Cagrilintide

CAS: 1415456-99-3
Formula: C194H312N54O59S2

Document ID: 717ef6b6
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Section 1 — Product and Company Identification

Product Name	Cagrilintide
Synonyms	Cagrilintide; 1415456-99-3; Cagrilintide [INN]
CAS Number	1415456-99-3
Molecular Formula	C194H312N54O59S2
IUPAC Name	20-[[(1S)-4-[[(2S)-6-amino-1-[[(4R,7S,10S,13S,16S,19R)-4-[[(2S)-1-[[(2S,3R)-1-[[(2S)-5-amino-1-[[(2S)-1-[[(2R)-1-[[(2R)-1-[[(2S)-1-[[(2S)-1-[[(2S)-1-[[(2S)-1-[[(2S)-1-[[(2S)-1-[[(2S)-4-amino-1-[[(2S)-4-amino-1-[[(2S)-1-[[2-[(2S)-2-[[(2S,3S)-1-[[(2R)-1-[(2R)-2-[(2R)-2-[[(2R,3S)-1-[[(2R)-4-amino-1-[[(2R)-1-[[2-[[(2R)-1-[[(2R)-4-amino-1-[[(2R,3S)-1-[(2R)-2-carbamoylpyrrolidin-1-yl]-3-hydroxy-1-oxobutan-2-yl]amino]-1,4-dioxobutan-2-yl]amino]-3-hydroxy-1-oxopropan-2-yl]amino]-2-oxoethyl]amino]-3-methyl-1-oxobutan-2-yl]amino]-1,4-dioxobutan-2-yl]amino]-3-hydroxy-1-oxobutan-2-yl]carbamoyl]pyrrolidine-1-carbonyl]pyrrolidin-1-yl]-4-methyl-1-oxopentan-2-yl]amino]-3-methyl-1-oxopentan-2-yl]carbamoyl]pyrrolidin-1-yl]-2-oxoethyl]amino]-1-oxo-3-phenylpropan-2-yl]amino]-1,4-dioxobutan-2-yl]amino]-1,4-dioxobutan-2-yl]amino]-3-hydroxy-1-oxopropan-2-yl]amino]-3-hydroxy-1-oxopropan-2-yl]amino]-3-(1H-imidazol-4-yl)-1-oxopropan-2-yl]amino]-5-carbamimidamido-1-oxopentan-2-yl]amino]-4-methyl-1-oxopentan-2-yl]amino]-1-oxo-3-phenylpropan-2-yl]amino]-4-carboxy-1-oxobutan-2-yl]amino]-1-oxopropan-2-yl]amino]-4-methyl-1-oxopentan-2-yl]amino]-5-carbamimidamido-1-oxopentan-2-yl]amino]-1,5-dioxopentan-2-… [truncated — full value in PDF metadata]
Identified Uses	Research laboratory chemical for in vitro scientific research and development use only.

Restriction on Use	Not for human or veterinary use. Not for food, drug, cosmetic, household, agricultural, clinical, therapeutic, or diagnostic applications.

Manufacturer / Supplier

Company	Ruo.bio
Address	30 N Gould St, Sheridan, WY 82801, US
Phone	+1-804-636-6879
Website	https://ruo.bio/
Emergency Phone	+1(804)636-6879 - Monday-Friday: 9:00 AM - 5:00 PM Pacific

Section 2 — Hazard Identification

Classification of the substance

Classified under GHS Rev.8 / OSHA HazCom 2012 — see hazard statements below.

Classification has been conducted in accordance with 29 CFR 1910.1200 (OSHA HazCom 2012) and GHS Rev.8 using all available data and scientifically valid weight-of-evidence approaches (GHS Rev.8 Chapter 1.3.2.4), including read-across from chemical class and structural considerations where substance-specific study data is not available.

