# SAFETY DATA SHEET

## MOTS-c - 20 mg

**MOTS-C 20**

| Issue date | Revision | Format |
|---|---|---|
| 11 November 2026 | 1.0 | Lyophilized research material |

**IMPORTANT LIMITATION**

Generic draft based on the stated chemical identity and nominal vial fill. Supplier identity, emergency telephone, lot-specific purity, excipients, salt form, analytical results and local regulatory determinations must be added or verified before commercial issue. This document does not replace the manufacturer or supplier SDS.

## 1. Identification

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| **Product identifier** | MOTS-c - 20 mg |
| **Product type** | Synthetic 16-amino-acid mitochondrial-derived peptide |
| **Recommended use** | Qualified laboratory research and analytical work only |
| **Restrictions on use** | Not for human or veterinary administration; not for food, cosmetic, household, diagnostic or therapeutic use |
| **Supplier / emergency contact** | Use the supplier details and emergency number shown on the product label or purchase documentation; not provided for this generic draft |

## 2. Hazard identification

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| **GHS status** | No definitive mixture or substance classification assigned in this generic sheet because complete test and formulation data are unavailable |
| **Signal word / pictograms** | Not assigned |
| **Primary concerns** | Bioactive material; unknown acute and chronic toxicity; dust may irritate eyes, skin and respiratory tract |

**PRECAUTION**

Treat as potentially hazardous until supplier-specific classification is available. Avoid inhalation, ingestion, injection, mucous-membrane contact and environmental release. Use appropriate engineering controls and PPE.

## 3. Composition / information on ingredients

| Component | CAS number | Nominal vial amount |
|---|---|---|
| MOTS-c | 1627580-64-6 | 20 mg nominal fill |

Nominal fill is not a purity statement. Lyophilized products may contain counterions, water, bulking agents or residual synthesis materials. Use the batch COA and supplier SDS for exact composition.

## 4. First-aid measures

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| **Inhalation** | Move to fresh air. Keep at rest. Obtain medical attention if symptoms occur or exposure was significant. |
| **Skin contact** | Remove contaminated clothing. Wash thoroughly with soap and water. Seek medical advice for persistent irritation or suspected systemic exposure. |
| **Eye contact** | Rinse cautiously with clean water for at least 15 minutes. Remove contact lenses if easy to do. Obtain medical attention if irritation persists. |
| **Ingestion** | Rinse mouth. Do not induce vomiting unless directed by medical personnel. Contact a poison center or physician promptly. |
| **Needlestick / injection** | Treat as an urgent medical exposure. Wash the site, do not squeeze aggressively, and obtain immediate medical evaluation with the label and SDS. |

Most important symptoms/effects: Irritation is possible. Delayed or systemic pharmacologic effects cannot be excluded. This research peptide lacks a complete human toxicology and occupational exposure data set.

## 5. Fire-fighting measures

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| **Suitable extinguishing media** | Water spray, alcohol-resistant foam, dry chemical or carbon dioxide, selected for the surrounding fire. |
| **Specific hazards** | Carbon oxides and nitrogen oxides; other irritating or toxic fumes may form. Sulfur oxides may also form. |
| **Protective equipment** | Firefighters should wear positive-pressure self-contained breathing apparatus and full protective clothing. |

## 6. Accidental release measures

- Restrict access and ventilate the area. Avoid generating or breathing dust.
- Wear gloves, protective clothing and eye protection; use respiratory protection when dust cannot be controlled.
- Collect with a HEPA-filtered method or carefully dampen and absorb. Do not dry sweep or use compressed air.
- Place waste in a sealed, labeled container. Prevent release to drains, soil and surface water.

## 7. Handling and storage

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| **Safe handling** | Use in a controlled laboratory area. Avoid aerosols and dust. Do not eat, drink or apply cosmetics in the work area. Wash hands after handling. |
| **Storage** | Store tightly closed, dry and protected from light. Unless the supplier specifies otherwise, lyophilized research peptides are commonly stored frozen (about -20 C); NAD+ may be stored cold and dry per supplier instructions. |
| **Incompatibilities** | Strong oxidizers, heat, moisture and conditions that promote peptide or nucleotide degradation. |
| **Inventory control** | Retain the label, lot number, supplier SDS and COA. Record receipt, opening and storage conditions. |

Reconstituted-solution stability is formulation- and buffer-dependent and is not established by this generic sheet. Follow validated laboratory procedures and supplier documentation.

