



Material Safety Data Sheet

According to 91/155 EEC

Printing date 15.09.2005

Reviewed on 15.09.2005

* 1 Identification of substance:

- **Product details:** Reagent for water analysis
- **Product name:** PHMB-Photometer
- **Catalog number:** 00516109, (4)516100, 516101, 516102, 516103(0)
- **Supplier:**
Tintometer GmbH
Schleefstraße 8a-12
D - 44287 Dortmund
Made in Germany
- **Informing department:** Department Laboratory
- **Emergency information:**
Poison Center Berlin, Germany
phone: +49(0)30 19240

phone: +49(0)231 94510-0

* 2 Composition/Data on components:

- **Description:** Preparation contains anorganic and organic compounds.

Dangerous components:

CAS: 77-92-9	citric acid	<input checked="" type="checkbox"/> Xi; R 36	2.5-5%
EINECS: 201-069-1			

- **Additional information** For the wording of the listed risk phrases refer to section 16.

* 3 Hazards identification

- **Hazard designation:** void
- **Information pertaining to particular dangers for man and environment**
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system**
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

* 4 First aid measures

- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact**
Rinse opened eye for several minutes under running water.
Call a doctor immediately.
- **After swallowing**
Drink copious amounts of water, induce vomiting.
In case of persistent symptoms consult doctor.
- **The following symptoms may occur:**
After swallowing of large amounts:
general feeling of sickness
sickness

(Contd. on page 2)

— GB —

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vomiting

(Contd. of page 1)

* 5 Fire fighting measures

- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
- **Special hazards caused by the material, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
combustible
- **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
- **Additional information**
Ambient fire may liberate hazardous vapours.
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

* 6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:** Do not allow product to reach sewage system or water bodies.
- **Measures for cleaning/collecting:**
Dispose of contaminated material as waste according to item 13.
Collect mechanically.
Ensure adequate ventilation.
- **Additional information:** No dangerous materials are released.

* 7 Handling and storage

- **Handling**
- **Information for safe handling:** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store under dry conditions.
Protect from humidity and keep away from water.
Protect from the effects of light.
- **Storage class** Not required.

* 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**
Wash hands during breaks and at the end of the work.
Do not eat, drink or smoke while working.
- **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
- **Recommended filter device for short term use:** Filter P2

(Contd. on page 3)

— GB —

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(Contd. of page 2)

- **Protection of hands:** Preventive skin protection by use of skin-protecting agents is recommended.
 - **Material of gloves**
nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
 - **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
Value for the permeation: Level ≥ 6 (480 min)
 - **Eye protection:** Safety glasses
 - **Body protection:** Protective work clothing.
-

9 Physical and chemical properties:

· Form:	Tablets
· Colour:	Light beige
· Odour:	Odourless
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	300°C
· Flash point:	Not applicable
· Danger of explosion:	Product is not explosive.
· Density	Not determined
· Solubility in / Miscibility with Water:	Soluble
· pH-value (10.8 g/l) at 20°C:	2.7
· Solvent content:	
Organic solvents:	0.0 %
· Solids content:	100.0 %

*10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
 - **Materials to be avoided:**
halogen compounds
combustible substances
aluminium, copper, zinc, metal ions, oxidizing agent
 - **Dangerous products of decomposition:** see chapter 5
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*11 Toxicological information

- **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

· LD/LC50 values that are relevant for classification:		
50-81-7 ascorbic acid		
Oral	LD50	11900 mg/kg (rat)
10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H3BO3 calculated on the dry weight		
Oral	LD50	2660 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rat)
77-92-9 citric acid		
Oral	LD50	3000 mg/kg (rat)

(Contd. on page 4)

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(Contd. of page 3)

- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** Irritant effect.

- **Sensitization:** No sensitizing effect known.

- **Subacute to chronic toxicity:**

CAS-No. 10043-35-3:

MERCK: Sensitization test (guinea pig): negative (OECD 406)

- **Additional toxicological information:**

The product is not subject to classification according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version.

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

The usual precautionary measures should be adhered to general rules for handling chemicals.

* 12 Ecological information:

- **Information about elimination (persistence and degradability):**

- **Other information:**

Quantitative data on the ecological effect of this product are not available.

CAS: 77-92-9 Citric acid: 98% / 2 d

- **Behaviour in environmental systems:**

50-81-7 ascorbic acid	
log P(o/w)	-2.15 (.)
10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H3BO3 calculated on the dry weight	
log P(o/w)	0.76 (25°C) (.)
77-92-9 citric acid	
log P(o/w)	-1.72 (20°C) (.)

- **Ecotoxicological effects:**

- **Aquatic toxicity:**

50-81-7 ascorbic acid	
LC50	33000 (Merck) mg/l/48h (Leuciscus idus)
	1020 mg/l/96h (Onchorhynchus mykiss)
10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H3BO3 calculated on the dry weight	
EC50	133 mg/l/48h (Daphnia magna)
LC50	5600 mg/l/96h (Gambusia affinis)
77-92-9 citric acid	
LC50	440-760 mg/l/96h (Leuciscus idus)

- **Additional ecological information:**

- **CSB-value:**

77-92-9 citric acid	
COD	0.728 g/g (.)

- **BSB5-value:**

77-92-9 citric acid	
BSB5	0.526 g/g (.)

- **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

(Contd. on page 5)

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(Contd. of page 4)

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

*13 Disposal considerations

- **Product:**
- **Recommendation** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue	
16 05 09	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

- **Uncleaned packagings:**
 - **Recommendation:** Disposal must be made according to official regulations.
 - **Recommended cleaning agent:** Water, if necessary with cleaning agent.
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14 Transport information

- | | |
|--|---|
| · Land transport ADR/RID (cross-border) | |
| · ADR/RID-GGVS/E Class: | - |

- | | |
|-----------------------------------|----|
| · Maritime transport IMDG: | |
| · IMDG Class: | - |
| · Marine pollutant: | No |

- | | |
|--|---|
| · Air transport ICAO-TI and IATA-DGR: | |
| · ICAO/IATA Class: | - |

- **Transport/Additional information:** Not dangerous according to the above specifications.
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*15 Regulatory information

- **Designation according to EC guidelines:**
The product is not subject to identification regulations under EC Directives and the Ordinance on Hazardous Materials (GefStoffV).
 - **Special designation of certain preparations:**
Safety data sheet available for professional user on request.
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*16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant R-phrases**
36 Irritating to eyes.
 - **Department issuing data specification sheet:** Technical Department
 - *** Data compared to the previous version altered.**
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