Signal Word: **WARNING**

GHS Pictograms:

GHS08

Hazard Statements

- H361d: Suspected of damaging the unborn child [Warning Reproductive toxicity]

Precautionary Statements

- P203
- P280
- P318
- P405
- P501

Hazards Not Otherwise Classified (HNOC)

None known based on available data and weight-of-evidence assessment. The toxicological properties of this substance have not been fully characterized; handle as a potentially bioactive substance of unknown toxicity.

Section 3 — Composition / Information on Ingredients

Single-substance product. Chemical identity:

Ingredient	CAS Number	Mol. Formula	Mol. Weight	Concentration
Cagrilintide	1415456-99-3	C194H312N54O59S2	4409 g/mol	>98% (research grade)

Impurities

No hazardous impurities known to be present above the GHS classification thresholds specified in 29 CFR 1910.1200 Appendix A. Residual synthesis reagents, solvents, and counter-ions may be present at levels consistent with research-grade (>98% purity) material. Balance: non-hazardous impurities. Refer to the accompanying Certificate of Analysis (CoA) for the lot-specific impurity profile.

Section 4 — First Aid Measures

Eye Contact

Rinse cautiously with water for several minutes. If irritation persists, seek medical advice.

Skin Contact

Wash with soap and water. Remove contaminated clothing and wash before reuse. If irritation persists, seek medical advice.

Inhalation

Move affected person to fresh air. If symptoms develop, seek medical advice.

Ingestion

Rinse mouth thoroughly with water. If large amounts are swallowed or if symptoms develop, seek medical advice. Do not induce vomiting unless directed by medical personnel.

Note to Physician

Treat symptomatically. No specific antidote known.

Section 5 — Fire Fighting Measures

Flash Point: *Not determined*

Suitable Extinguishing Media

Use extinguishing media appropriate to the surrounding fire conditions. Carbon dioxide (CO2), dry chemical powder, foam, or water spray.

Special Hazards

May produce toxic gases upon combustion. Carbon monoxide and other combustion products may be generated.

Protective Equipment for Firefighters

Wear self-contained breathing apparatus (SCBA) and full protective gear. Do not enter fire area without proper protective equipment.

Section 6 — Accidental Release Measures

Personal Precautions

Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Use personal protective equipment as described in Section 8.

Environmental Precautions

Prevent further leakage or spillage if safe to do so. Do not allow the product to enter drains, sewers, or waterways.

Containment and Cleanup

Sweep up and shovel. Keep in suitable, closed containers for disposal. Avoid raising dust. Clean contaminated surface thoroughly. Dispose of waste in accordance with local regulations (see Section 13).

Section 7 — Handling and Storage

Handling Precautions

Handle Cagrilintide (CAS 1415456-99-3) only in accordance with good laboratory practice and OSHA's Laboratory Standard (29 CFR 1910.1450) and Hazard Communication Standard (29 CFR 1910.1200). Treat this synthetic peptide as a potentially bioactive substance of incompletely characterized toxicity; minimize all routes of exposure (skin/eye contact, inhalation, ingestion). Weigh and manipulate the dry solid in a ventilated enclosure such as a chemical fume hood, ducted balance enclosure, or HEPA-filtered powder-handling hood to control airborne particulates, since no OSHA PEL, ACGIH TLV, or NIOSH REL has been established for this compound. Wear chemically resistant nitrile gloves, a buttoned lab coat, and ANSI Z87.1-compliant safety eyewear; use respiratory protection (e.g., NIOSH-certified N95 or higher) where engineering controls do not adequately limit airborne exposure to dust or aerosols. Because lyophilized peptides are typically hygroscopic, allow sealed containers to equilibrate to room temperature in a desiccator before opening to limit moisture uptake and static-driven dispersion of fine powder. Avoid generation of dust; do not eat, drink, smoke, or apply cosmetics in work areas. Wash hands and exposed skin thoroughly after handling and before leaving the work area. Decontaminate work surfaces and reusable equipment after use, and manage contaminated PPE and waste as hazardous chemical waste in accordance with applicable EPA (40 CFR 260-273) and state/local regulations.

