# Safety Data Sheet

According to Regulation (EC) No 1907/2006 (REACH)
and Regulation (EC) No 1272/2008 (CLP) as retained in UK law

**Date of issue:** 2026-05-27 · **Last reviewed:** 2026-10-01 · **Next review due:** 2026-12-30 · **Version:** 1.0

| | | | |
|---|---|---|---|
| **Trade name** | GHK-Cu 50mg (Copper Peptide) | **CAS Number** | 89030-95-5 |
| **Chemical name** | Glycyl-L-histidyl-L-lysine copper(II) (copper tripeptide-1) | **Molecular formula** | C14H22CuN6O4 |
| **Catalogue №** | GHK-023 | **Molecular weight** | 401.91 g/mol |
| **Pack size** | 50.0 mg | **Physical form** | Lyophilised Solid |

## 1. Identification

| | |
|---|---|
| **Trade name** | GHK-Cu 50mg (Copper Peptide) |
| **Chemical name** | Glycyl-L-histidyl-L-lysine copper(II) (copper tripeptide-1) |
| **Synonyms** | |
| **IUPAC name** | copper(II) (2S)-6-amino-2-[[(2S)-2-[(2-aminoacetyl)amino]-3-(1H-imidazol-5-yl)propanoyl]amino]hexanoate |
| **Sequence (one-letter)** | |
| **Sequence (three-letter)** | |
| **CAS Number (acetate)** | 89030-95-5 |
| **CAS Number (free acid)** | 49557-75-7 (for cross-reference) |
| **Molecular formula** | C14H22CuN6O4 |
| **Molecular weight** | 401.91 g/mol (acetate); 401.91 g/mol (free acid) |
| **Purity** | ≥ 98% (HPLC) |
| **Catalogue number** | GHK-023 |

### 1.2 Relevant identified uses of the substance and uses advised against

For research use only (in vitro). Not for human or veterinary use, including diagnostic, therapeutic, prophylactic or in vivo administration of any kind. Not for use in or as a food, drug, medical device, cosmetic, household product, or any other commercial application.

### 1.3 Details of the supplier of the Safety Data Sheet

| | |
|---|---|
| **Supplier** | |
| **Address** | 167-169 Great Portland Street, London W1W 5PF, United Kingdom |
| **Email** | |
| **Website** | |
| **Business hours** | |

### 1.4 Emergency telephone number

| | |
|---|---|
| **United Kingdom** | Emergency: **999** · Non-emergency: **111 (NHS — UK)** |
| **Healthcare professionals** | Healthcare professionals can access the UK National Poisons Information Service (NPIS) via TOXBASE (www.toxbase.org) or by calling 0344 892 0111. |
| **Supplier (business hours)** | |

## 2. Hazard(s) identification

### 2.1 Classification of the substance or mixture

Not classified as hazardous under UK CLP (Regulation (EC) No 1272/2008 as retained).

### 2.2 Label elements

| | |
|---|---|
| **Hazard pictograms** | None |
| **Signal word** | None |
| **Hazard statements (H-codes)** | None |
| **Precautionary statements (P-codes)** | None |

### 2.3 Other hazards

| | |
|---|---|
| **PBT / vPvB assessment** | Not applicable. The substance has not been assessed as Persistent, Bioaccumulative and Toxic (PBT) or very Persistent and very Bioaccumulative (vPvB). |

No other hazards known under conditions of normal handling. As a research-use-only substance with limited published toxicological data, handle with the precautions appropriate to a substance of unknown toxicity.

## 3. Composition / information on ingredients

Substance type: Substance (single component)

| Component | CAS № | EC № | Concentration |
|---|---|---|---|
| GHK-Cu 50mg (Copper Peptide) | 89030-95-5 | Not assigned | >98 (purity by HPLC) |

## 4. First-aid measures

### 4.1 Description of first-aid measures

| | |
|---|---|
| **General** | If symptoms occur or persist, consult a doctor and present this Safety Data Sheet. |
| **Inhalation** | Move to fresh air. If breathing is difficult, obtain medical attention. |
| **Skin contact** | Wash affected area with soap and plenty of water. Remove contaminated clothing. Seek medical attention if irritation persists. |
| **Eye contact** | Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do — continue rinsing. Seek medical attention. |
| **Ingestion** | Do not induce vomiting. Rinse mouth. Do not give anything by mouth to an unconscious person. Seek medical attention immediately and present this Safety Data Sheet. |

### 4.2 Most important symptoms and effects, acute and delayed

No specific symptoms known. As a research compound with limited toxicological characterisation, observe casualty for delayed effects.

