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SAFETY DATA SHEET

GHS / OSHA HazCom 2012 Compliant

Biomod Compounds LLC

Epitalon

CAS: 307297-39-8
Formula: C14H22N4O9

Document ID: 7743e8d2
Revision Date: 2026-05-21
Version: 1.0

Section 1 — Product and Company Identification

Product Name	Epitalon
Synonyms	Epitalon; 307297-39-8; Epithalon
CAS Number	307297-39-8
Molecular Formula	C14H22N4O9
IUPAC Name	(4S)-4-[[(2S)-2-aminopropanoyl]amino]-5-[[(2S)-3-carboxy-1-(carboxymethylamino)-1-oxopropan-2-yl]amino]-5-oxopentanoic acid
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	Biomod Compounds LLC
Address	6625 S Valley View Blvd D418, Las Vegas, Nevada 89118, US
Phone	7024982144
Website	https://www.biomodpeptides.com/
Emergency Contact	CHEMTREC
Emergency Phone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

Section 2 — Hazard Identification

Classification of the substance

Not classified based on currently available data; however, data is limited and hazards cannot be fully characterized. The absence of classification should not be interpreted as a determination of the absence of hazard.

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: **None**

GHS Pictograms:
None required based on classification.

Hazard Statements
None. This substance is not classified for any GHS hazard class based on available data.

Precautionary Statements

- P261: Avoid breathing dust, fume, gas, mist, vapors, or spray.
- P264: Wash hands and exposed skin thoroughly after handling.
- P280: Wear protective gloves, protective clothing, and eye/face protection.
- P501: Dispose of contents and container in accordance with local, regional, national, and international regulations.

Precautionary statements are provided as best practice for handling substances with limited toxicological data, and are not a declaration of GHS classification.

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
Epitalon	307297-39-8	C14H22N4O9	390.35 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 in accordance with good industrial hygiene and laboratory safety practice consistent with OSHA's Laboratory Standard (29 CFR 1910.1450) and the recommendations in 29 CFR 1910.1450 Appendix A (NRC Prudent Practices in the Laboratory). Because comprehensive toxicological data for this synthetic tetrapeptide are not available, treat it as a substance of unknown toxicity and minimize all exposures. Handle only in a well-ventilated area; weigh and manipulate the dry powder inside a chemical fume hood, ventilated balance enclosure, or glove box to control airborne particulates, as required by the OSHA Hazard Communication Standard (29 CFR 1910.1200). Use engineering controls in preference to personal protective equipment, but wear chemical-resistant gloves, a laboratory coat, and ANSI Z87.1-compliant eye protection at minimum; add respiratory protection (NIOSH-approved particulate respirator) when dust generation cannot be otherwise controlled. Avoid formation, inhalation, and contact with dust, aerosols, mist, and solutions; do not taste or swallow. Keep containers tightly closed when not in use to limit absorption of atmospheric moisture and CO2, which can degrade free-amino-acid peptides. Ground and bond containers when transferring to mitigate static accumulation in dry powders. Do not eat, drink, smoke, or apply cosmetics in work areas. Wash hands, forearms, and face thoroughly with soap and water after handling and before breaks and at the end of the workday, and remove and launder contaminated clothing before reuse, consistent with OSHA 29 CFR 1910.141 sanitation

requirements. Where solutions are prepared, use small working aliquots to minimize freeze-thaw cycles and microbial contamination.

Storage Conditions

Store the lyophilized solid tightly closed in its original container under an inert, dry atmosphere (e.g., argon or nitrogen) where feasible, protected from light, moisture, and heat. Consistent with general guidance for synthetic peptides (e.g., NIH/NCBI Prudent Practices in the Laboratory, NBK55875), maintain the dry powder at -20 degC or colder (-80 degC preferred for long-term storage) in a dedicated, non-frost-free freezer with a desiccant; allow sealed containers to equilibrate to room temperature before opening to prevent condensation and hydrolysis. Reconstituted aqueous solutions should be aliquoted and stored frozen, and repeated freeze-thaw cycles should be avoided. Keep the container labeled in accordance with 29 CFR 1910.1200(f) and segregated from incompatible materials (see below). Store away from foodstuffs, oxidizers, and strong acids/bases, in a secure area with restricted access. No specific NFPA or DOT special storage classification has been established by an authoritative regulatory body (OSHA, EPA, DOT) for this substance; apply general chemical-storage principles from OSHA 29 CFR 1910.1450 and NFPA 45 for laboratory-scale quantities.

