

**Copper/Zinc HR Photometer**

Version number: GHS 1.0

Date of compilation: 2026-05-20

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

**1.1 Product identifier**

Trade name **Copper/Zinc HR Photometer**  
Article number TbsPCZHR

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

Relevant identified uses Reagent for water analysis  
Uses advised against Other.

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

Water-i.d. GmbH  
Daimlerstrasse 20  
76344 Eggenstein  
Germany

Telephone: +49 (0) 721-78 20 29-0  
e-mail: lab@water-id.com  
Website: <https://www.water-id.com>

e-mail (competent person) lab@water-id.com

**1.4 Emergency telephone number**

| Poison centre                                    |                 |
|--|-----------------|
| Name   | Telephone       |
| National Chemical Emergency Centre (NCEC) Europe | +44 1235 239670 |

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

Classification (acc. to GB CLP)  
This mixture does not meet the criteria for classification.

**2.2 Label elements**

Labelling (acc. to GB CLP)  
not required

**2.3 Other hazards**

Results of PBT and vPvB assessment  
Does not contain a PBT-/vPvB-substance at a concentration of  $\geq 0,1\%$ .  
Endocrine disrupting properties  
Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

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

**3.1 Substances**

Not relevant (mixture)

**3.2 Mixtures**

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Description of the mixture

| Name of substance | Identifier   | Wt%    | Classification acc. to GHS                 |
|-------------------|--|--------|--|
| ammonium chloride | CAS No<br>12125-02-9<br><br>EC No<br>235-186-4<br><br>Index No<br>017-014-00-8 | 1 – <5 | Acute Tox. 4 / H302<br>Eye Irrit. 2 / H319 |

| Name of substance | Specific Conc. Limits | M-Factors | ATE       | Exposure route |
|-------------------|-----------------------|-----------|-----------|----------------|
| ammonium chloride | -                     | -         | 500 mg/kg | oral           |

**Remarks**

For full text of abbreviations: see SECTION 16

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

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

Symptoms and effects are not known to date.

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

none

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

Suitable extinguishing media

Water, Foam, ABC-powder

Unsuitable extinguishing media

Water jet

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

Hazardous combustion products

Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2)

**5.3 Advice for firefighters**

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

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**SECTION 6: Accidental release measures**

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

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

**6.2 Environmental precautions**

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

**6.3 Methods and material for containment and cleaning up**

Advice on how to contain a spill

Covering of drains, Take up mechanically

Advice on how to clean up a spill

Take up mechanically.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

**6.4 Reference to other sections**

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

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

Managing of associated risks

- Explosive atmospheres

Removal of dust deposits.

**7.3 Specific end use(s)**

See section 16 for a general overview.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

| Occupational exposure limit values (Workplace Exposure Limits) |                   |            |            |           |                          |            |                           |                 |                                |          |           |
|--|-------------------|------------|------------|-----------|--------------------------|------------|---------------------------|-----------------|--------------------------------|----------|-----------|
| Country  | Name of agent     | CAS No     | Identifier | TWA [ppm] | TWA [mg/m <sup>3</sup> ] | STEL [ppm] | STEL [mg/m <sup>3</sup> ] | Ceiling-C [ppm] | Ceiling-C [mg/m <sup>3</sup> ] | Notation | Source    |
| GB   | ammonium chloride | 12125-02-9 | WEL        |           | 10                       |            | 20                        |                 |                                | fume     | EH40/2005 |

Notation

Ceiling-C ceiling value is a limit value above which exposure should not occur

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Notation

- fume as fume
- STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
- TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

**8.2 Exposure controls**

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Use protective eyewear to guard against splash of liquids.

Skin protection

- Hand protection

>10 minutes (permeation: level 1).