Storage Conditions

Store the lyophilized solid in its original tightly closed container, protected from light, moisture, and air, in a cool, dry, well-ventilated area dedicated to hazardous chemicals and accessible only to trained personnel. Consistent with general handling guidance for lyophilized synthetic peptides, long-term storage of the dry powder is recommended at -20 degC or lower in a non-frost-free freezer; keep the container in a sealed secondary bag or container with desiccant to limit exposure to atmospheric moisture and condensation during retrieval. Allow containers to warm to ambient temperature in a desiccator before opening to prevent moisture condensation on the solid. Avoid repeated freeze-thaw cycles of any reconstituted solutions; prepare working aliquots and store frozen, and do not store peptide solutions for extended periods, as peptides in solution are prone to chemical degradation (e.g., hydrolysis, oxidation, deamidation). Keep away from heat, direct sunlight, ignition sources, and incompatible materials (see below). Label containers in compliance with 29 CFR 1910.1200(f) and segregate from food, beverages, and unrelated chemical inventories. No specific shelf life is established here; follow the expiration/retest date on the container label.

Incompatibilities

Keep separated from strong oxidizing agents (e.g., peroxides, hypochlorites, nitric acid, permanganates, chromates), which can oxidize susceptible amino acid residues and the disulfide bridge present in this peptide. Avoid contact with strong acids and strong bases, which can promote hydrolysis of peptide (amide) bonds, and with strong reducing agents that can cleave the disulfide bridge present in this molecule (formula C194H312N54O59S2 indicates two sulfur atoms consistent with a single intramolecular disulfide). Protect from moisture, elevated temperature, and prolonged exposure to light/UV, all of which can accelerate chemical degradation of the peptide. No hazardous polymerization is expected under recommended storage conditions.

Section 8 — Exposure Controls / Personal Protection

Exposure Limits

No regulatory occupational exposure limits (OEL) have been established by OSHA, ACGIH, NIOSH, or equivalent bodies for Cagrilintide (CAS 1415456-99-3). No biological exposure indices (BEIs) have been established. Cagrilintide is an investigational long-acting amylin analogue active pharmaceutical ingredient (API); handle as a potentially bioactive

substance of unknown toxicity and control exposure to the lowest level reasonably achievable (ALARA) using the engineering controls and PPE specified below.

Engineering Controls

Use in accordance with NIOSH and OSHA general guidance for handling active pharmaceutical ingredients of unknown potency (29 CFR 1910.1450 / 29 CFR 1910.1200). Handle only in a closed system or in a ventilated enclosure that prevents release of dust, aerosols, or solutions to the workplace atmosphere: a certified chemical fume hood, Class II Type A2/B2 biological safety cabinet, ventilated weighing/balance enclosure, or glovebox/isolator is recommended for weighing, transferring, reconstituting, and aliquoting the lyophilized peptide. Maintain the work area under negative pressure relative to surrounding areas. Provide local exhaust ventilation at points of potential aerosol or dust generation. Ensure the immediate availability of an emergency eyewash and safety shower meeting ANSI Z358.1 in the work area. Do not eat, drink, smoke, or store food in areas where the substance is handled. Wash hands and exposed skin thoroughly after handling and before breaks. Decontaminate work surfaces and reusable equipment after each use. Restrict access to trained personnel only.

Personal Protective Equipment

Respiratory Protection: Respiratory protection is not normally required when handling is performed inside a properly functioning fume hood, ventilated enclosure, glovebox, or biosafety cabinet. Where engineering controls are not feasible, where airborne dust or aerosols of the lyophilized peptide may be generated (e.g., weighing open powder), or during spill response, wear a NIOSH-approved (42 CFR Part 84) air-purifying respirator with N100/P100 particulate filters, or a powered air-purifying respirator (PAPR) with HEPA filters, as a minimum. Respirator use must comply with a written respiratory protection program under OSHA 29 CFR 1910.134 (selection, fit-testing, medical clearance, and training).