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

Treat symptomatically. No specific antidote known.

## 5. Fire-fighting measures

| | |
|---|---|
| **Suitable extinguishing media** | Use extinguishing media appropriate to surrounding fire. Suitable media include dry chemical powder, carbon dioxide ($CO_2$), foam, or water spray. |
| **Unsuitable extinguishing media** | None known. |
| **Specific hazards from substance** | Combustion may produce carbon oxides (CO, $CO_2$), nitrogen oxides ($NO_x$) and other irritant or toxic fumes. |
| **Advice for firefighters** | Self-contained breathing apparatus and full protective clothing for firefighters. |

## 6. Accidental release measures

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|---|---|
| **Personal precautions** | Wear appropriate personal protective equipment (see section 8). Avoid generation and inhalation of dust. Avoid contact with skin and eyes. |
| **Environmental precautions** | Do not allow to enter drains, sewers, or watercourses. |
| **Containment** | Collect spilled material into a sealable, labelled container. Avoid dust generation. |
| **Cleaning up** | After collection, wash the spill area with water. Dispose of waste in accordance with section 13. |

## 7. Handling and storage

### 7.1 Precautions for safe handling

Handle only in a properly ventilated laboratory by trained personnel. Avoid formation of dust and aerosols. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

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

Store the unopened, lyophilised product at -20 °C, protected from light and moisture, in the original sealed container. Prepared solutions should be stored according to validated laboratory procedures.

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| **Incompatibilities** | Strong oxidising agents, strong acids and strong bases. Avoid prolonged exposure to atmospheric moisture (hygroscopic). |

### 7.3 Specific end uses

For research use only (in vitro). See section 1.2.

## 8. Exposure controls / personal protection

### 8.1 Control parameters

No occupational exposure limits (WELs, OELs, TLVs) have been established for this substance.

### 8.2 Exposure controls

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|---|---|
| **Engineering controls** | Use in a fume hood or other local exhaust ventilation when handling powder. Eyewash and safety shower should be readily accessible in work area. |
| **Respiratory protection** | If handling produces dust or aerosol exceeding acceptable levels, wear an approved respirator (FFP2 or higher per EN 149). |
| **Hand protection** | Disposable nitrile or latex laboratory gloves (EN 374). Replace immediately if contaminated. |
| **Eye / face protection** | Safety glasses with side shields or chemical splash goggles (EN 166). |
| **Skin and body protection** | Standard laboratory coat, closed-toe footwear. |
| **Hygiene measures** | Wash hands and any exposed skin thoroughly after handling. Do not eat, drink, smoke or apply cosmetics in the work area. |

## 9. Physical and chemical properties

| | |
|---|---|
| **Appearance** | Blue lyophilised solid |
| **Colour** | White to off-white |
| **Odour** | Odourless to faint characteristic odour |
| **Odour threshold** | Not determined |
| **pH** | Not determined |
| **Melting point / freezing point** | Not determined |
| **Initial boiling point / range** | Not applicable (decomposes before boiling) |
| **Flash point** | Not applicable |
| **Evaporation rate** | Not applicable |
| **Flammability (solid, gas)** | Not classified as flammable |
| **Upper explosive limit** | Not determined |
| **Lower explosive limit** | Not determined |
| **Vapour pressure** | Not applicable (non-volatile solid) |
| **Vapour density** | Not applicable |
| **Relative density** | Not determined |
| **Solubility in water** | Soluble in water |
| **Solubility in other solvents** | Soluble in DMSO; sparingly soluble in ethanol |
| **Partition coefficient (n-octanol / water)** | Not determined |
| **Auto-ignition temperature** | Not determined |
| **Decomposition temperature** | Not determined |
| **Viscosity** | Not applicable |
| **Explosive properties** | Not classified as explosive |
| **Oxidising properties** | Not classified as oxidising |

