

**PrymaLab****SAFETY DATA SHEET**

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1.0

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FORMAT

GHS / OSHA HCS 2012**SAFETY DATA SHEET · SOLUTION, VIAL****HHB Blend (B-vitamin and lipotropic blend)**

Solution, vial · covers 1 catalogue item · mixture classification

**WARNING****H319** Causes serious eye irritation.

For laboratory research use only. Not for human or veterinary use; not a drug, food, dietary supplement, cosmetic or household product. Read this sheet before handling and keep it with the material.

1 IDENTIFICATION

Product identifier	HHB Blend (B-vitamin and lipotropic blend) — solution, vial
Catalogue items covered	HHB Peptide (Healthy Hair & Nails Blend) PL-HHB-BLD
Synonyms / chemical names	Niacinamide: Nicotinamide (vitamin B3) (CAS 98-92-0) Thiamine HCl: Thiamine hydrochloride (vitamin B1) (CAS 67-03-8) Pantothenic acid: D-Pantothenic acid / dexpantenol (vitamin B5) (CAS 79-83-4) Choline: Choline (as chloride or bitartrate) (CAS 67-48-1) Inositol: myo-Inositol (CAS 87-89-8) Niacin: Nicotinic acid (vitamin B3) (CAS 59-67-6) Biotin: D-Biotin (vitamin B7) (CAS 58-85-5) Folic acid: Folic acid (vitamin B9) (CAS 59-30-3) Riboflavin: Riboflavin (vitamin B2) / riboflavin 5-phosphate (CAS 83-88-5)
Recommended use	Laboratory research chemical for in-vitro and animal-model studies by trained personnel.
Restrictions on use	Not for human or veterinary use, diagnosis or therapy. Not for use as a drug, food, dietary supplement, cosmetic or in household products. Not for resale to the public for personal use.
Supplier	PrymaLab LLC (PrymaLab Analytical), 3705 Music Branch Rd, Ashland, KY 41102, United States · Tel. +1 (606) 465-9063 · michael@prymalab.net · https://prymalab.net
Emergency telephone	Poison Help (US, 24 h): 1-800-222-1222 · Supplier (business hours, US Eastern): +1 (606) 465-9063

2 HAZARD(S) IDENTIFICATION**CLASSIFICATION OF THE MIXTURE**

- Serious eye damage/eye irritation**, Category 2A — H319

LABEL ELEMENTS

GHS07 — Exclamation mark

Signal word: Warning**Hazard statements**

- H319** Causes serious eye irritation.

Precautionary statements*Prevention*

- P264** Wash hands and any exposed skin thoroughly after handling.
- P280** Wear protective gloves, protective clothing and eye protection.

Response

- 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.

HAZARDS NOT OTHERWISE CLASSIFIED / OTHER HAZARDS

- Pharmacologically active material. Accidental injection, ingestion or absorption may produce systemic effects consistent with the compound's mechanism of action; see Section 11.

3 COMPOSITION / INFORMATION ON INGREDIENTS

Sterile aqueous solution in a sealed multi-dose glass vial with a rubber stopper.

INGREDIENT	CAS NO.	FORMULA	CONCENTRATION	QUANTITY	INGREDIENT CLASSIFICATION (GHS)
Niacinamide Nicotinamide (vitamin B3)	98-92-0	C ₆ H ₆ N ₂ O	5% w/v	500 mg per 10 mL vial	Eye irrit. 2A · H319
Thiamine HCl Thiamine hydrochloride (vitamin B1)	67-03-8	C ₁₂ H ₁₈ Cl ₂ N ₄ OS	5% w/v	500 mg per 10 mL vial	Eye irrit. 2A · H319
Pantothenic acid D-Pantothenic acid / dexpantenol (vitamin B5)	79-83-4	C ₉ H ₁₇ NO ₅	2.5% w/v	250 mg per 10 mL vial	not classified
Choline Choline (as chloride or bitartrate)	67-48-1	C ₅ H ₁₄ ClNO	1% w/v	100 mg per 10 mL vial	not classified
Inositol myo-Inositol	87-89-8	C ₆ H ₁₂ O ₆	1% w/v	100 mg per 10 mL vial	not classified
Niacin Nicotinic acid (vitamin B3)	59-67-6	C ₆ H ₅ NO ₂	0.5% w/v	50 mg per 10 mL vial	Eye irrit. 2A · H319
Biotin D-Biotin (vitamin B7)	58-85-5	C ₁₀ H ₁₆ N ₂ O ₃ S	0.01% w/v	1 mg per 10 mL vial	not classified
Folic acid Folic acid (vitamin B9)	59-30-3	C ₁₉ H ₁₉ N ₇ O ₆	0.01% w/v	1 mg per 10 mL vial	not classified
Riboflavin Riboflavin (vitamin B2) / riboflavin 5-phosphate	83-88-5	C ₁₇ H ₂₀ N ₄ O ₆	0.01% w/v	1 mg per 10 mL vial	not classified
Water for injection Water for injection	7732-18-5	H ₂ O	balance to 100%	—	not classified