Hand Protection: Wear chemically resistant, single-use protective gloves meeting EN ISO 374-5 (for biological hazards) and EN ISO 374-1 Type B chemical permeation requirements, in accordance with OSHA 29 CFR 1910.138. Nitrile rubber gloves of at least 0.11 mm thickness are recommended for incidental contact; double-glove when weighing or handling the neat powder or concentrated solutions. Inspect gloves before use and replace immediately if contamination, tearing, or puncture is suspected. Remove gloves using a technique that avoids skin contact with the outer surface, and wash hands thoroughly after removal. Do not reuse disposable gloves.

Eye / Face Protection: Wear tight-fitting protective eyewear in accordance with OSHA 29 CFR 1910.133 and ANSI/ISEA Z87.1. Chemical splash goggles are required when handling solutions, suspensions, or when there is any potential for splash, aerosol, or airborne particulates. A full-face shield worn over goggles is recommended for operations involving larger quantities, transfers under pressure, or spill response. Contact lenses should not be worn unless required by prescription and only with appropriate goggle protection.

Skin Protection: Wear a long-sleeved laboratory coat or chemical-resistant gown over street clothing, in accordance with OSHA 29 CFR 1910.132. Closed-toe, chemical-resistant footwear is required; disposable shoe covers are recommended for operations with significant spill potential. For weighing of open powder, bulk handling, or spill cleanup, wear a disposable chemically resistant coverall (e.g., Type 5/6 to EN 13982-1 / EN 13034) plus disposable sleeve covers. Remove and segregate contaminated clothing immediately; do not take contaminated PPE or clothing home. Launder reusable garments separately from personal laundry, or dispose of single-use PPE as pharmaceutical/chemical waste.

Section 9 — Physical and Chemical Properties

Physical State	Solid (research-grade lyophilised powder or crystalline solid)
Appearance	White to off-white lyophilized powder
Odor	Odorless
Odor Threshold	Not available.
Boiling Point	*Not determined*

Melting Point	*Not determined*
Flash Point	*Not determined*
Auto-ignition Temperature	No data available.
Decomposition Temperature	No experimental data available.
Vapor Pressure	*Not determined*
Vapor Density	*Not determined*
Specific Gravity	*Not determined*
Partition Coefficient (log Kow)	No experimental data available.
Solubility	Soluble in water
Stability in Solution	Subject to hydrolytic and oxidative degradation typical of the chemical class; store reconstituted solutions refrigerated or frozen, protect from light, and use within the stability window indicated on the Certificate of Analysis.
pH	*Not determined*
Molecular Weight	4409 g/mol
Molecular Formula	C194H312N54O59S2

Section 10 — Stability and Reactivity

Chemical Stability: Stable under normal conditions of use, storage, and transport.

Conditions to Avoid: Excessive heat, open flames, sparks, incompatible materials.

Incompatible Materials: Keep separated from strong oxidizing agents (e.g., peroxides, hypochlorites, nitric acid, permanganates, chromates), which can oxidize susceptible amino acid residues and the disulfide bridge present in this peptide. Avoid contact with strong acids and strong bases, which can promote hydrolysis of peptide (amide) bonds, and with strong reducing agents that can cleave the disulfide bridge present in this molecule (formula C194H312N54O59S2 indicates two sulfur atoms consistent with a single intramolecular disulfide). Protect from moisture, elevated temperature, and prolonged exposure to light/UV, all of which can accelerate chemical degradation of the peptide. No hazardous polymerization is expected under recommended storage conditions.

Hazardous Decomposition Products: Upon combustion or decomposition may produce: carbon monoxide (CO), carbon dioxide (CO2), nitrogen oxides (NOx), sulfur oxides (SOx).

Hazardous Polymerization: Will not occur.

Section 11 — Toxicological Information

The toxicological properties of this substance have not been fully characterized. Where no authoritative study data was identified, endpoint classifications are based on a weight-of-evidence approach using read-across from the compound's chemical class and structural features, per GHS Rev.8 Chapter 1.3.2.4. “Not classified” entries below mean “not classified based on currently available data” — hazards cannot be excluded.

