# Safety Data Sheet

According to 29 CFR 1910.1200 (OSHA Hazard Communication Standard, 2024)

Version 1 · Date of preparation 2026-10-07

## Section 1. Identification

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| Product identifier used on the label | H-Cit-OH (product number 47049) |
| Other means of identification | Product number: 47049<br>Abbreviation: H-Cit-OH |
| Recommended use of the chemical and restrictions on use | Recommended use: laboratory reagent; protected amino acid building block for peptide synthesis. For research and development use only.<br>Restrictions on use: not for food, drug, household, pesticide or biocidal use. |
| Name, U.S. address, and U.S. telephone number of the chemical manufacturer, importer, or other responsible party | P3 BioSystems<br>270 Haven Hill Rd, Shelbyville, KY 40065<br>Telephone: +1 888-737-5598<br>Email: info@p3bio.com |
| Emergency phone number | +1 888-737-5598 (P3 BioSystems office line, business hours) |

## Section 2. Hazard identification

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| Classification of the chemical in accordance with paragraph (d)(1) of § 1910.1200, except for classification under paragraph (d)(1)(ii) | Not classified as hazardous under 29 CFR 1910.1200 on the available data; see section 11 for the evidence on each hazard class. |
| Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of § 1910.1200 | **Signal word: None**<br>Hazard pictograms: None<br>Hazard statements: None<br>Precautionary statements: None |
| Hazards classified under paragraph (d)(1)(ii) of § 1910.1200 | None identified. |
| Hazards not otherwise classified that have been identified during the classification process | None identified. |

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| Where an ingredient with unknown acute toxicity is used in a mixture at a concentration ≥ 1% and the mixture is not classified based on testing of the mixture as a whole, a statement that X% of the mixture consists of ingredient(s) of unknown acute toxicity | Not applicable: the product is a substance, not a mixture. |

## Section 3. Composition/information on ingredients

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| Chemical name | (2S)-2-amino-5-(carbamoylamino)pentanoic acid |
| Common name and synonyms | H-Cit-OH; (2S)-2-amino-5-(carbamoylamino)pentanoic acid. |
| CAS number and other unique identifiers | • CAS number: 372-75-8<br>• InChIKey: RHGKLRLOHDJJDR-BYPYZUCNSA-N<br>• PubChem CID: 9750 |
| Impurities and stabilizing additives (constituents) which are themselves classified and which contribute to the classification of the substance | None known. The product is a single substance. No classified impurities or stabilizing additives are present. |

## Section 4. First-aid measures

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| Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion | Inhalation: Move the person to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.<br>Skin: Remove contaminated clothing. Wash off with soap and plenty of water. Wash contaminated clothing before reuse.<br>Eyes: Rinse with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses if present and easy to do. Get medical attention if irritation persists.<br>Ingestion: Do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur. |
| Most important symptoms/effects, acute and delayed | No specific symptoms or effects are known. The toxicological properties have not been fully investigated. |
| Indication of immediate medical attention and special treatment needed, if necessary | Treat symptomatically. |

## Section 5. Fire-fighting measures

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| Suitable (and unsuitable) extinguishing media | Suitable: water spray, carbon dioxide, dry chemical, alcohol-resistant foam.<br>Unsuitable: do not use a solid water jet. |

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| Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products) | Keep product and empty containers away from heat and sources of ignition. Thermal decomposition can release irritating gases and vapors. Hazardous combustion products: carbon monoxide, carbon dioxide and nitrogen oxides. |
| Special protective equipment and precautions for fire-fighters | Wear a NIOSH/MSHA-approved, pressure-demand self-contained breathing apparatus and full protective gear. Thermal decomposition can release irritating gases and vapors. |

## Section 6. Accidental release measures

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| Personal precautions, protective equipment, and emergency procedures | Use personal protective equipment (see Section 8). Avoid dust formation and avoid breathing dust. Ensure adequate ventilation. |
| Methods and materials for containment and cleaning up | Sweep up and shovel the material, without creating dust, into suitable closed containers for disposal (see Section 13). Do not let the product enter drains. |

## Section 7. Handling and storage

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| Precautions for safe handling | Avoid contact with skin, eyes and clothing. Avoid formation of dust and do not breathe dust. Provide appropriate exhaust ventilation where dust is formed. Keep away from heat and sources of ignition; minimize dust generation and accumulation. Do not eat, drink or smoke when handling. Wash hands thoroughly after handling. |
| Conditions for safe storage, including any incompatibilities | Keep the container tightly closed. Store as stated on the product label. Allow the container to warm to room temperature before opening. Incompatible materials: strong oxidizing agents. |

## Section 8. Exposure controls/personal protection

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| OSHA permissible exposure limit (PEL), ACGIH Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available | No OSHA PEL or ACGIH TLV has been established. |
| Appropriate engineering controls | Use with adequate ventilation; use local exhaust ventilation (e.g. a fume hood) where dust is generated. An eyewash station should be available where the material is stored or used. |

