PrymaLab
SAFETY DATA SHEET
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1.0	October 3, 2026	GHS / OSHA HCS 2012

SAFETY DATA SHEET · CAPSULES

RAD-150

Capsules · covers 1 catalogue item · mixture classification

WARNING

H361 Suspected of damaging fertility or the unborn child. · **H373** May cause damage to organs (liver) through prolonged or repeated exposure.

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	**RAD-150 — capsules**
Catalogue items covered	RAD-150 (TLB-150) 5mg Capsules `PL-RAD150-5MG-CAP`
Synonyms / chemical names	**RAD-150**: RAD150 (TLB-150), benzoate ester of RAD140 (CAS 1333223-66-7)
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

- **Reproductive toxicity**, Category 2 — H361
- **Specific target organ toxicity, repeated exposure**, Category 2 (liver) — H373

LABEL ELEMENTS

GHS08 — Health hazard

Signal word: Warning

Hazard statements

- **H361** Suspected of damaging fertility or the unborn child.
- **H373** May cause damage to organs (liver) through prolonged or repeated exposure.

Precautionary statements

Prevention

- **P201** Obtain special instructions before use.
- **P202** Do not handle until all safety precautions have been read and understood.
- **P260** Do not breathe dust, mist or spray.
- **P280** Wear protective gloves, protective clothing and eye protection.

Response

- **P308+P313** IF exposed or concerned: Get medical advice/attention.
- **P314** Get medical advice/attention if you feel unwell.

Storage

- **P405** Store locked up.

Disposal

- **P501** Dispose of contents and container to an approved waste disposal plant in accordance with local, state and federal regulations.

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.
- The active ingredient(s) (< 10% of the mixture) have no acute toxicity data.
- Finely divided organic powder may form combustible dust concentrations in air if dispersed in bulk (not expected at laboratory scale).

3 COMPOSITION / INFORMATION ON INGREDIENTS

Hard gelatin capsules containing the active substance blended with microcrystalline cellulose, packed in a sealed bottle.

INGREDIENT	CAS NO.	FORMULA	CONCENTRATION	QUANTITY	INGREDIENT CLASSIFICATION (GHS)
RAD-150 RAD150 (TLB-150), benzoate ester of RAD140	1333223-66-7	$C_{27}H_{18}ClN_5O_3$	1.2% w/w of capsule contents (nominal)	5 mg per capsule	Repr. 2 · H361 STOT RE 2 · H373
Microcrystalline cellulose Microcrystalline cellulose (capsule filler)	9004-34-6	$(C_6H_{10}O_5)n$	balance of capsule contents	—	not classified
Gelatin Gelatin (capsule shell)	9000-70-8	—	capsule shell	—	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. Concentrations of the active in the capsule contents are calculated for a nominal fill weight of 400 mg; the classification of the pure active substance is given in Section 11 for the case where capsule contents are handled as a powder.

4 FIRST-AID MEASURES

General	If exposed or concerned, get medical advice. Show this safety data sheet to the doctor. Pregnant or nursing laboratory staff should avoid exposure.
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.
Most important symptoms and effects	No specific symptoms are known. pharmacologically active material: systemic effects consistent with its mechanism of action are possible after accidental injection, ingestion or absorption.
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	Combustible organic solid; capsule contents may form combustible dust if dispersed in bulk. Thermal decomposition may release carbon monoxide, carbon dioxide and nitrogen 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 dust formation and inhalation of dust.
Environmental precautions	Do not allow material to reach drains, surface water or soil. Quantities supplied are small; collect for disposal.
Methods for cleaning up	Collect intact capsules. Dampen any spilled powder with water, wipe up with absorbent material and place in a sealed container for disposal. Decontaminate surfaces with 70% alcohol or detergent and water.

7 HANDLING AND STORAGE

Precautions for safe handling	Do not open or crush capsules unless required for an experiment; if capsule contents are handled as a powder, avoid generating dust and weigh inside a ventilated enclosure. 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 room temperature (15–25 °C) in the tightly closed original container, dry and protected from light. Keep the container tightly closed and labelled, out of reach of unauthorised persons (store locked up).
Storage temperature	15–25 °C, dry, protected from light
Incompatible materials	Strong oxidising agents, strong acids and bases.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits	Microcrystalline cellulose: OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction); ACGIH TLV 10 mg/m³ (as cellulose). No occupational exposure limits have been established for the active ingredient(s).
Engineering controls	Good general laboratory ventilation. Weigh or manipulate dry powder in a ventilated enclosure (powder hood, biosafety cabinet or fume hood). An eyewash station should be available.
Eye / face protection	Safety glasses with side shields (ANSI Z87.1 / EN 166).
Skin protection	Nitrile gloves (inspect before use; change after contamination) and a laboratory coat.
Respiratory protection	Not normally required with the engineering controls above. Where dust cannot be controlled, use a NIOSH-approved N95 (or P2) particulate respirator.
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	Solid. Hard gelatin capsules containing a white to off-white powder.
Odour / odour threshold	Characteristic (parent RAD140, Cayman)
pH	Not applicable (solid)
Melting / freezing point	No data available
Boiling point	743.0 +/- 70.0 °C (predicted, ChemicalBook for TLB-150 benzoate)
Flash point / flammability	Not applicable (non-flammable solid); combustible organic material
Vapour pressure / density	Negligible (solid)
Relative density	No data available (bulk density of lyophilized cake is low)
Solubility	No data for RAD150; parent RAD140: DMF 30 mg/mL, DMSO 30 mg/mL, ethanol 2 mg/mL, ethanol:PBS (1:3) 0.25 mg/mL (Cayman)
Partition coefficient (log P_{ow})	No data available (lipophilic ester, expected higher than RAD140)
Auto-ignition / decomposition temperature	No data available; peptides decompose above about 200 °C
Molecular formula / mass	RAD-150: $C_{27}H_{18}ClN_5O_3$, 499.9 g/mol
Other information	Benzoate ester of RAD140. Vendors give CAS 1208070-53-4, C27H20ClN5O3, MW 497.93 (TargetMol/ChemicalBook) - the group file's CAS 1333223-66-7 and formula C27H18ClN5O3 / 499.9 do not match these vendor...