## 10. Stability and reactivity

| | |
|---|---|
| **Reactivity** | No specific reactivity hazards known under recommended storage and handling conditions. |
| **Chemical stability** | Stable in the lyophilised form under recommended storage conditions (-20 °C, sealed, protected from light and moisture). |
| **Possibility of hazardous reactions** | No hazardous polymerisation. No hazardous reactions known under recommended conditions. |
| **Conditions to avoid** | Heat, light, moisture, freeze-thaw cycles when reconstituted. |
| **Incompatible materials** | Strong oxidising agents, strong acids, strong bases. |
| **Hazardous decomposition products** | Thermal decomposition may yield carbon oxides ($CO_x$), nitrogen oxides ($NO_x$) and other irritant / toxic fumes. |

## 11. Toxicological information

**11.1 Information on toxicological effects**

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|---|---|
| **Acute oral toxicity ($LD_{50}$)** | No data available |
| **Acute dermal toxicity ($LD_{50}$)** | No data available |
| **Acute inhalation toxicity ($LC_{50}$)** | No data available |
| **Skin corrosion / irritation** | Not classified. No data available. |
| **Serious eye damage / irritation** | Not classified. No data available. |
| **Respiratory sensitisation** | Not classified. No data available. |
| **Skin sensitisation** | Not classified. No data available. |
| **Germ cell mutagenicity** | Not classified. No data available. |
| **Carcinogenicity** | Not listed by IARC, NTP, ACGIH or under UK CLP Annex VI (carcinogen categories 1A/1B/2). |
| **Reproductive toxicity** | Not classified. No data available. |
| **STOT — single exposure** | Not classified. No data available. |
| **STOT — repeated exposure** | Not classified. No data available. |
| **Aspiration hazard** | Not classified. No data available. |

No specific toxicological data is available for this substance. Limited toxicological data is available and the precautionary principle should be applied.

## 12. Ecological information

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|---|---|
| **Aquatic toxicity** | No data available |
| **Persistence / degradability** | No data available. As a peptide composed of natural amino acids, biodegradation is expected. |
| **Bioaccumulative potential** | Low bioaccumulation potential expected (high water solubility, peptide bond hydrolysis). |
| **Mobility in soil** | No data available |
| **PBT / vPvB assessment** | Not assessed. |
| **Other adverse effects** | Do not allow undiluted product or large quantities to enter ground water, watercourses or sewage systems. |

## 13. Disposal considerations

**13.1 Waste treatment methods**

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|---|---|
| **Product waste** | Dispose of contents and container in accordance with UK Environmental Protection Act 1990, Hazardous Waste (England and Wales) Regulations 2005 (as amended), and any other relevant national, regional and local legislation. Consult a licensed waste disposal contractor. |
| **Contaminated packaging** | Empty containers should be disposed of in line with local regulations. Do not reuse empty containers. |
| **EWC waste code** | Not assigned by the supplier. The end user must allocate a List of Wastes (LoW) code — formerly European Waste Catalogue (EWC) — appropriate to the specific use and waste stream. |

## 14. Transport information

| Mode | UN № | Proper shipping name | Hazard class | Packing group |
|---|---|---|---|---|
| ADR (road) | Not regulated | Not regulated | Not regulated | Not regulated |
| RID (rail) | Not regulated | Not regulated | Not regulated | Not regulated |
| IMDG (sea) | Not regulated | Not regulated | Not regulated | Not regulated |
| IATA / ICAO (air) | Not regulated | Not regulated | Not regulated | Not regulated |

| | |
|---|---|
| **Environmental hazards** | Not applicable |
| **Special precautions for user** | None |
| **Transport in bulk (MARPOL)** | Not applicable — substance is not transported in bulk |

## 15. Regulatory information

**UK REACH**

UK REACH — Regulation (EC) No 1907/2006 as it applies in Great Britain by virtue of the REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 (SI 2019/758), as amended. This substance is not listed on the UK REACH Candidate List of Substances of Very High Concern (SVHC) and is not subject to authorisation under UK REACH Annex XIV.