Acute Toxicity: Acute toxicity data specific to cagrilintide (CAS 1415456-99-3) have not been located in authoritative sources (PubChem CID 171397054, ECHA, NIOSH, NTP). No oral, dermal, or inhalation LD50/LC50 values from peer-reviewed literature or regulatory bodies are available. The toxicological profile is not fully characterized. Not classified for acute toxicity based on currently available data; hazards cannot be excluded (GHS Rev.8 S1.3.2.4). Handle as a substance of unknown acute toxicity and avoid all routes of exposure (ingestion, inhalation of dust/aerosol, skin and eye contact).

Skin Corrosion / Irritation: No experimental skin corrosion/irritation data for cagrilintide are available from authoritative sources (PubChem, ECHA, NIOSH). The substance has not been evaluated under OECD TG 404/431/439. Not

classified for skin corrosion/irritation based on currently available data; hazards cannot be excluded (GHS Rev.8 S1.3.2.4). Direct skin contact should be avoided as a precaution.

Serious Eye Damage / Irritation: No experimental serious eye damage/eye irritation data for cagrilintide are available from authoritative sources (PubChem, ECHA, NIOSH); the substance has not been evaluated under OECD TG 405/437/438/492. Not classified for serious eye damage/eye irritation based on currently available data; hazards cannot be excluded (GHS Rev.8 S1.3.2.4). Eye contact with the solid or solutions should be avoided.

Skin / Respiratory Sensitization: No respiratory or skin sensitization data (OECD TG 406, 429, 442A-E) for cagrilintide are reported in PubChem, ECHA, or NIOSH databases. Not classified for respiratory or skin sensitization based on currently available data; hazards cannot be excluded (GHS Rev.8 S1.3.2.4). Repeated or prolonged exposure to the dust or solutions should be avoided.

Germ Cell Mutagenicity / Genotoxicity: Not classified based on currently available data; hazards cannot be excluded. Weight-of-evidence assessment applied using read-across from chemical class and structural considerations (GHS Rev.8 Chapter 1.3.2.4); no authoritative substance-specific study data identified.

Carcinogenicity: Cagrilintide is not listed by IARC, the U.S. National Toxicology Program (NTP) Report on Carcinogens, OSHA (29 CFR 1910 Subpart Z), or ACGIH as a carcinogen. No long-term carcinogenicity bioassays specific to cagrilintide are available in the published literature or authoritative databases. Not classified for carcinogenicity based on currently available data; hazards cannot be excluded (GHS Rev.8 S1.3.2.4).

Reproductive Toxicity: Cagrilintide is classified under GHS as Reproductive Toxicity Category 2 (H361d: Suspected of damaging the unborn child), based on available hazard data (PubChem). Specific OECD guideline reproductive/-developmental toxicity studies (e.g., OECD TG 414, 416, 421, 422, 443) are not publicly reported in authoritative sources. The substance is not listed on the California Proposition 65 list for reproductive toxicity. Effects on or via lactation have not been characterized. Exposure of pregnant or potentially pregnant workers should be avoided; minimize all routes of exposure as a precaution.

Specific Target Organ Toxicity (STOT): No specific target organ toxicity has been established for cagrilintide from single exposure (STOT-SE) or repeated exposure (STOT-RE). No subacute, subchronic, or chronic repeated-dose toxicity studies (e.g., OECD TG 407, 408, 410, 411, 412, 413) are reported in PubChem, ECHA, or NTP authoritative sources. Not classified for STOT-SE or STOT-RE based on currently available data; hazards cannot be excluded (GHS Rev.8 S1.3.2.4). The toxicological properties of this substance are not fully characterized; minimize exposure as a precaution.