Incompatibilities

No specific incompatibility data for Epitalon (CAS 307297-39-8) have been published by an authoritative regulatory source (OSHA, NIOSH, EPA, ECHA, or PubChem). Based on the compound's chemical structure (a tetrapeptide containing free alpha-amino, alpha-carboxyl, and side-chain carboxyl groups, plus amide bonds), apply general peptide/amino-acid handling principles and avoid contact with: strong oxidizing agents (which can oxidize peptide bonds and side chains); strong acids and strong bases (which catalyze hydrolysis of amide/peptide bonds and may cause racemization); strong reducing agents; aldehydes and other electrophiles (e.g., isocyanates, acid chlorides, anhydrides) that react with primary amines; heavy-metal ions, which can chelate to carboxylates and amides; and prolonged exposure to moisture, heat, or UV light, which promote hydrolysis, deamidation, and aggregation. Incompatible with materials that generate or release these species. Hazardous decomposition products on thermal breakdown or combustion may include carbon monoxide, carbon dioxide, and nitrogen oxides (NOx), as expected for organic nitrogen-containing compounds; no authoritative measurement of decomposition products specific to this substance is available.

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 Epitalon (CAS 307297-39-8). No biological exposure indices (BEIs) have been established. Control exposure to the lowest level reasonably achievable (ALARA) using the engineering controls and PPE specified below. Handle as a potentially bioactive substance of unknown toxicity.

Engineering Controls

Use in a well-ventilated area. Handle weighing, transfer, and dissolution of the dry powder inside a chemical fume hood, ventilated balance enclosure, or Class I/II biological safety cabinet to prevent inhalation of dust or aerosols, consistent with the OSHA Laboratory Standard (29 CFR 1910.1450) and Prudent Practices in the Laboratory (NRC, 2011). Where powder handling cannot be enclosed, use local exhaust ventilation at the point of generation. Provide readily accessible eyewash stations and safety showers in the work area in accordance with ANSI/ISEA Z358.1. Do not eat, drink, smoke, or store food in areas where this material is handled. Wash hands and exposed skin thoroughly after handling.

Personal Protective Equipment

Respiratory Protection: Under normal laboratory handling with adequate local exhaust ventilation or use within a fume hood, respiratory protection is not typically required. If engineering controls are inadequate, if airborne dust, mist, or aerosols may be generated (e.g., weighing bulk powder on an open bench, lyophilization, sonication), or in

emergency/spill response, wear a NIOSH-approved (42 CFR Part 84) air-purifying respirator equipped with N100, P100, or equivalent HEPA particulate filters. Respirator selection and use must comply with the OSHA Respiratory Protection Standard (29 CFR 1910.134), including medical clearance, fit testing, and a written program.

Hand Protection: Wear chemical-resistant, disposable laboratory gloves compliant with EN ISO 374 / ASTM D6978. Nitrile gloves (minimum 4-8 mil) are generally suitable for handling small quantities of this solid peptide and its aqueous solutions. Inspect gloves before use, change immediately upon contamination or suspected breakthrough, and double-glove when handling bulk powder or concentrated stock solutions. Remove gloves without contaminating skin and wash hands thoroughly after removal. Glove material compatibility data specific to Epitalon are not available in the published literature; select based on the solvent system in use.

Eye / Face Protection: Wear ANSI Z87.1-compliant (or EN 166-compliant) tight-fitting chemical splash safety goggles when handling the solid or its solutions. A full-face shield worn over goggles is recommended when there is a risk of splash, spray, or when handling larger volumes or pressurized systems. Do not wear contact lenses when handling this material unless protective eyewear is worn over them.

Skin Protection: Wear a laboratory coat (knee-length, flame-resistant where appropriate) buttoned closed over street clothing, with long pants and closed-toe, non-absorbent footwear that fully covers the foot. For tasks with higher splash potential or when handling bulk quantities, wear a chemical-resistant apron and disposable sleeve covers. Remove contaminated clothing promptly and launder before reuse; dispose of grossly contaminated single-use garments as chemical waste. PPE selection should follow the hazard assessment requirements of 29 CFR 1910.132.

Section 9 — Physical and Chemical Properties

Physical State	Solid (research-grade lyophilised powder or crystalline solid)
Appearance	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; soluble in dilute acids and bases; poorly soluble in organic solvents such as ethanol
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	390.35 g/mol
Molecular Formula	C14H22N4O9

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: No specific incompatibility data for Epitalon (CAS 307297-39-8) have been published by an authoritative regulatory source (OSHA, NIOSH, EPA, ECHA, or PubChem). Based on the compound's chemical structure (a tetrapeptide containing free alpha-amino, alpha-carboxyl, and side-chain carboxyl groups, plus amide bonds), apply general peptide/amino-acid handling principles and avoid contact with: strong oxidizing agents (which can oxidize peptide bonds and side chains); strong acids and strong bases (which catalyze hydrolysis of amide/peptide bonds and may cause racemization); strong reducing agents; aldehydes and other electrophiles (e.g., isocyanates, acid chlorides, anhydrides) that react with primary amines; heavy-metal ions, which can chelate to carboxylates and amides; and prolonged exposure to moisture, heat, or UV light, which promote hydrolysis, deamidation, and aggregation. Incompatible with materials that generate or release these species. Hazardous decomposition products on thermal breakdown or combustion may include carbon monoxide, carbon dioxide, and nitrogen oxides (NOx), as expected for organic nitrogen-containing compounds; no authoritative measurement of decomposition products specific to this substance is available.