- Other protection measures

Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

**SECTION 9: Physical and chemical properties**

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

|  |   |
|--|---|
| Physical state   | solid (tablets)   |
| Colour   | dark violet   |
| Odour  | odourless   |
| Melting point/freezing point                             | not determined  |
| Boiling point or initial boiling point and boiling range | 288 °C  |
| Flammability   | this material is combustible, but will not ignite readily |
| Lower and upper explosion limit                          | not relevant (solid)                                      |
| Flash point  | not applicable  |
| Auto-ignition temperature                                | 384 °C  |
| Decomposition temperature                                | not relevant  |
| pH (value)   | not applicable  |
| Kinematic viscosity                                      | not relevant  |
| Solubility(ies)  | not determined  |

Partition coefficient

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|   |                                   |
|---|-----------------------------------|
| Partition coefficient n-octanol/water (log value) | this information is not available |
|---|-----------------------------------|

|                 |                    |
|-----------------|--------------------|
| Vapour pressure | 0.002 Pa at 150 °C |
|-----------------|--------------------|

Density and/or relative density

|                         |                      |
|-------------------------|----------------------|
| Density                 | not determined       |
| Relative vapour density | not relevant (solid) |

|                          |                   |
|--------------------------|-------------------|
| Particle characteristics | no data available |
|--------------------------|-------------------|

**9.2 Other information**

|  |   |
|--|---|
| Information with regard to physical hazard classes | hazard classes acc. to GHS (physical hazards): not relevant |
|--|---|

Other safety characteristics

|                |        |
|----------------|--------|
| Liquid content | 2.66 % |
| Solid content  | 100 %  |

**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

**10.2 Chemical stability**

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**10.3 Possibility of hazardous reactions**

No known hazardous reactions.

**10.4 Conditions to avoid**

There are no specific conditions known which have to be avoided.

**10.5 Incompatible materials**

Oxidisers

**10.6 Hazardous decomposition products**

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**Classification acc. to GHS**

This mixture does not meet the criteria for classification.

Acute toxicity

Shall not be classified as acutely toxic.

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GHS of the United Nations, annex 4: May be harmful if swallowed or if inhaled.

| Acute toxicity estimate (ATE) of components |            |                |           |
|---|------------|----------------|-----------|
| Name of substance                           | CAS No     | Exposure route | ATE       |
| ammonium chloride                           | 12125-02-9 | oral           | 500 mg/kg |

**Skin corrosion/irritation**

Shall not be classified as corrosive/irritant to skin.

**Serious eye damage/eye irritation**

Shall not be classified as seriously damaging to the eye or eye irritant.

**Respiratory or skin sensitisation**

Shall not be classified as a respiratory or skin sensitiser.

**Germ cell mutagenicity**

Shall not be classified as germ cell mutagenic.

**Carcinogenicity**

Shall not be classified as carcinogenic.

**Reproductive toxicity**

Shall not be classified as a reproductive toxicant.

**Specific target organ toxicity - single exposure**

Shall not be classified as a specific target organ toxicant (single exposure).

**Specific target organ toxicity - repeated exposure**

Shall not be classified as a specific target organ toxicant (repeated exposure).

**Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

**SECTION 12: Ecological information**

**12.1 Toxicity**

Shall not be classified as hazardous to the aquatic environment.

**12.2 Persistence and degradability**

Data are not available.

**12.3 Bioaccumulative potential**

Data are not available.

**12.4 Mobility in soil**

Data are not available.

**12.5 Results of PBT and vPvB assessment**

Does not contain a PBT-/vPvB-substance at a concentration of  $\geq 0,1\%$ .

**12.6 Endocrine disrupting properties**

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

**12.7 Other adverse effects**

Data are not available.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Sewage disposal-relevant information**

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

**Waste treatment of containers/packages**

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance it-

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self.

**Remarks**

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

**SECTION 14: Transport information**

- 14.1 **UN number** not subject to transport regulations
- 14.2 **UN proper shipping name** not relevant
- 14.3 **Transport hazard class(es)** none
- 14.4 **Packing group** not assigned
- 14.5 **Environmental hazards** non-environmentally hazardous acc. to the dangerous goods regulations
- 14.6 **Special precautions for user**  
There is no additional information.
- 14.7 **Maritime transport in bulk according to IMO instruments**  
The cargo is not intended to be carried in bulk.

**Information for each of the UN Model Regulations**

**International Maritime Dangerous Goods Code (IMDG) - Additional information**

Not subject to IMDG.