Aspiration Hazard: Not classified based on currently available data; hazards cannot be excluded. Weight-of-evidence assessment applied using read-across from chemical class and structural considerations (GHS Rev.8 Chapter 1.3.2.4); no authoritative substance-specific study data identified.

Derived No-Effect Level (DNEL): No data available — no substance-specific DNEL has been derived.

Predicted No-Effect Concentration (PNEC): No data available — no substance-specific PNEC has been derived.

Section 12 — Ecological Information

No authoritative substance-specific ecotoxicity study data was identified. In the absence of experimental data, adverse environmental effects cannot be fully excluded.

Ecotoxicity: No substance-specific experimental aquatic toxicity data (e.g., fish LC50, Daphnia EC50, algal ErC50) have been identified for cagrilintide (CAS 1415456-99-3) in authoritative regulatory sources, including the U.S. EPA ECOTOX database, ECHA registration dossiers, or PubChem. Not classified as hazardous to the aquatic environment (acute or chronic) under GHS/CLP based on a weight-of-evidence assessment in the absence of authoritative experimental data. The substance is a high-molecular-weight (~4409 g/mol) modified peptide active pharmaceutical ingredient; releases to the environment should nevertheless be minimized as a precautionary measure.

Persistence and Degradability: No substance-specific experimental data on environmental persistence, ready biodegradability (e.g., OECD 301 series), or hydrolytic/photolytic half-lives have been identified for cagrilintide in

authoritative regulatory sources. A definitive persistence classification cannot be assigned without substance-specific test data.

Bioaccumulative Potential: No substance-specific experimental bioconcentration factor (BCF), bioaccumulation factor (BAF), or measured log Kow values have been identified for cagrilintide in authoritative regulatory sources. Given the high molecular weight (~4409 g/mol), which exceeds the 700 g/mol threshold commonly cited in ECHA Guidance R.11 above which steric hindrance generally limits passive membrane permeation and bioconcentration, significant bioaccumulation is not anticipated; however, this conclusion is provisional in the absence of authoritative experimental data.

Mobility in Soil: No substance-specific experimental data identified.

Other Adverse Effects: No other adverse environmental effects identified. The substance is not included on the Montreal Protocol list of ozone-depleting substances.

Section 13 — Disposal Considerations

Dispose of contents and container in accordance with all local, state, and federal regulations. Do not dispose of this material into sewers or waterways. Contact a licensed waste disposal company for disposal guidance.

US: Dispose in accordance with 40 CFR Parts 261-270 (RCRA). **EU:** Dispose according to Directive 2008/98/EC (Waste Framework Directive).

Section 14 — Transport Information

DOT (US)	Not regulated as dangerous goods under DOT (49 CFR) based on current classification.
IATA	Not regulated as dangerous goods under IATA Dangerous Goods Regulations based on current classification.
IMDG	Not regulated as dangerous goods or as a marine pollutant under the IMDG Code based on current classification.
UN Number	Not applicable.

Transport classifications above are based on the substance's intrinsic hazard classification; the shipper must independently verify the classification, packaging, labelling, and documentation requirements for their specific shipment configuration, quantity, and carrier (including airline policies) prior to dispatch.

Section 15 — Regulatory Information

United States

TSCA (Toxic Substances Control Act): May be eligible for exemption from TSCA inventory listing requirements under the R&D provisions of 40 CFR 720.36, depending on actual conditions of use. This substance is supplied solely for use in scientific research and development in small quantities; it is not intended for, and shall not be used for, any commercial manufacturing, processing, or distribution in commerce. The importer/end user is responsible for confirming that the R&D exemption criteria are met for their specific use. **OSHA HazCom 2012:** This SDS was prepared in accordance with 29 CFR 1910.1200 (HazCom 2012), aligned with the Globally Harmonized System (GHS) Rev. 8. **CERCLA / SARA Title III:** Not listed as a CERCLA Hazardous Substance (40 CFR 302.4); not subject to SARA 313 reporting based on available classification data. Users must independently verify applicability for their facility.