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| Individual protection measures, such as personal protective equipment | Eyes/face: Safety glasses with side shields or chemical safety goggles (29 CFR 1910.133).<br>Skin: Chemical-resistant gloves (e.g. nitrile rubber); inspect before use and remove without touching the outer surface. Wear a lab coat or other protective clothing to prevent skin exposure.<br>Respiratory: Not required under normal use with adequate ventilation. Where dust is generated, use a NIOSH-approved particulate respirator (e.g. N95), under a respiratory protection program meeting 29 CFR 1910.134.<br>Hygiene: Wash hands before breaks and at the end of the workday. |

## Section 9. Physical and chemical properties

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| Physical state | Solid. |
| Color | No applicable information available. |
| Odor (includes odor threshold) | Odorless (one supplier); not determined by others. Odor threshold: no applicable information available. |
| Melting point/freezing point | No applicable information available. |
| Boiling point (or initial boiling point or boiling range) | No applicable information available. |
| Flammability | No applicable information available. |
| Lower and upper explosion limit/flammability limit | No applicable information available. |
| Flash point | No applicable information available. |
| Auto-ignition temperature | No applicable information available. |
| Decomposition temperature | No applicable information available. |
| pH | No applicable information available. |
| Kinematic viscosity | Not applicable (solid). |
| Solubility | No applicable information available. |
| Partition coefficient n-octanol/water (log value) | No applicable information available. |
| Vapor pressure (includes evaporation rate) | Vapor pressure: no applicable information available. Evaporation rate: not applicable (solid). |
| Density and/or relative density | No applicable information available. |
| Relative vapor density | Not applicable (solid). |
| Particle characteristics | Powder. No particle size data available. |

## Section 10. Stability and reactivity

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| Reactivity | None known, based on information available. |

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| Chemical stability | Stable under recommended storage conditions. |
| Possibility of hazardous reactions, including those associated with foreseeable emergencies | No hazardous reactions known under normal processing. |
| Conditions to avoid (e.g., static discharge, shock, or vibration) | Heat, flames, sparks and other ignition sources; dust formation; contact with incompatible materials. |
| Incompatible materials | Strong oxidizing agents. |
| Hazardous decomposition products | Carbon monoxide, carbon dioxide and nitrogen oxides. |

## Section 11. Toxicological information

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| Information on the likely routes of exposure (inhalation, ingestion, skin, and eye contact) | Inhalation of dust, skin contact, eye contact and ingestion. |
| Symptoms related to the physical, chemical, and toxicological characteristics | No symptoms are known. No data are available on irritation of the skin, eyes or respiratory tract. |
| Delayed and immediate effects and also chronic effects from short- and long-term exposure | No data are available on immediate, delayed or chronic effects. The toxicological properties have not been fully investigated. |
| Numerical measures of toxicity (such as acute toxicity estimates) | No applicable information available. |
| Interactive effects; information on interactions should be included if relevant and readily available | No applicable information available. |
| Whether the hazardous chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or by OSHA | Not listed by NTP, IARC or OSHA as a carcinogen. |
| When specific chemical data or information is not available, whether alternative information is used and the method used to derive the information (e.g., information from a class of chemicals rather than the exact chemical, using SAR) | No alternative (analog, class or SAR) information was used. No toxicity data exist for this substance; it is not classified because the available data are insufficient. |

## Section 12. Ecological information

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| Ecotoxicity (aquatic and terrestrial, where available) | No data available. |
| Persistence and degradability | No data available. |
| Bioaccumulative potential | No data available. |
| Mobility in soil | No data available. |
| Other adverse effects (such as hazardous to the ozone layer) | Do not let the product enter drains. |

## Section 13. Disposal considerations

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| Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging | Dispose of contents and container in accordance with local, state and federal regulations, using a licensed waste disposal company. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Dispose of contaminated packaging as unused product. Do not let the product enter drains. |

## Section 14. Transport information

US DOT: not regulated.

IMDG: not offered — P3 does not ship by sea.

IATA: not regulated.

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| UN number | See above: not regulated by any mode P3 ships by. |
| UN proper shipping name | See above: not regulated by any mode P3 ships by. |
| Transport hazard class(es) | See above: not regulated by any mode P3 ships by. |
| Packing group, if applicable | See above: not regulated by any mode P3 ships by. |
| Environmental hazards (e.g., Marine pollutant (Yes/No)) | See above: not regulated by any mode P3 ships by. |
| Transport in bulk (according to IMO instruments) | Not applicable. P3 BioSystems does not ship this product in bulk or by sea. |
| Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises | None known. |

## Section 15. Regulatory information

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| Safety, health and environmental regulations specific for the product in question | TSCA: The chemicals shipped by P3 BioSystems are not subject to TSCA.<br>SARA 302: no extremely hazardous substances.<br>SARA 313: no components subject to reporting.<br>SARA 311/312: see Section 2.<br>CERCLA: contains no substances regulated as hazardous substances (40 CFR 302).<br>California Proposition 65: contains no Proposition 65 chemicals. |

## Section 16. Other information, including date of preparation or last revision

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| The date of preparation of the SDS or the last change to it | Date of preparation: 2026-10-07. |

The information above is believed to be accurate and represents the best information available to P3 BioSystems on the date of preparation. It is provided for the safe handling of the product by trained persons in a laboratory and is not a warranty of any kind.