Peptides are supplied as the acetate or trifluoroacetate salt unless stated otherwise; the counter-ion and residual water make up the balance of a lyophilized product. Concentration limits used for mixture classification follow OSHA HCS 2012 Appendix A.

4 FIRST-AID MEASURES

Inhalation	Move the person to fresh air and keep comfortable for breathing. If breathing is difficult or symptoms persist, call a POISON CENTER or doctor.
Skin contact	Take off contaminated clothing. Wash the skin with plenty of soap and water. If irritation or a rash develops, get medical advice.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do; continue rinsing. If eye irritation persists, get medical advice.
Ingestion	Rinse mouth. Do not induce vomiting. Call a POISON CENTER or doctor if you feel unwell.
Accidental injection	For an accidental needle-stick: wash the site with soap and water, do not squeeze, cover with a dressing and seek medical advice; report the incident according to your laboratory's sharps procedure.
Most important symptoms and effects	Eye redness, watering and irritation.
Indication of immediate medical attention	Treat symptomatically. Show this safety data sheet to the attending physician. No specific antidote is known; monitor for the effects described in Section 11.

5 FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water spray, carbon dioxide, dry chemical or alcohol-resistant foam. Use measures appropriate to the surrounding fire.
Unsuitable extinguishing media	None known. Do not use a high-pressure water jet on powders (dust dispersion).
Specific hazards	Aqueous solution; not flammable and does not support combustion. Thermal decomposition may release carbon monoxide, carbon dioxide and nitrogen oxides, and sulfur oxides.
Protective equipment for fire-fighters	Self-contained breathing apparatus and full protective clothing. Prevent run-off from entering drains.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear the protective equipment in Section 8. Keep unprotected people away. Avoid contact with eyes and skin; beware of broken glass.
Environmental precautions	Do not allow material to reach drains, surface water or soil. Quantities supplied are small; collect for disposal.
Methods for cleaning up	Absorb small spills with paper towel or an inert absorbent, place in a sealed container for disposal and clean the area with water and detergent. Decontaminate surfaces with 70 % alcohol or detergent and water.

7 HANDLING AND STORAGE

Precautions for safe handling	Use aseptic technique when withdrawing solution. Avoid splashes to eyes and skin. Do not pipette by mouth. Wash hands after handling. Do not eat, drink or smoke in the handling area. Follow the precautionary statements in Section 2.
Conditions for safe storage	Store at 2–8 °C, protected from light; do not freeze. Keep the vial upright and tightly closed. Keep the container tightly closed and labelled, out of reach of unauthorised persons (store locked up).
Storage temperature	2–8 °C, protected from light; do not freeze
Incompatible materials	Strong oxidising agents, strong acids and bases.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits	No occupational exposure limits (OSHA PEL, ACGIH TLV, NIOSH REL) have been established for any ingredient.
Engineering controls	Good general laboratory ventilation. An eyewash station should be available.
Eye / face protection	Safety glasses with side shields (ANSI Z87.1 / EN 166); goggles where splashing is possible.
Skin protection	Nitrile gloves (inspect before use; change after contamination) and a laboratory coat.
Respiratory protection	Not normally required with the engineering controls above. Not required for the solution under normal laboratory use.
Hygiene measures	Wash hands after handling and before breaks. Remove contaminated clothing. Do not pipette by mouth.

