

Emergency Phone # : 0800 181 7059 (CHEMTREC Deutschland)  
+49 (0)696 43508409 (CHEMTREC weltweit)

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Skin corrosion (Category 1B), H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

C Corrosive R14, R34

For the full text of the R-phrases mentioned in this Section, see Section 16.

**2.2 Label elements****Labelling according Regulation (EC) No 1272/2008**

Pictogram



Signal word : Danger

Hazard statement(s)  
H314 : Causes severe skin burns and eye damage.

Precautionary statement(s)  
P280 : Wear protective gloves/ protective clothing/ eye protection/ face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 Immediately call a POISON CENTER or doctor/ physician.  
 Supplemental Hazard information (EU)  
 EUH014 Reacts violently with water.

**2.3 Other hazards** - none

**SECTION 3: Composition/information on ingredients**

**3.1 Substances**

Chemical characterization : Natural product  
 Formula : Br<sub>5</sub>P  
 Molecular Weight : 430,49 g/mol  
 CAS-No. : 7789-69-7  
 EC-No. : 232-186-6

**Hazardous ingredients according to Regulation (EC) No 1272/2008**

Component	Classification	Concentration
<b>Phosphorus pentabromide</b>		
CAS-No. 7789-69-7 EC-No. 232-186-6	Skin Corr. 1B; H314, EUH014	<= 100 %

**Hazardous ingredients according to Directive 1999/45/EC**

Component	Classification	Concentration
<b>Phosphorus pentabromide</b>		
CAS-No. 7789-69-7 EC-No. 232-186-6	C, R14 - R34	<= 100 %

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

no data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Dry powder

### 5.2 Special hazards arising from the substance or mixture

Oxides of phosphorus, Hydrogen bromide gas

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 5.4 Further information

no data available

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Never allow product to get in contact with water during storage.

Store under inert gas.

### 7.3 Specific end use(s)

A part from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Components with workplace control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

#### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### **Body Protection**

Complete suit protecting against chemicals, Flame retardant protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### **Control of environmental exposure**

Do not let product enter drains.

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## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

- |  |                   |
|--|-------------------|
| a) Appearance                              | Form: solid       |
| b) Odour                                   | no data available |
| c) Odour Threshold                         | no data available |
| d) pH                                      | no data available |
| e) Melting point/freezing point            | no data available |
| f) Initial boiling point and boiling range | no data available |
| g) Flash point                             | not applicable    |
| h) Evaporation rate                        | no data available |
| i) Flammability (solid, gas)               | no data available |
| j) Upper/lower flammability or             | no data available |

explosive limits

- k) Vapour pressure no data available
- l) Vapour density no data available
- m) Relative density no data available
- n) Water solubility no data available
- o) Partition coefficient: n-octanol/water no data available
- p) Auto-ignition temperature no data available
- q) Decomposition temperature no data available
- r) Viscosity no data available
- s) Explosive properties no data available
- t) Oxidizing properties no data available

## 9.2 Other safety information

no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Reacts violently with water.

### 10.4 Conditions to avoid

Do not allow water to enter container because of violent reaction.  
Exposure to moisture.

### 10.5 Incompatible materials

Strong bases, Alcohols, acids, Strong oxidizing agents, Reacts violently with water.

### 10.6 Hazardous decomposition products

Other decomposition products - no data available  
In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

no data available

#### Skin corrosion/irritation

no data available

#### Serious eye damage/eye irritation

no data available

#### Respiratory or skin sensitisation

no data available

#### Germ cell mutagenicity

no data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**

no data available

**Specific target organ toxicity - single exposure**

no data available

**Specific target organ toxicity - repeated exposure**

no data available

**Aspiration hazard**

no data available

**Additional Information**

RTECS: Not available

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

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

no data available

**12.2 Persistence and degradability**

no data available

**12.3 Bioaccumulative potential**

no data available

**12.4 Mobility in soil**

no data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

no data available

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**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

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**SECTION 14: Transport information****14.1 UN number**

ADR/RID: 2691

IMDG: 2691

IATA: 2691

**14.2 UN proper shipping name**

ADR/RID: PHOSPHORUS PENTABROMIDE

IMDG: PHOSPHORUS PENTABROMIDE

IATA: Phosphorus pentabromide

Passenger Aircraft: Not permitted for transport

**14.3 Transport hazard class(es)**

ADR/RID: 8

IMDG: 8

IATA: 8

**14.4 Packaging group**

ADR/RID: II

IMDG: II

IATA: II

**14.5 Environmental hazards**

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

**14.6 Special precautions for user**  
no data available

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**SECTION 15: Regulatory information**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

**15.2 Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out

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**SECTION 16: Other information**

**Full text of H-Statements referred to under sections 2 and 3.**

EUH014	Reacts violently with water.
H314	Causes severe skin burns and eye damage.
Skin Corr.	Skin corrosion

**Full text of R-phrases referred to under sections 2 and 3**

C	Corrosive
R14	Reacts violently with water.
R34	Causes burns.

**Further information**

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