



Material Safety Data Sheet According to 91/155 EEC

Printing date 14.04.2005

Reviewed on 14.04.2005

* 1 Identification of substance:

- **Product details:** Reagent for water analysis
- **Product name:** Copper / Zinc HR
- **Catalog number:** 00512349, (4)512340, (4)512341, 512343
- **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 compounds.
- **Dangerous components:** Void

* 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 rinse with water.
- **After eye contact**
Rinse opened eye for several minutes under running water.
Seek immediate medical advice.
- **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:
Danger of disturbed cardiac rhythm.
Danger of system failure.
sickness

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vomiting

* 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.
Hydrogen chloride (HCl)
dipotassium oxide
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter drains.

* 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:** Collect mechanically.
- **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:** The product is not flammable
- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **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:
1330-43-4 disodium tetraborate, anhydrous
OES (Great Britain) Long-term value: 1 mg/m ³

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

- **Personal protective equipment**

- **General protective and hygienic measures**

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

- **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.

- **Recommended filter device for short term use:** Filter P1

- **Protection of hands:** Preventive skin protection by use of skin-protecting agents is recommended.

- **Material of gloves**

nitrile

Recommended thickness of the material: ≥ 0.11 mm

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· 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.

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:	Violet
· Odour:	Odourless
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	1413°C
· Flash point:	Not applicable
· Self-inflammability:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive.
· Density	Not determined
· Solubility in / Miscibility with Water:	Soluble
· pH-value (11.9 g/l) at 20°C:	8.7
· 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:

acids

oxidizing agents

--> forms heat

· Dangerous products of decomposition: see chapter 5

* 11 Toxicological information

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

· LD/LC50 values that are relevant for classification:

7447-40-7 potassium chloride		
Oral	LD50	2600 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)
1330-43-4 disodium tetraborate, anhydrous		
Oral	LD50	709 mg/kg (human)
		2660 mg/kg (rat)

· Primary irritant effect:
· on the skin: No irritant effect.

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- **on the eye:** Irritant effect.
 - **Sensitization:** No sensitizing effect known.
 - **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.
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* 12 Ecological information:

- **Information about elimination (persistence and degradability):**
- **Other information:**
Quantitative data on the ecological effect of this product are not available.
Methods for the determination of biodegradability are not applicable to inorganic substances.

· Behaviour in environmental systems:	
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10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H3BO3 calculated on the dry weight	
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log P(o/w)	0.76 (25°C) (.)
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· Ecotoxicological effects:	
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· Acquatic toxicity:	
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7447-40-7 potassium chloride	
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EC50	825 mg/l/48h (Daphnia magna)
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LC50	920 mg/l/96h (Gambusia affinis)
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10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H3BO3 calculated on the dry weight	
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EC50	133 mg/l/48h (Daphnia magna)
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1330-43-4 disodium tetraborate, anhydrous	
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LC 50	807 mg/l (fish)
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· General notes:	
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- 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.
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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	
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16 05 09	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08
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- **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

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

· Maritime transport IMDG:	
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· IMDG Class:	-
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· Marine pollutant:	No
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- **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:**
Observe the normal safety regulations when handling chemicals
The product is not subject to identification regulations under EC Directives and the Ordinance on Hazardous Materials (GefStoffV).
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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.
- **Department issuing data specification sheet:** Technical Department
 - *** Data compared to the previous version altered.**
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