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state / appearance	Liquid. Clear, yellow aqueous solution (B vitamins).
Odour / odour threshold	Odourless
pH	Approximately 5–7
Melting / freezing point	About 0 °C (aqueous solution)
Boiling point	About 100 °C (aqueous solution)
Flash point / flammability	Not flammable; aqueous solution
Vapour pressure / density	As water (about 2.3 kPa at 20 °C)
Relative density	About 1.00–1.02 g/mL at 20 °C
Solubility	Aqueous solution; miscible with water
Partition coefficient (log P_{ow})	–0.38
Auto-ignition / decomposition temperature	Not applicable (aqueous solution); dissolved peptide degrades on heating
Molecular formula / mass	Niacinamide: C ₆ H ₆ N ₂ O, 122.1 g/mol Thiamine HCl: C ₁₂ H ₁₈ Cl ₂ N ₄ OS, 337.3 g/mol Pantothenic acid: C ₉ H ₁₇ NO ₅ , 219.2 g/mol Choline: C ₅ H ₁₄ ClNO, 139.6 g/mol Inositol: C ₆ H ₁₂ O ₆ , 180.2 g/mol Niacin: C ₆ H ₅ NO ₂ , 123.1 g/mol Biotin: C ₁₀ H ₁₆ N ₂ O ₃ S, 244.3 g/mol Folic acid: C ₁₉ H ₁₉ N ₇ O ₆ , 441.4 g/mol Riboflavin: C ₁₇ H ₂₀ N ₄ O ₆ , 376.4 g/mol

10 STABILITY AND REACTIVITY

Reactivity	No hazardous reactivity under normal laboratory conditions.
Chemical stability	Stable when stored as recommended (Section 7). Solutions degrade over time; discard discoloured or cloudy solutions.
Possibility of hazardous reactions	None known.
Conditions to avoid	Heat, direct light, moisture, freezing, repeated freeze–thaw cycles.
Incompatible materials	Strong oxidising agents, strong acids and bases; reducing agents; metals; iodine; sulfides; mercury compounds; Acids; alkalis; Spectrum: none known; nitrous acid; formaldehyde; reducing agents; reducing agents; calcium and metallic salts.
Hazardous decomposition products	Carbon oxides and nitrogen oxides, sulfur oxides, hydrogen halides on combustion. No hazardous decomposition under recommended storage.

11 TOXICOLOGICAL INFORMATION

Likely routes of exposure: Skin and eye contact from splashes; accidental injection with needles used to withdraw the solution; ingestion.

Symptoms related to the physical, chemical and toxicological characteristics: Eye redness, watering and irritation.

Niacinamide Nicotinamide (vitamin B3) · CAS 98-92-0**Substance classification adopted:** **Eye irrit. 2A · H319**

Sigma-Aldrich SDS 72340 (H319).

Acute toxicity, oral	LD50 oral rat > 2,500 mg/kg (Sigma); LD50 oral rat 3,500 mg/kg (CIL); LD50 subcutaneous rat 1,680 mg/kg (Cayman kit SDS)
Acute toxicity, dermal	LD50 dermal rabbit > 2,000 mg/kg (Sigma)
Acute toxicity, inhalation	LC50 inhalation rat > 3.8 mg/L (Sigma)
Skin corrosion/irritation	Not irritating (Sigma); CIL (d4 analog) classifies Skin Irrit. 2
Serious eye damage/irritation	Eye irritation — positive (Sigma; basis for H319)
Respiratory or skin sensitisation	Negative in guinea pig maximization test
Germ cell mutagenicity	Negative (Ames, mammalian cell, in vivo micronucleus)
Carcinogenicity	Not listed by IARC, NTP, OSHA
Reproductive toxicity	No data available
STOT, single exposure	No data available (CIL d4 analog: STOT SE 3, respiratory irritation)
STOT, repeated exposure	No data available
Aspiration hazard	No data available

Thiamine HCl Thiamine hydrochloride (vitamin B1) · CAS 67-03-8**Substance classification adopted:** **Eye irrit. 2A · H319**

Sigma-Aldrich and Chemos SDSs (H319).