**UK CLP**

UK CLP — Regulation (EC) No 1272/2008 as it applies in Great Britain by virtue of the CLP etc. (Amendment etc.) (EU Exit) Regulations 2019 (SI 2019/720), as amended. The substance does not have a harmonised classification under UK CLP Annex VI and is not classified by the supplier as hazardous.

**MHRA**

This product is not authorised as a medicinal product by the UK Medicines and Healthcare products Regulatory Agency (MHRA) under the Human Medicines Regulations 2012. Any supply, marketing, or use must comply with applicable UK legislation, including the Human Medicines Regulations 2012. This product is supplied solely as a chemical reagent for in vitro research.

**Other UK legislation**

| | |
|---|---|
| **Poisons Act 1972** | Not listed under the Poisons Act 1972 (as amended). |
| **Misuse of Drugs Act 1971** | Not listed under the Misuse of Drugs Act 1971 or Misuse of Drugs Regulations 2001. |

**Chemical safety assessment**

A Chemical Safety Assessment under UK REACH has not been carried out by the supplier.

## 16. Other information

**Date of issue** 2026-05-27
**Revision date** 2026-05-27
**Last reviewed** 2026-10-01
**Next review due** 2026-12-30
**Version** 1.0
**Prepared by** Compliance Team

**Review history**

| Date | Reviewed by | Outcome |
|---|---|---|
| 2026-05-27 | Compliance Team | Initial issue |
| 2026-07-01 | Compliance Team | Quarterly review — no changes required |
| 2026-10-01 | Compliance Team | Quarterly review — no changes required |

**Abbreviations and acronyms**

- CAS — Chemical Abstracts Service
- CLP — Classification, Labelling and Packaging Regulation (EC 1272/2008)
- ECHA — European Chemicals Agency
- GHS — Globally Harmonised System of Classification and Labelling of Chemicals
- IATA — International Air Transport Association
- IARC — International Agency for Research on Cancer
- IMDG — International Maritime Code for Dangerous Goods
- LoW — List of Wastes (UK; formerly European Waste Catalogue)
- MHRA — Medicines and Healthcare products Regulatory Agency (UK)
- NPIS — National Poisons Information Service (UK)
- NTP — National Toxicology Program (USA)
- OEL — Occupational Exposure Limit
- PBT — Persistent, Bioaccumulative and Toxic
- PPE — Personal Protective Equipment
- REACH — Registration, Evaluation, Authorisation and Restriction of Chemicals (EC 1907/2006)
- SDS — Safety Data Sheet
- STOT-SE — Specific Target Organ Toxicity, Single Exposure
- STOT-RE — Specific Target Organ Toxicity, Repeated Exposure
- SVHC — Substance of Very High Concern
- vPvB — very Persistent and very Bioaccumulative
- WEL — Workplace Exposure Limit

**References**

- ECHA Classification & Labelling Inventory — substance not listed as classified
- PubChem (NCBI) — chemical identity database (CAS, molecular formula, IUPAC name)
- Regulation (EC) No 1907/2006 (REACH) as retained in UK law
- Regulation (EC) No 1272/2008 (CLP) as retained in UK law
- UK MHRA — Human Medicines Regulations 2012

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The information in this Safety Data Sheet is provided in good faith and is believed to be correct as of the date of issue. makes no warranty, express or implied, regarding the accuracy of this data or the results to be obtained from its use. This product is supplied for research use only (in vitro). The user assumes all responsibility for the safe use, handling, storage and disposal of the product, and for compliance with all applicable laws and regulations. This SDS does not constitute a quality specification — quality data is supplied separately on the Certificate of Analysis.

This document is provided for occupational safety and transport reference purposes only and does not constitute product approval, authorisation, or suitability for any specific application.