



Safety Data Sheet

According to Regulation (EC) No 1907/2006, Annex II,
as amended by Regulation (EU) 2020/878

GHK-CU

Product name	GHK-CU
SDS number	ADRIA-SDS-013-GHK-CU
Version	1.0
Issue date	01 June 2026
Revision date	01 June 2026
Supersedes	New safety data sheet
Language	English

SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier	Product name: GHK-CU CAS No.: 49557-75-7; copper complex 89030-95-5 Substance type: Research compound
1.2 Relevant identified uses	Laboratory reagent for research, analytical, educational, and R&D use only, where permitted by applicable law.
Uses advised against	Not for human or animal use. Not for use as a food, drug, cosmetic, dietary supplement, diagnostic product, therapeutic product, clinical product, or household product.
1.3 Supplier	Adria Science Telephone: +386 71 483 246 Email: info@adriascience.com
1.4 Emergency telephone	Emergency services: 112 (EU, 24 hours) Product information: +386 71 483 246 (business hours) Email: info@adriascience.com

SECTION 2: Hazards Identification

2.1 Classification	Classification according to Regulation (EC) No 1272/2008 (CLP): Acute toxicity, oral - Category 4 (H302) Skin irritation - Category 2 (H315) Eye irritation - Category 2 (H319)	
2.2 Label elements	See label elements below.	
Hazard pictogram		GHS07 - Exclamation mark
Signal word		Warning
Hazard statements		H302: Harmful if swallowed. H315: Causes skin irritation. H319: Causes serious eye irritation.

Precautionary statements	P264: Wash hands and exposed skin thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P312: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. P330: Rinse mouth. P302+P352: IF ON SKIN: Wash with plenty of water. P332+P313: If skin irritation occurs: Get medical advice/attention. P362+P364: Take off contaminated clothing and wash it before reuse. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical advice/attention. P501: Dispose of contents/container in accordance with local, regional, national and international regulations.
2.3 Other hazards	This research material has not been fully characterized toxicologically. No data are available to conclude that the substance/mixture meets PBT or vPvB criteria under Annex XIII of Regulation (EC) No 1907/2006. No endocrine-disrupting properties have been identified from available information.

SECTION 3: Composition/Information on Ingredients

3.1 Substances/Mixtures	Composition information is provided for the supplied product identity.				
Component	CAS No.	EC No.	Formula	Molecular weight	Concentration
GHK-CU	49557-75-7; copper complex 89030-95-5	Not assigned	C ₁₄ H ₂₂ CuN ₆ O ₄ for copper complex; C ₁₄ H ₂₄ N ₆ O ₄ for GHK ligand	403.9 g/mol for GHK-Cu copper complex; 340.38 g/mol for GHK ligand	Substance as supplied
Sequence / identity	Gly-His-Lys copper complex				
Physical appearance	Blue to blue-green lyophilized powder				
Salt/form	Copper peptide complex				
Purity	Analytical purity reported per lot				

SECTION 4: First Aid Measures

4.1 Description	General advice: Remove exposed person from exposure. Show this safety data sheet to medical personnel. Treat symptomatically. Inhalation: Move to fresh air. Seek medical attention if breathing difficulty, irritation, or other symptoms occur. Skin contact: Remove contaminated clothing. Wash skin with soap and plenty of water. Seek medical attention if irritation occurs. Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention if irritation persists. Ingestion: Rinse mouth. Do not induce vomiting unless instructed by medical personnel. Call a poison centre or doctor if unwell.
4.2 Symptoms/effects	May cause skin irritation, serious eye irritation, and harmful effects if swallowed.
4.3 Immediate treatment	No specific antidote known. Provide supportive and symptomatic treatment.

SECTION 5: Firefighting Measures

5.1 Extinguishing media	Suitable media: water spray, dry chemical, carbon dioxide (CO ₂), or alcohol-resistant foam. Use extinguishing media suitable for surrounding fire. No unsuitable media known.
5.2 Special hazards	Thermal decomposition or combustion may produce carbon oxides, nitrogen oxides, and other irritating or toxic fumes.
5.3 Advice for firefighters	Wear self-contained breathing apparatus and full protective clothing. Prevent contaminated fire-extinguishing water from entering drains or the environment where possible.

SECTION 6: Accidental Release Measures

6.1 Personal precautions	Avoid dust formation. Avoid inhalation, ingestion, skin contact, and eye contact. Wear protective equipment as described in Section 8.
6.2 Environmental precautions	Do not allow material to enter drains, surface water, groundwater, or soil.
6.3 Cleanup methods	Collect dry material carefully using methods that minimize dust generation. Use a HEPA-filtered vacuum or damp wipe where appropriate. Place in a suitable closed container for disposal.
6.4 Reference	See Sections 8 and 13.

SECTION 7: Handling and Storage

7.1 Safe handling	Handle only by trained personnel in a properly equipped laboratory. Avoid breathing dust. Avoid contact with skin, eyes, and clothing. Do not eat, drink, or smoke while handling. Wash thoroughly after handling.
7.2 Storage	Lyophilized: -20 deg C long term; protect from moisture and light. Prepared solutions: 2-8 deg C short-term laboratory handling.
7.3 Specific end use	Laboratory research and analytical use only.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters	No occupational exposure limit values are established for GHK-CU.
8.2 Engineering controls	Use adequate ventilation. Handle powders in a fume hood, local exhaust enclosure, or equivalent containment when dust may be generated.
Eye/face protection	Wear safety glasses with side shields or chemical safety goggles.
Skin protection	Wear suitable protective gloves such as nitrile gloves. Wear a laboratory coat or protective clothing.
Respiratory protection	Use an approved particulate respirator when risk assessment indicates dust exposure may occur.
Hygiene measures	Remove contaminated clothing and protective equipment before entering eating areas. Wash hands after handling.
Environmental controls	Avoid release to the environment.