Acute toxicity, oral	LD50 oral, rat: 3710 mg/kg; LD50 oral, mouse: 8224 mg/kg (Fisher; Lupin confirms rat 3710 mg/kg)
Acute toxicity, dermal	No data available
Acute toxicity, inhalation	No data available
Skin corrosion/irritation	Not classified; may cause skin irritation (Fisher)
Serious eye damage/irritation	Eye irritation Category 2, H319 (Sigma, Chemos)
Respiratory or skin sensitisation	Hypersensitivity reactions ranging from mild to severe may occur; life-threatening anaphylactic reactions, collapse and death reported after parenteral thiamine (Lupin injection SDS); Lupin assigns 'May cause allergy or asthma symptoms or breathing difficulties if inhaled' (H334).
Germ cell mutagenicity	No data available / criteria not met (Chemos)
Carcinogenicity	Not listed by ACGIH, IARC, NTP, OSHA or California Prop 65 (Fisher)
Reproductive toxicity	No data available (Fisher, Chemos); Lupin: 'May cause harm to breast-fed children' (H362) - thiamine is excreted in breast milk
STOT, single exposure	Not classified; may cause respiratory and digestive tract irritation (Fisher)
STOT, repeated exposure	No data available
Aspiration hazard	No data available

- Hypersensitivity reactions, including anaphylaxis, are documented after parenteral thiamine; one injection-product SDS (Lupin) classifies the substance as a respiratory sensitiser on that basis. Treat as a potential sensitiser in susceptible individuals.

Pantothenic acid D-Pantothenic acid / dexpanthenol (vitamin B5) · CAS 79-83-4**Substance classification adopted:** not classified

Not classified as hazardous under OSHA HCS 2012 (29 CFR 1910.1200) or UN GHS, on the basis of the supplier safety data sheets consulted.

Acute toxicity, oral	Dexpanthenol: LD50 oral rat > 10,000 mg/kg; LD50 oral mouse 15,000 mg/kg (DSM, Spectrum)
Acute toxicity, dermal	Dexpanthenol: LD50 dermal rat > 3,500 mg/kg (DSM)
Acute toxicity, inhalation	No data available
Skin corrosion/irritation	No skin irritation (DSM); Spectrum: 'may cause skin irritation'
Serious eye damage/irritation	No eye irritation (DSM); Spectrum: mild eye irritation (Category 2B, H320)
Respiratory or skin sensitisation	Did not cause sensitisation (DSM); Spectrum: repeated or prolonged skin contact may cause allergic reactions (dexpanthenol is a recognised rare contact allergen in cosmetics)
Germ cell mutagenicity	Not mutagenic (DSM); Spectrum 'may affect genetic material' (unsupported)
Carcinogenicity	No indication of carcinogenicity (DSM); not listed by IARC, NTP, OSHA
Reproductive toxicity	No data available
STOT, single exposure	No data available
STOT, repeated exposure	NOAEL 200 mg/kg bw/day (repeated dose, DSM)
Aspiration hazard	No data available

- SDSs located are for dexpanthenol/calcium pantothenate; not classified (Spectrum lists H320).

Choline Choline (as chloride or bitartrate) · CAS 67-48-1**Substance classification adopted:** not classified

Not classified as hazardous under OSHA HCS 2012 (29 CFR 1910.1200) or UN GHS, on the basis of the supplier safety data sheets consulted.

Acute toxicity, oral	LD50 oral rat 3,400 mg/kg; LD50 oral mouse 3,900 mg/kg (Spectrum SDS) - above Category 4 cut-off (2,000 mg/kg), so not classified
Acute toxicity, dermal	No information available
Acute toxicity, inhalation	No information available
Skin corrosion/irritation	May cause skin irritation (Spectrum, non-classifying remark)
Serious eye damage/irritation	May cause eye irritation (Spectrum, non-classifying remark)
Respiratory or skin sensitisation	No information available
Germ cell mutagenicity	No data available
Carcinogenicity	Not considered carcinogenic; not listed by IARC, ACGIH, NTP or OSHA (Spectrum)
Reproductive toxicity	No data available
STOT, single exposure	Inhalation of dust may irritate respiratory tract (Spectrum remark)
STOT, repeated exposure	No information available
Aspiration hazard	No data available

Inositol myo-Inositol · CAS 87-89-8**Substance classification adopted:** not classified

Not classified as hazardous under OSHA HCS 2012 (29 CFR 1910.1200) or UN GHS, on the basis of the supplier safety data sheets consulted.