**International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information**

Not subject to ICAO-IATA.

**SECTION 15: Regulatory information**

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

**Relevant provisions of the European Union (EU)**

**Deco-Paint Directive**

|             |        |
|-------------|--------|
| VOC content | 2.66 % |
|-------------|--------|

**Industrial Emissions Directive (IED)**

|             |        |
|-------------|--------|
| VOC content | 2.66 % |
|-------------|--------|

**Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)**

none of the ingredients are listed

**Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)**

none of the ingredients are listed

**Water Framework Directive (WFD)**

| List of pollutants (WFD) |        |           |         |
|--------------------------|--------|-----------|---------|
| Name of substance        | CAS No | Listed in | Remarks |
| ammonium chloride        |        | a)        |         |
| ammonium chloride        |        | a)        |         |

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Legend

a) Indicative list of the main pollutants

**Regulation on persistent organic pollutants (POP)**

none of the ingredients are listed

**National regulations (GB)**

**List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list**

none of the ingredients are listed

**Restrictions according to GB REACH, Annex 17**

| Dangerous substances with restrictions (GB REACH, Annex 17) |  |        |    |
|---|--|--------|----|
| Name of substance   | Name acc. to inventory   | CAS No | No |
| ammonium chloride   | Inorganic ammonium salts   |        | 65 |
| ammonium chloride   | this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC |        | 3  |

**National inventories**

| Country | Inventory  | Status                              |
|---------|------------|-------------------------------------|
| AU      | AIIC       | all ingredients are listed          |
| CN      | IECSC      | all ingredients are listed          |
| EU      | ECSI       | all ingredients are listed          |
| EU      | REACH Reg. | not all ingredients are listed      |
| US      | TSCA       | all ingredients are listed (ACTIVE) |

Legend

AIIC Australian Inventory of Industrial Chemicals  
 ECSI EC Substance Inventory (EINECS, ELINCS, NLP)  
 IECSC Inventory of Existing Chemical Substances Produced or Imported in China  
 REACH Reg. REACH registered substances  
 TSCA Toxic Substance Control Act

**15.2 Chemical Safety Assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information**

**Abbreviations and acronyms**

| Abbr.      | Descriptions of used abbreviations  |
|------------|---|
| Acute Tox. | Acute toxicity  |
| ADR        | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)                     |
| ATE        | Acute Toxicity Estimate   |
| CAS        | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)  |
| Ceiling-C  | Ceiling value   |
| DGR        | Dangerous Goods Regulations (see IATA/DGR)  |
| EC No      | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) |

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| Abbr.      | Descriptions of used abbreviations  |
|------------|---|
| ED         | Endocrine disruptor   |
| EH40/2005  | EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> ) |
| EINECS     | European Inventory of Existing Commercial Chemical Substances   |
| ELINCS     | European List of Notified Chemical Substances   |
| Eye Dam.   | Seriously damaging to the eye   |
| Eye Irrit. | Irritant to the eye   |
| GB CLP     | The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended)                            |
| GB REACH   | The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)  |
| GHS        | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations   |
| IATA       | International Air Transport Association   |
| IATA/DGR   | Dangerous Goods Regulations (DGR) for the air transport (IATA)  |
| ICAO       | International Civil Aviation Organization   |
| IMDG       | International Maritime Dangerous Goods Code   |
| index No   | The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008  |
| NLP        | No-Longer Polymer   |
| PBT        | Persistent, Bioaccumulative and Toxic   |
| ppm        | Parts per million   |
| RID        | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)               |
| STEL       | Short-term exposure limit   |
| TWA        | Time-weighted average   |
| VOC        | Volatile Organic Compounds  |
| vPvB       | Very Persistent and very Bioaccumulative  |
| WEL        | Workplace exposure limit  |

**Key literature references and sources for data**

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended). The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended). GB mandatory classification and labelling.

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

**Classification procedure**

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**List of relevant phrases (code and full text as stated in section 2 and 3)**

| Code | Text                           |
|------|--------------------------------|
| H302 | Harmful if swallowed.          |
| H319 | Causes serious eye irritation. |

**Disclaimer**

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This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.