SECTION 9: Physical and Chemical Properties

Property	Value
Physical state	Blue to blue-green lyophilized powder
Color	Blue to blue-green
Odor	No data available
Melting point/freezing point	No data available
Boiling point	No data available
Flammability	No data available
Lower/upper explosion limit	No data available
Flash point	No data available; not applicable to supplied solid under normal conditions
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH	No data available
Kinematic viscosity	Not applicable
Solubility	Soluble in sterile water or bacteriostatic water
Partition coefficient n-octanol/water	No data available
Vapor pressure	No data available
Density/relative density	No data available
Relative vapor density	Not applicable

Property	Value
Granulometry/solid form	No data available
Molecular formula	C ₁₄ H ₂₂ CuN ₆ O ₄ for copper complex; C ₁₄ H ₂₄ N ₆ O ₄ for GHK ligand
Molecular weight	403.9 g/mol for GHK-Cu copper complex; 340.38 g/mol for GHK ligand

SECTION 10: Stability and Reactivity

10.1 Reactivity	No specific reactivity data available.
10.2 Stability	Stable under recommended handling and storage conditions.
10.3 Hazardous reactions	No hazardous reactions known under recommended conditions.
10.4 Conditions to avoid	Heat, light, moisture, dust generation, and repeated freeze-thaw cycles.
10.5 Incompatible materials	Strong oxidizing agents.
10.6 Decomposition products	Carbon oxides and nitrogen oxides may form during thermal decomposition or combustion.

SECTION 11: Toxicological Information

11.1 CLP hazard classes	Acute toxicity: Harmful if swallowed. Quantitative toxicity values are not available. Skin corrosion/irritation: Causes skin irritation. Serious eye damage/irritation: Causes serious eye irritation. Respiratory or skin sensitisation: No data available. Germ cell mutagenicity: No data available. Carcinogenicity: No data available. Reproductive toxicity: No data available. STOT - single exposure: No data available. STOT - repeated exposure: No data available. Aspiration hazard: Not applicable to the supplied solid.
Routes of exposure	Inhalation, skin contact, eye contact, ingestion.
Symptoms	May cause irritation to skin and eyes. Ingestion may be harmful.
11.2 Other information	Endocrine-disrupting properties: no endocrine-disrupting properties identified from available information.

SECTION 12: Ecological Information

12.1 Toxicity	No aquatic toxicity data available. Avoid release to the environment.
12.2 Persistence/degradability	No data available.
12.3 Bioaccumulative potential	No data available.
12.4 Mobility in soil	No data available.
12.5 PBT/vPvB assessment	No data are available to conclude that the substance/mixture meets PBT or vPvB criteria.
12.6 Endocrine disruption	No endocrine-disrupting properties identified from available information.
12.7 Other adverse effects	No data available.

SECTION 13: Disposal Considerations

13.1 Waste treatment	Dispose of contents and container in accordance with applicable local, regional, national, and international regulations. Do not discharge into drains, surface water, groundwater, or soil. Waste classification should be determined by the waste holder based on actual material, contamination, and use.
Contaminated packaging	Dispose of as unused product unless fully cleaned and permitted by applicable regulations.

SECTION 14: Transport Information

Regulation	Classification
ADR/RID	Not regulated as dangerous goods.

Regulation	Classification
IMDG	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
UN number	Not applicable.
UN proper shipping name	Not applicable.
Transport hazard class(es)	Not applicable.
Packing group	Not applicable.
Environmental hazards	No data available; avoid environmental release.
Special precautions	Keep container tightly closed and protected from moisture during transport.
Maritime transport in bulk	Not applicable.

SECTION 15: Regulatory Information

15.1 Safety regulations	This safety data sheet is prepared according to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) 2020/878. Classification and labelling are provided according to Regulation (EC) No 1272/2008 (CLP).
REACH registration	No REACH registration number is available for this product.
Use restriction	For laboratory, analytical, educational, and R&D use only where permitted by applicable law. Not for human or animal use.
15.2 Chemical safety assessment	A chemical safety assessment has not been carried out for this product.

SECTION 16: Other Information

Issue date	01 June 2026
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SDS number	ADRIA-SDS-013-GHK-CU
Full text of H-statements	H302: Harmful if swallowed. H315: Causes skin irritation. H319: Causes serious eye irritation.
Abbreviations	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. CAS: Chemical Abstracts Service. CLP: Classification, Labelling and Packaging. EC: European Community. GHS: Globally Harmonized System. IATA: International Air Transport Association. IMDG: International Maritime Dangerous Goods. PBT: Persistent, Bioaccumulative and Toxic. REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals. SDS: Safety Data Sheet. STOT: Specific Target Organ Toxicity. vPvB: very Persistent and very Bioaccumulative.
Information statement	The information in this safety data sheet is based on the current state of knowledge and is intended to describe the product only for health, safety, and environmental handling purposes. It does not constitute a specification or guarantee of any specific product property. The recipient is responsible for ensuring safe handling and compliance with applicable laws and regulations.