Acute toxicity, oral	LD50 oral mouse 10,000 mg/kg (PhytoTech SDS); no information available (Spectrum)
Acute toxicity, dermal	No data available
Acute toxicity, inhalation	No data available
Skin corrosion/irritation	May cause skin irritation (Spectrum Section 11 remark, non-classifying)
Serious eye damage/irritation	Spectrum Section 11 states 'Causes serious eye irritation' although Section 2 does not classify - treat as a precautionary remark; other suppliers (Sigma, PhytoTech) do not classify for eye irritation
Respiratory or skin sensitisation	No information available
Germ cell mutagenicity	No data available
Carcinogenicity	No information available; not listed by IARC, NTP, OSHA
Reproductive toxicity	No information available
STOT, single exposure	No data available
STOT, repeated exposure	No data available
Aspiration hazard	No data available

Niacin Nicotinic acid (vitamin B3) · CAS 59-67-6**Substance classification adopted:** Eye irrit. 2A · H319

Agilent, Duchefa and PhytoTech SDSs agree (H319).

Acute toxicity, oral	LD50 oral rat 7,000 mg/kg (Agilent; Duchefa); 6,450 mg/kg (PhytoTech); LD50 oral rat (male) 5,210 mg/kg bw (TargetMol)
Acute toxicity, dermal	LD50 dermal rat > 2,000 mg/kg (Agilent; Duchefa)
Acute toxicity, inhalation	No data available
Skin corrosion/irritation	No irritant effect (Agilent)
Serious eye damage/irritation	Irritating effect - Eye Irrit. 2A, H319 (all suppliers); TargetMol: 'mildly irritating to the eyes'
Respiratory or skin sensitisation	No sensitizing effects known (Agilent); TargetMol: no data
Germ cell mutagenicity	No data available
Carcinogenicity	Not listed by IARC, NTP, OSHA (Agilent, PhytoTech)
Reproductive toxicity	No data available
STOT, single exposure	No data available
STOT, repeated exposure	No data available
Aspiration hazard	No data available

Biotin D-Biotin (vitamin B7) · CAS 58-85-5**Substance classification adopted:** not classified

Not classified as hazardous under OSHA HCS 2012 (29 CFR 1910.1200) or UN GHS, on the basis of the supplier safety data sheets consulted.

Acute toxicity, oral	LD50 oral rat > 20,000 mg/kg; LD50 oral mouse > 10,000 mg/kg (DSM SDS). Selleck: no data available
Acute toxicity, dermal	No data available
Acute toxicity, inhalation	No data available
Skin corrosion/irritation	Not irritating (DSM); Selleck: no data
Serious eye damage/irritation	Not irritating (DSM); Selleck: no data
Respiratory or skin sensitisation	No data available
Germ cell mutagenicity	Non-mutagenic (DSM); Selleck: no data
Carcinogenicity	Non-carcinogenic (DSM); not listed by IARC, NTP, OSHA
Reproductive toxicity	Non-teratogenic (DSM); Selleck: no data
STOT, single exposure	No data available
STOT, repeated exposure	No data available
Aspiration hazard	No data available

Folic acid Folic acid (vitamin B9) · CAS 59-30-3**Substance classification adopted:** not classified

Not classified as hazardous under OSHA HCS 2012 (29 CFR 1910.1200) or UN GHS, on the basis of the supplier safety data sheets consulted.

Acute toxicity, oral	LD50 oral, mouse: 10,000 mg/kg (Sigma-Aldrich, Spectrum, Fisher)
Acute toxicity, dermal	No data available
Acute toxicity, inhalation	No data available
Skin corrosion/irritation	No data available (Sigma, Fisher); Spectrum: may cause skin irritation (not classified)
Serious eye damage/irritation	No data available (Sigma, Fisher); Spectrum: may cause eye irritation (not classified)
Respiratory or skin sensitisation	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	Not listed by IARC, NTP, ACGIH or OSHA; Spectrum: not considered carcinogenic
Reproductive toxicity	No data available
STOT, single exposure	No data available
STOT, repeated exposure	No data available
Aspiration hazard	No data available

Riboflavin Riboflavin (vitamin B2) / riboflavin 5-phosphate · CAS 83-88-5**Substance classification adopted:** not classified

Not classified as hazardous under OSHA HCS 2012 (29 CFR 1910.1200) or UN GHS, on the basis of the supplier safety data sheets consulted.

