AOD-9604

Research material · Solid — lyophilized powder · CAS 221231-10-3 · for research purposes only

For research and laboratory use only (in vitro). Not for human or animal consumption or use. This product is not a medicinal product, dietary supplement, cosmetic, food or medical device.

SECTION 1 — Identification of the substance/mixture and of the company

1.1 Product identifier	AOD-9604
Synonyms	AOD 9604; AOD9604
CAS number	221231-10-3
Molecular formula	$C_{78}H_{123}N_{23}O_{23}S_2$
Amino-acid sequence	YLRIVQCRSVEGSCGF
1.2 Relevant identified uses	Laboratory reagent for scientific research and development (R&D) use in vitro by qualified research entities.
Uses advised against	Not for human or animal use. Not for food, medicinal, diagnostic, cosmetic, agricultural or household applications.
1.3 Supplier of the safety data sheet	K2B Enterprise sp. z o.o., ul. Kolejowa 61, 83-307 Kiełpino, Polska · KRS 0001222763 · NIP 5892109601 · REGON 544011815 · purepoint.pl · contact@purepoint.pl
1.4 Emergency telephone number	112 (EU general emergency number). Poison information centre competent for the place of use — available during working hours.

SECTION 2 — Hazards identification

2.1 Classification of the substance (Regulation (EC) No 1272/2008, CLP)

The substance is **not classified** as hazardous based on available data. No harmonized classification exists in Annex VI to CLP and no classifying entry was identified in the ECHA Classification & Labelling (C&L) Inventory. The toxicological properties are not fully characterised — **hazards cannot be excluded**. Assessment applied a weight-of-evidence approach (read-across within the chemical class) consistent with GHS/CLP.

Signal word: none GHS pictograms: none · Hazard statements (H): —

2.3 Other hazards

Handle as a potentially bioactive substance of unknown toxicity. Fine powder may cause mechanical irritation of the eyes and respiratory tract — avoid generating and inhaling dust. The substance does not meet PBT or vPvB criteria based on available data.

SECTION 3 — Composition / information on ingredients

Single-substance product.

Component	CAS No.	Formula	Mol. wt.	Concentration
AOD-9604	221231-10-3	$C_{78}H_{123}N_{23}O_{23}S_2$	1815.04 g/mol	>99% HPLC (HPLC, research grade)

No hazardous impurities present above classification thresholds. Residual synthesis reagents, solvents and counter-ions may be present at levels consistent with research-grade material. For the lot-specific impurity profile, see the Certificate of Analysis (COA).

SECTION 4 — First aid measures

Skin contact	Wash with soap and water. Remove contaminated clothing and wash before reuse. If irritation persists, seek medical advice.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. If irritation persists, seek medical advice.
Inhalation	Move the affected person to fresh air. If symptoms develop, seek medical advice.
Ingestion	Do not induce vomiting. Rinse mouth with water. Seek medical advice. Never give anything by mouth to an unconscious person.
Notes to physician	Treat symptomatically. No specific antidote known.

SECTION 5 — Firefighting measures

Extinguishing media: Appropriate to the surrounding fire — carbon dioxide (CO_2), dry chemical powder, foam or water spray.
Special hazards: Combustion may generate carbon oxides (CO, CO_2), nitrogen oxides (NO_x) and sulfur oxides (SO_x).
Protective equipment for firefighters: Self-contained breathing apparatus (SCBA) and full protective clothing.

SECTION 6 — Accidental release measures

Personal precautions: Avoid dust formation; ensure ventilation; use personal protective equipment per Section 8.
Environmental precautions: Do not allow to enter drains or watercourses.
Methods for cleaning up: Collect mechanically into closed, labelled containers; avoid raising dust; clean the surface. Dispose per Section 13.

SECTION 7 — Handling and storage

Handling: Handle as a potentially bioactive substance of unknown toxicity. Use in a well-ventilated area or under local exhaust. Avoid generating, inhaling and contacting dust with skin, eyes and clothing. Do not eat, drink or smoke while handling. Wash hands after work. Follow good laboratory hygiene practice.

Storage: Store in a tightly closed original container under: **2–8 °C, protect from light and moisture**. Protect from atmospheric moisture (hygroscopic material). Keep away from food. Access restricted to trained personnel. Do not infer a shelf-life other than that stated in the Certificate of Analysis.

Incompatible materials: Strong oxidizers (oxidation of methionine/cysteine/tryptophan), strong acids and bases, heavy-metal ions, reducing agents. Protect from moisture, oxygen, heat and light.

SECTION 8 — Exposure controls / personal protection

Occupational exposure limits (OEL): None established for this substance (no OEL/PEL/TLV/REL entry). Control exposure to the lowest level reasonably achievable (ALARA). In the absence of a substance-specific dust limit, apply the general limits for particulates not otherwise classified as a reference.

Engineering controls: Perform dust-generating operations (weighing, transfer, dissolution) under a laboratory fume hood or ventilated enclosure. Provide access to an eyewash station.