European Union

REACH (EC 1907/2006): Supplied solely for Scientific Research and Development (SR&D) use in quantities below 1 tonne per year per legal entity. Where applicable, this use may be exempt from REACH registration obligations under the scientific research and development provisions of REACH Article 3(23) and the conditions of Article 26(3); importers/users should independently verify the applicable exemption pathway for their specific use. If the substance is used as part of a formally notified Product and Process Oriented Research and Development (PPORD) programme, the separate notification procedure under REACH Article 9 (with a 5-year exemption renewable once) may apply instead. **CLP (EC 1272/2008):** Not classified under CLP based on available data; no harmonized classification entry identified in Annex VI of CLP or the ECHA Classification and Labelling (C&L) Inventory.

Canada

WHMIS 2015 / HPR: Not classified as a hazardous product under the Hazardous Products Act and Hazardous Products Regulations (SOR/2015-17) based on available data and weight-of-evidence assessment. Supplied for laboratory research use only. **DSL/NDSL:** Research-use exemption applies; substance is not intended for commercial import or manufacture in Canada.

Note: The regulatory statements above reflect the intended use of this substance for scientific research and development only and do not constitute a legal determination of regulatory status. If the substance is used outside the R&D exemption scope, users are solely responsible for independently verifying applicable regulatory obligations (TSCA, REACH, WHMIS, state, and local) for their specific use and jurisdiction prior to any such use.

Section 16 — Other Information

Document ID	717ef6b6-09b0-4947-8857-b767f7a2b3b3
Revision Date	2026-08-13
Version	1.0
Prepared By	Prepared in accordance with GHS Rev.8 and OSHA HazCom 2012 (29 CFR 1910.1200). Independent review by a qualified chemical safety professional is recommended prior to use.

Revision History

Revision date: 2026-08-13
Version: 1.0
Change description: Initial issue. Document prepared in 16-section GHS Rev.8 / OSHA HazCom 2012 format.

Sources Used

- PubChem (U.S. National Library of Medicine / NCBI) — https://pubchem.ncbi.nlm.nih.gov
- Peer-reviewed chemistry and toxicology literature (class-based read-across and weight-of-evidence assessment per GHS Rev.8 Chapter 1.3.2.4)
- OSHA HazCom 2012 / 29 CFR 1910.1200 Appendix A–C; GHS Rev.8; OECD Test Guidelines

Key to Abbreviations

CAS = Chemical Abstracts Service; GHS = Globally Harmonized System of Classification and Labelling of Chemicals; OSHA = U.S. Occupational Safety and Health Administration; HazCom = Hazard Communication Standard; REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals; CLP = Classification, Labelling and Packaging Regulation; TSCA = Toxic Substances Control Act; WHMIS = Workplace Hazardous Materials Information System; OEL = Occupational Exposure Limit; PEL = Permissible Exposure Limit; TLV = Threshold Limit Value; REL = Recommended Exposure Limit; STOT = Specific Target Organ Toxicity; LD50 =

Median Lethal Dose; LC50 = Median Lethal Concentration; PPE = Personal Protective Equipment; SCBA = Self-Contained Breathing Apparatus; R&D = Research and Development.

Disclaimer

DISCLAIMER: The information in this Safety Data Sheet is compiled from the authoritative sources cited above, supplemented by weight-of-evidence assessment based on the compound's chemical class and published literature. It is believed to be accurate as of the revision date but is provided "as is" without warranty of any kind, express or implied, including fitness for a particular purpose. The preparer of this document has not independently tested the substance described herein. Users bear sole responsibility for verifying all information, ensuring safe handling, and compliance with all applicable federal, state, provincial, and local regulations.This SDS is not a substitute for independent chemical safety assessment by a qualified professional. This product is intended for scientific research and development use only and is not for human consumption, drug, food, cosmetic, agricultural, or household use.

This SDS complies with GHS Revision 8 / UN GHS Rev.8 and OSHA HazCom 2012 (29 CFR 1910.1200).