Acute toxicity, oral	LD50 oral rat > 10,000 mg/kg (Sigma PHR1054; Fisher: > 10 g/kg)
Acute toxicity, dermal	No data available
Acute toxicity, inhalation	LC50 inhalation rat 4 h > 5.4 mg/L (Sigma PHR1054)
Skin corrosion/irritation	No skin irritation (Sigma); Fisher (2007) lists possible mechanical irritation
Serious eye damage/irritation	No eye irritation (Sigma); Fisher lists possible irritation (dust)
Respiratory or skin sensitisation	Negative (Sigma)
Germ cell mutagenicity	Ames test negative (Sigma); Fisher cites a hamster lung cytogenetic analysis at 300 mg/L (not a classification basis)
Carcinogenicity	Not listed by IARC, NTP or OSHA
Reproductive toxicity	No data available
STOT, single exposure	No data available
STOT, repeated exposure	No data available
Aspiration hazard	No data available

- Photolabile; protect solutions from light.

Mixture classification: the ingredient classifications above were combined using the additivity and cut-off rules of OSHA HCS 2012 Appendix A (acute toxicity estimate calculation; 10% cut-off for skin and eye irritation; 0.1% for carcinogenicity, reproductive toxicity and respiratory sensitisation; 1.0% for skin sensitisation and STOT; 20% for respiratory tract irritation).

Carcinogen listings: no ingredient is listed as a carcinogen by IARC, NTP or OSHA.

12 ECOLOGICAL INFORMATION

Niacinamide: Fish LC50 > 1,000 mg/L (96 h); algae NOEC 560 mg/L (72 h); microorganism NOEC 4,235 mg/L; readily biodegradable (96% in 14 d); not bioaccumulative; not PBT/vPvB (Sigma).

Thiamine HCl: No information available (Fisher). Chemos: water hazard class 1 (slightly hazardous for water). Readily biodegradable expected; not bioaccumulative.

Pantothenic acid: Dexpanthenol: LC50 fish (rainbow trout) > 1,000 mg/L; EC50 Daphnia > 100 mg/L; readily biodegradable (97% in 21 d); not PBT/vPvB (DSM). Not classified as hazardous to the aquatic environment.

Choline: Low aquatic toxicity: fish LC50 >10,000 mg/L (96 h, *Leuciscus idus*); algae EC50 >500 mg/L (72 h, *Desmodesmus subspicatus*) (Spectrum SDS). Readily biodegradable in general literature.

Inositol: Inherently biodegradable (Spectrum); environmental impact not fully investigated; no aquatic toxicity data.

Niacin: LC50 fish (*Salmo trutta* / rainbow trout) 520 mg/L 96 h; EC50 Daphnia magna 77 mg/L 48 h; readily biodegradable (PhytoTech; TargetMol). PhytoTech additionally classifies Acute aquatic toxicity Category 3 (H402 'Harmful to aquatic life'; not an HCS 2012 class).

Biotin: Low bioaccumulation potential (log P < 3). No persistence/degradability or aquatic toxicity data in the supplier SDSs reviewed.

Folic acid: No ecotoxicity data available (Sigma, Spectrum). Fisher: persistence unlikely; will likely be mobile in the environment due to water solubility; no bioaccumulation information.

Riboflavin: LC50 fish > 10,000 mg/L; readily biodegradable 90-100% (Sigma PHR1054). Not classified as hazardous to the aquatic environment.

Persistence and degradability: peptides and amino acids are expected to biodegrade readily; benzyl alcohol is readily biodegradable (92-96% in 14 days, OECD 301C). Bioaccumulative potential: low (hydrophilic, log P_{ow} < 3 where known). Mobility in soil: water-soluble; mobile. PBT/vPvB: not expected to meet the criteria. Other adverse effects: none known. Do not release concentrated material to the environment.