Respiratory protection	Where engineering controls do not eliminate dust — FFP3 filtering half-mask (EN 149) or P3 filter (EN 143).
Hand protection	Chemical-resistant gloves to EN ISO 374 (e.g. nitrile ≥0.11 mm). Replace if damaged.
Eye / face protection	Tightly fitting safety goggles (EN 166). For larger quantities — a face shield.
Body protection	Long-sleeved laboratory coat, closed footwear. Wash contaminated clothing before reuse.

SECTION 9 — Physical and chemical properties

Physical state	Solid — lyophilized powder

Colour / appearance	White to off-white
Odour	Odourless or no characteristic odour
Solubility	Soluble in water and DMSO
Molecular weight	1815.04 g/mol
Melting / boiling / flash point	Not determined
pH / vapour pressure / density	Not determined
Partition coefficient (log Kow)	No data
Stability in solution	Store reconstituted solutions refrigerated or frozen, protected from light; use within the stability window stated in the COA.

SECTION 10 — Stability and reactivity

Chemical stability: Stable under normal conditions of use, storage and transport.
Conditions to avoid: Excessive heat, light, moisture, ignition sources.
Incompatible materials: Strong oxidizers (oxidation of methionine/cysteine/tryptophan), strong acids and bases, heavy-metal ions, reducing agents. Protect from moisture, oxygen, heat and light.
Hazardous decomposition products: Combustion or thermal decomposition may generate carbon oxides (CO, CO_2), nitrogen oxides (NO_x) and sulfur oxides (SO_x).
Hazardous polymerization: Will not occur.

SECTION 11 — Toxicological information

The toxicological properties of the substance are **not fully characterised**. "Not classified" entries mean "not classified based on currently available data" — hazards cannot be excluded. Classifications applied a weight-of-evidence (read-across) approach consistent with GHS/CLP.

- **Acute toxicity:** no authoritative LD50/LC50 values (oral/dermal/inhalation). Not classified; minimise exposure by all routes.
- **Skin/eye corrosion/irritation:** no validated studies (OECD TG 404/405/439/492). Not classified; fine powder may cause mechanical irritation — avoid contact.
- **Sensitisation:** no study data (OECD TG 429/442). Not classified; avoid repeated exposure.
- **Mutagenicity, carcinogenicity, reproductive toxicity:** the substance is not listed in Annex VI to CLP or by IARC/NTP. No studies meeting OECD guidelines. Not classified; hazards cannot be excluded — women who are pregnant or planning pregnancy should avoid occupational exposure.
- **Specific target organ toxicity (STOT) / aspiration hazard:** insufficient data. Not classified.

SECTION 12 — Ecological information

No substance-specific ecotoxicity data (fish, Daphnia, algae), persistence or bioaccumulation data are available. In the absence of data, adverse environmental effects cannot be fully excluded. Do not allow to enter surface water, drains or soil. The substance is not on the list of ozone-depleting substances.

SECTION 13 — Disposal considerations

Dispose of contents and container in accordance with local, national and EU regulations (Directive 2008/98/EC). Do not dispose to drains or watercourses. Use a licensed waste contractor. Assign the waste code according to the actual source and point of generation.

SECTION 14 — Transport information

ADR / RID / IMDG / IATA	Not regulated as dangerous goods based on the current classification.
UN number	Not applicable.

Transport classification follows the substance hazard classification; the consignor must independently verify the requirements for the specific shipment and carrier.

SECTION 15 — Regulatory information

REACH (EC 1907/2006): supplied solely for scientific research and development (SR&D) in quantities below 1 tonne per year per legal entity; the use may benefit from R&D exemptions (Art. 3(23), 26(3)) — the user verifies the applicable exemption pathway for their use. CLP (EC 1272/2008): see Section 2. The above reflects the substance being intended for R&D use only and is not a legal determination of regulatory status.

SECTION 16 — Other information

Document No.	SDS-PP-AOD9604-EN
Version / date	1.0 · 2026-07-02
Revision history	Initial issue. Document prepared in the 16-section format compliant with REACH Annex II / GHS.
Sources	PubChem (NCBI); ECHA C&L Inventory and Annex VI; REACH and CLP Regulations; weight-of-evidence assessment within the chemical class.
Prepared	Prepared in accordance with REACH Annex II and GHS. Independent review by a qualified chemical safety professional is recommended prior to use.

Abbreviations: CAS — Chemical Abstracts Service; GHS — Globally Harmonized System; REACH — Reg. (EC) 1907/2006; CLP — Reg. (EC) 1272/2008; OEL — occupational exposure limit; PBT/vPvB — persistent/bioaccumulative/toxic; COA — Certificate of Analysis; LD50/LC50 — median lethal dose/concentration; OECD TG — OECD Test Guidelines; ALARA — as low as reasonably achievable.

DISCLAIMER: The information in this safety data sheet is compiled from the sources cited, supplemented by a weight-of-evidence assessment based on the chemical class and literature. It is believed 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 issuer has not independently tested the substance described. The user bears sole responsibility for verifying all information, ensuring safe handling and compliance with applicable regulations. This sheet does not replace an independent chemical safety assessment by a qualified professional. Product for research and development use only — not for human or animal consumption or use.