10 STABILITY AND REACTIVITY

Reactivity	No hazardous reactivity under normal laboratory conditions.
Chemical stability	Stable when stored as recommended (Section 7). Lyophilized peptides are hygroscopic and degrade faster once moist or reconstituted.
Possibility of hazardous reactions	None known.
Conditions to avoid	Heat, direct light, moisture, repeated freeze–thaw cycles.
Incompatible materials	Strong oxidising agents, strong acids and bases.
Hazardous decomposition products	Carbon oxides and nitrogen oxides, hydrogen halides on combustion. No hazardous decomposition under recommended storage.

11 TOXICOLOGICAL INFORMATION

Likely routes of exposure: Ingestion; inhalation of dust and skin/eye contact if capsules are opened.

Symptoms related to the physical, chemical and toxicological characteristics: No specific symptoms are known. pharmacologically active material: systemic effects consistent with its mechanism of action are possible after accidental injection, ingestion or absorption.

RAD-150 RAD150 (TLB-150), benzoate ester of RAD140 · CAS 1333223-66-7

Substance classification adopted: Repr. 2 · H361 STOT RE 2 · H373

No supplier SDS exists for RAD-150 (TLB-150 benzoate). Classified by read-across to the parent compound RAD-140, of which it is the benzoate ester prodrug.

Acute toxicity, oral	No data available
Acute toxicity, dermal	No data available
Acute toxicity, inhalation	No data available
Skin corrosion/irritation	No data for RAD150; parent RAD140: no irritant effect known (Cayman)
Serious eye damage/irritation	No data for RAD150; parent RAD140: no irritating effect known (Cayman)
Respiratory or skin sensitisation	No data; parent RAD140: no sensitizing effects known (Cayman)
Germ cell mutagenicity	No data available
Carcinogenicity	Not listed by IARC, NTP, OSHA
Reproductive toxicity	No supplier data. Class remark: SARMs are androgen receptor agonists; several SARM SDSs carry H361 'Suspected of damaging fertility or the unborn child'; RAD140 suppresses the HPG axis and testosterone in animals and humans - a careful author should consider H361
STOT, single exposure	No data available
STOT, repeated exposure	No data available. Remark: RAD140 produced drug-induced liver injury in a phase 1 breast-cancer trial and in case reports; FDA has warned that SARMs are associated with liver toxicity, heart attack and stroke risk
Aspiration hazard	No data available

- Selective androgen receptor modulator (SARM). No supplier SDS assigns a reproductive classification, but SARMs act on the androgen receptor, suppress gonadotropins and spermatogenesis in animal and human studies and are prohibited at all times under WADA class S1.2. PrymaLab therefore self-classifies the substance as Reproductive toxicity Category 2 (H361) by expert judgement.
- Identifier discrepancy between vendors (CAS 1208070-53-4 / C27H20ClN5O3 / 497.9 vs CAS 1333223-66-7 / C27H18ClN5O3 / 499.9); the vendor record for the lot governs.

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

RAD-150: No data available (ChemicalBook for RAD140). Parent RAD140: Cayman self-assesses water hazard class 1 (slightly hazardous for water). Lipophilic aromatic - potential for bioaccumulation; keep out of drains.

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: Reproductive toxicity (Category 2); Specific target organ toxicity, repeated exposure (Category 2).
TSCA (Toxic Substances Control Act)	RAD-150: not listed on the TSCA Inventory (supplied for research and development; 40 CFR 720.36); Microcrystalline cellulose: listed on the TSCA Inventory; Gelatin: 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.
Anti-doping (information only)	RAD-150: WADA class S1.
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. Concentrations of the active in the capsule contents are calculated for a nominal fill weight of 400 mg; the classification of the pure active substance is given in Section 11 for the case where capsule contents are handled as a powder.
Sources consulted	Cayman Chemical; ChemicalBook; TargetMol via CymitQuimica; Spectrum Chemical; Sigachi Industries; Parchem; Fisher Scientific / Acros Organics; Electron Microscopy Sciences.
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.