13 DISPOSAL CONSIDERATIONS

Dispose of unused material and contaminated packaging through a licensed chemical-waste contractor in accordance with federal (40 CFR 261), state and local regulations; the material is not a listed RCRA hazardous waste but is classified as hazardous for supply and should be managed as chemical waste. Do not pour down the drain. Small residues may be inactivated with 10% bleach for 30 minutes before disposal where local rules allow. Empty glass vials and cartridges: remove labels or deface them before recycling or disposal.

14 TRANSPORT INFORMATION

DOT (49 CFR) / IATA / IMDG	Not regulated as a dangerous good for transport by road (DOT 49 CFR), air (IATA/ICAO) or sea (IMDG). Not a marine pollutant. Ship refrigerated or frozen as required by Section 7; the coolant (dry ice, UN 1845) is regulated when used.
UN number / proper shipping name / class / packing group	Not applicable.

15 REGULATORY INFORMATION**OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Hazardous: Serious eye damage/eye irritation (Category 2A).

TSCA (Toxic Substances Control Act)	Niacinamide: listed on the TSCA Inventory; Thiamine HCl: listed on the TSCA Inventory; Pantothenic acid: listed on the TSCA Inventory; Choline: listed on the TSCA Inventory; Inositol: listed on the TSCA Inventory; Niacin: listed on the TSCA Inventory; Biotin: listed on the TSCA Inventory; Folic acid: listed on the TSCA Inventory; Riboflavin: listed on the TSCA Inventory; Water: listed on the TSCA Inventory.
SARA Title III (Sections 302, 311/312, 313), CERCLA	No ingredient is listed as an extremely hazardous substance (Section 302), a Section 313 toxic chemical or a CERCLA hazardous substance. Section 311/312 hazard categories follow the classification in Section 2.
California Proposition 65	No ingredient is listed as known to the State of California to cause cancer or reproductive toxicity.
State right-to-know lists	No ingredient is listed.
US FDA	Research chemical. Not an FDA-approved drug product; not evaluated for safety or efficacy in humans or animals; not GRAS; not a dietary ingredient. Sold for laboratory research use only.
US DEA controlled substances	No ingredient is scheduled under the Controlled Substances Act at the revision date.
International	The classification in Section 2 applies equally under EU CLP (Regulation (EC) 1272/2008) and other UN GHS implementations; peptides of this kind are generally not registered under REACH (research and development use).

16 OTHER INFORMATION

Revision	Revision 1.0, October 3, 2026 — first issue. Prepared by PrymaLab Analytical, PrymaLab LLC.
Classification method	Calculated from the ingredient classifications (Section 3) with the OSHA HCS 2012 Appendix A mixture rules; ingredient classifications were adopted from the supplier safety data sheets listed below with the PrymaLab policy adjustments stated in Section 11. Policy: Cayman Chemical is the primary reference for research peptides and novel small molecules and Sigma-Aldrich/Merck for commodity chemicals; a more conservative manufacturer or ECHA classification is adopted where internally consistent; SARMs, GLP-1 receptor agonists, GnRH analogues and gonadotropins carry reproductive-toxicity classifications by expert judgement.
Sources consulted	Sigma-Aldrich / Merck; MakingCosmetics Inc.; Cambridge Isotope Laboratories; Cayman Chemical; Sigma-Aldrich; Sigma-Aldrich SDS; Chemos GmbH; Fisher Scientific; Lupin Pharmaceuticals; DSM Nutritional Products; Spectrum Chemical; Merck Life Science / Sigma-Aldrich.
Abbreviations	ATE acute toxicity estimate · CAS Chemical Abstracts Service · GHS Globally Harmonized System · HCS Hazard Communication Standard · IARC International Agency for Research on Cancer · LD50/LC50 median lethal dose/concentration · NTP National Toxicology Program · OEL occupational exposure limit · PEL permissible exposure limit · STOT specific target organ toxicity · TLV threshold limit value · WADA World Anti-Doping Agency.

The information in this safety data sheet is believed to be accurate as of the revision date and is given in good faith for the guidance of trained laboratory personnel handling the material described. It relates only to the specific material designated and may not be valid for the material used in combination with other substances or in any process. No warranty, express or implied, is made as to its completeness; users must make their own determination of suitability and comply with all applicable laws. PrymaLab products are sold for laboratory research use only and are not intended for human or veterinary use. © 2026 PrymaLab LLC.