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

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 for Epitalon (CAS 307297-39-8) have not been established in authoritative regulatory databases (no entries located in ECHA registration dossiers, NIOSH RTECS, or PubChem-indexed peer-reviewed acute toxicity studies giving oral, dermal, or inhalation LD50/LC50 values). Not classified for acute toxicity (oral, dermal, or inhalation) 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. Handle as a substance of unknown acute toxicity and minimize all routes of exposure.

Skin Corrosion / Irritation: No experimental skin corrosion or irritation data (e.g., OECD 404, OECD 439) for Epitalon were located in ECHA, NIOSH, EPA, or peer-reviewed sources. Not classified for skin corrosion/irritation based on currently available data; hazards cannot be excluded (GHS Rev.8, S1.3.2.4). As a fine solid, mechanical irritation upon contact is possible. Avoid skin contact and use appropriate personal protective equipment as described in Section 8.

Serious Eye Damage / Irritation: No experimental serious eye damage/eye irritation data (e.g., OECD 405, OECD 437/438/491/492) for Epitalon were located in authoritative sources. Not classified for serious eye damage/eye irritation based on currently available data; hazards cannot be excluded (GHS Rev.8, S1.3.2.4). Dust contact with the eye may produce transient mechanical irritation. Avoid eye contact and use eye protection consistent with Section 8.

Skin / Respiratory Sensitization: No experimental respiratory or skin sensitization data (e.g., OECD 429 LLNA, OECD 442B/442C/442D/442E, or human repeat-insult patch test data) for Epitalon were identified in ECHA, NIOSH, EPA, or peer-reviewed databases. Not classified for respiratory or skin sensitization based on currently available data; sensitization hazards cannot be excluded (GHS Rev.8, S1.3.2.4). Individuals with known hypersensitivity to short-chain amino acid sequences should avoid exposure.

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: Epitalon (CAS 307297-39-8) is not listed in the IARC Monographs on the Identification of Carcinogenic Hazards to Humans, in the U.S. National Toxicology Program 15th Report on Carcinogens, in the OSHA list of regulated carcinogens (29 CFR 1910 Subpart Z), or in the ACGIH carcinogen classification. No regulatory carcinogenicity classification exists. Standard regulatory bioassays (e.g., OECD 451/453) on this substance were not located in authoritative sources. Not classified for carcinogenicity based on currently available data; hazards cannot be excluded (GHS Rev.8, S1.3.2.4).

Reproductive Toxicity: No regulatory reproductive or developmental toxicity studies (e.g., OECD 414, 416, 421, 422, 443) for Epitalon were located in ECHA registration dossiers, the U.S. EPA, or peer-reviewed sources indexed in PubChem (CID 219042). The substance is not listed under California Proposition 65 as causing reproductive toxicity, nor is it included in the ECHA Candidate List as a reproductive toxicant. Not classified for reproductive toxicity or effects on or via lactation based on currently available data; hazards cannot be excluded (GHS Rev.8, S1.3.2.4).

Specific Target Organ Toxicity (STOT): Specific Target Organ Toxicity - Single Exposure (STOT-SE): No data from standardized studies (e.g., OECD 403, 420, 423, 425) identifying single-exposure target organ effects of Epitalon were located in authoritative sources. Not classified for STOT-SE based on currently available data; hazards cannot be excluded (GHS Rev.8, S1.3.2.4). Specific Target Organ Toxicity - Repeated Exposure (STOT-RE): No subacute, subchronic, or chronic repeated-dose toxicity studies (e.g., OECD 407, 408, 409, 411, 452) for this substance were located in ECHA, NIOSH, or peer-reviewed databases. Not classified for STOT-RE based on currently available data; hazards cannot be excluded (GHS Rev.8, S1.3.2.4). The toxicological profile is not fully characterized; minimize repeated or prolonged exposure by any route.

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 Epitalon (CAS 307297-39-8) in authoritative databases (PubChem CID 219042, ECHA, EPA ECOTOX). Not classified as hazardous to the aquatic environment based on weight-of-evidence assessment (no authoritative experimental data identified). The substance should nevertheless be prevented from entering drains, surface water, and groundwater.

Persistence and Degradability: No substance-specific experimental biodegradation studies (e.g., OECD 301 series) have been identified for Epitalon in authoritative sources. As a low-molecular-weight, highly polar, water-soluble compound containing only C, H, N, and O with multiple amide and carboxylic acid functionalities, it is expected to undergo hydrolytic and microbial transformation in the environment, but no quantitative degradation half-life data are available from authoritative regulatory sources.

Bioaccumulative Potential: No experimentally determined bioconcentration factor (BCF) or measured log Kow has been identified for Epitalon in authoritative databases. Given the compound's high polarity, ionizable carboxylic acid and amine groups, expected high water solubility, and low predicted log Kow, significant bioaccumulation in aquatic organisms is not anticipated; however, this assessment is based on structural considerations rather than substance-specific 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	7743e8d2-051c-43e9-8c33-9a7d72e8e457
Revision Date	2026-05-21
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: 2026-05-21
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).