## 8. Exposure controls / personal protection

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| **Occupational limits** | No OSHA PEL, ACGIH TLV or compound-specific occupational exposure limit identified for the stated research material. |
| **Engineering controls** | Use local exhaust ventilation, a ventilated enclosure or other containment for weighing and transfers that may generate dust. |
| **Eye / face protection** | Safety glasses with side shields; use chemical splash goggles when splash or aerosol exposure is possible. |
| **Skin protection** | Disposable nitrile gloves and laboratory coat. Change gloves after contamination; evaluate double-gloving for potent-compound work. |
| **Respiratory protection** | Use a fit-tested, approved particulate respirator when risk assessment shows ventilation is inadequate. Follow the respiratory-protection program. |

## 9. Physical and chemical properties

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| **Physical state** | Lyophilized solid / powder |
| **Appearance** | White to off-white lyophilized powder |
| **Odor** | Expected to be odorless or nearly odorless; no test data supplied |
| **pH / melting point / boiling point** | Not determined for the supplied vial |
| **Solubility** | Formulation-dependent; many peptides and NAD+ salts are water soluble, but no quantitative value is assigned here |
| **Flash point / flammability** | Not determined; small quantity of organic solid may decompose or burn in a fire |

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|---|---|
| **Chemical identity** | MOTS-c |
| **CAS number** | 1627580-64-6 |
| **Molecular formula** | C101H152N28O22S2 |
| **Molecular weight** | about 2174.6 g/mol |

## 10. Stability and reactivity

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| **Reactivity** | No hazardous polymerization expected under normal laboratory storage; compound-specific reactivity data are limited. |
| **Chemical stability** | Expected to be stable when sealed and stored as directed by the supplier. Heat, light, moisture and repeated temperature cycling may accelerate degradation. |
| **Conditions to avoid** | Heat, direct light, moisture, aerosol generation, strong acids/bases outside validated methods and incompatible oxidizers. |
| **Hazardous decomposition products** | Carbon oxides and nitrogen oxides; other irritating or toxic fumes may form. Sulfur oxides may also form. |

## 11. Toxicological information

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| **Likely routes** | Inhalation of dust, eye or skin contact, ingestion, and accidental injection |
| **Acute toxicity** | Reliable LD50/LC50 data for the supplied research material are not available |
| **Irritation / sensitization** | Not adequately tested; irritation or sensitization cannot be excluded |
| **Chronic / reproductive / carcinogenic effects** | Insufficient data to classify the supplied material. No safe occupational dose is established. |
| **Target-organ / systemic effects** | Bioactivity is expected; unintended systemic effects may occur depending on identity, dose and route. |

**MEDICAL NOTE** This research peptide lacks a complete human toxicology and occupational exposure data set.

## 12. Ecological information

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|---|---|
| **Ecotoxicity** | No adequate product-specific aquatic or terrestrial toxicity data are available. |
| **Persistence / degradability** | Peptides may undergo biological and chemical degradation; rate and products depend on conditions. NAD+ is also degradable, but product-specific data are absent. |
| **Mobility / bioaccumulation** | Not determined. |
| **Environmental precautions** | Prevent release to drains, soil and surface water. |

## 13. Disposal considerations

- Dispose of contents, contaminated absorbents and PPE through an authorized laboratory-chemical waste route.
- Do not discard to sink, sewer or general trash unless a documented local waste determination permits it.
- Empty containers may retain residue. Deface labels only after decontamination or authorized disposal.
- Follow applicable federal, state/provincial and local requirements.

## 14. Transport information

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| **UN number / proper shipping name** | Not assigned in this generic assessment |
| **Transport hazard class / packing group** | Not assigned |
| **Marine pollutant** | Not determined |
| **Special precautions** | Protect from heat, moisture, breakage and unauthorized access. Verify the actual formulation and current carrier rules before shipment. |

The conclusion above is based on the stated small-quantity research material and incomplete formulation data. A supplier-specific classification may differ.

## 15. Regulatory information

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| **OSHA Hazard Communication** | Classification cannot be finalized without supplier and mixture data. Treat as a chemical of unknown toxicity. |
| **Research-use status** | This sheet describes research material, not a finished pharmaceutical, food, cosmetic or medical device. |
| **Inventory / reporting** | CAS identity and reporting thresholds must be evaluated for the actual salt, counterion, formulation, quantity and jurisdiction. |

## 16. Other information

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| **Revision** | 1.0 - initial redesigned generic SDS draft |
| **Identity notes** | Human occupational exposure limits and a complete toxicology profile have not been established. |
| **Reference basis** | PubChem CID 146675088: MOTS-c; supplier batch COA/SDS; OSHA Hazard Communication Standard; UN Globally Harmonized System principles. |
| **Disclaimer** | Information is compiled in good faith for laboratory risk communication. Because manufacturer, formulation, purity and test data were not supplied, the user must verify suitability and compliance before reliance or distribution. |

**RESEARCH USE ONLY** Not for human or veterinary administration. Not for therapeutic, diagnostic, food, cosmetic or household use. Handle only by trained personnel under an approved laboratory risk assessment.