

# SAFETY DATA SHEET

according to the Hazard Communication Standard, 29 CFR 1910.1200 (OSHA HazCom 2012, GHS)

Version 1.0  
Revision date: 30 September 2026  
Print date: 30 September 2026

Product name: **NAD+**

SDS number: SDS-AVX-NAD

Product form: Substance, lyophilized powder

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

|                   |                                                                                           |
|-------------------|-------------------------------------------------------------------------------------------|
| Product name      | <b>NAD+</b>                                                                               |
| Synonyms          | Nicotinamide adenine dinucleotide (oxidized form); beta-NAD; Diphosphopyridine nucleotide |
| CAS No.           | 53-84-9                                                                                   |
| Molecular formula | C <sub>21</sub> H <sub>27</sub> N <sub>7</sub> O <sub>14</sub> P <sub>2</sub>             |
| Molecular weight  | 663.4 g/mol                                                                               |
| Catalog page      | averixlabs.com/product/nad/                                                               |

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

|                      |                                                                                                                                                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Identified uses      | Laboratory chemical for research and development. For in-vitro research use only.                                                                 |
| Uses advised against | Not for human or animal use. Not for diagnostic, therapeutic or veterinary use. Not a drug, dietary supplement, food or cosmetic. Not for resale. |

### 1.3 Details of the supplier of the safety data sheet

|           |                                                                                        |
|-----------|----------------------------------------------------------------------------------------|
| Company   | Averix LLC, trading as Averix Labs                                                     |
| Address   | 8101 College Blvd Ste 130, PMB 259286, Overland Park, Kansas 66210-2793, United States |
| Telephone | +1 785-755-2055                                                                        |
| E-mail    | contact@averixlabs.com                                                                 |
| Website   | averixlabs.com                                                                         |

### 1.4 Emergency telephone number

|                     |                                                           |
|---------------------|-----------------------------------------------------------|
| Emergency phone     | +1 785-755-2055 (Monday to Friday, 9:00 to 17:00 Central) |
| Poison Control (US) | 1-800-222-1222 (24 hours)                                 |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**GHS classification in accordance with 29 CFR 1910.1200:** Not a hazardous substance or mixture according to the criteria of the Hazard Communication Standard, on the basis of the available data.

### 2.2 GHS label elements, including precautionary statements

|                              |                                                                                                                                                                        |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pictogram                    | <div>None</div>                                                                                                                                                        |
| Signal word                  | None                                                                                                                                                                   |
| Hazard statement(s)          | None                                                                                                                                                                   |
| Precautionary statement(s)   | None required. Recommended: P261 Avoid breathing dust. P280 Wear protective gloves, protective clothing and eye protection. P264 Wash hands thoroughly after handling. |
| Supplemental label statement | "For research use only. Not for human or animal use."                                                                                                                  |

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None known. Fine lyophilized powder may form dust when handled dry. The compound is biologically active in living systems and its effects on exposure are not characterized; treat any unintended exposure (ingestion, inhalation, injection, mucous membrane contact) as exposure to a substance of unknown toxicity.

**SECTION 3: Composition/information on ingredients****3.1 Substances**

| Component                                                            | CAS No. | Molecular formula                                                             | Mol. weight (g/mol) | Concentration                                              | GHS classification |
|----------------------------------------------------------------------|---------|-------------------------------------------------------------------------------|---------------------|------------------------------------------------------------|--------------------|
| NAD <sup>+</sup> (Nicotinamide adenine dinucleotide (oxidized form)) | 53-84-9 | C <sub>21</sub> H <sub>27</sub> N <sub>7</sub> O <sub>14</sub> P <sub>2</sub> | 663.4               | Purity as stated on the lot certificate of analysis (HPLC) | Not classified     |

Other components: residual moisture within certificate limits. No other ingredients.

**3.2 Mixtures**

Not applicable.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

|                         |                                                                                                                                                                 |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General advice          | Show this safety data sheet to the doctor in attendance. Move out of the dangerous area.                                                                        |
| If inhaled              | Move the person into fresh air. If not breathing, give artificial respiration. Consult a physician if symptoms occur.                                           |
| In case of skin contact | Wash off with soap and plenty of water. Remove contaminated clothing. Consult a physician if irritation develops.                                               |
| In case of eye contact  | Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Consult a physician if irritation persists. |
| If swallowed            | Rinse mouth with water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Consult a physician.                                     |
| Accidental injection    | Treat as exposure to a substance of unknown effect. Seek medical attention promptly and show this data sheet.                                                   |

**4.2 Most important symptoms and effects, both acute and delayed**

No data available. The most important known symptoms and effects are described in Section 2.2 and Section 11.

**4.3 Indication of any immediate medical attention and special treatment needed**

Treat symptomatically. No specific antidote is known.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

|                                |                                                                      |
|--------------------------------|----------------------------------------------------------------------|
| Suitable extinguishing media   | Water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| Unsuitable extinguishing media | None known.                                                          |

**5.2 Special hazards arising from the substance or mixture**

Not flammable. Hazardous combustion products: carbon oxides, nitrogen oxides (NO<sub>x</sub>).

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information**

No data available.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment (Section 8). Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas if necessary.

**6.2 Environmental precautions**

Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up**

Cover dry spill with a damp paper towel to prevent dust, then pick up and arrange disposal. Sweep up and shovel. Keep in suitable, closed containers for disposal. Wipe the surface with water and detergent.

**6.4 Reference to other sections**

For disposal see Section 13.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols; weigh in a ventilated enclosure where practical. Provide appropriate exhaust ventilation at places where dust is formed. Wash hands after handling. Do not eat, drink or smoke in the handling area. Reconstitute only with an appropriate sterile diluent for laboratory use. For precautions see Section 2.2.

**7.2 Conditions for safe storage, including any incompatibilities**

|                         |                                                                                                                                                                                                                                        |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Storage conditions      | Keep container tightly closed in a dry place, protected from light. Recommended: 2 to 8 C for short-term storage; -20 C or below for long-term storage. Stable at ambient temperature for the duration of shipping and short handling. |
| Reconstituted solutions | Store refrigerated (2 to 8 C); prepare fresh where possible; avoid repeated freeze-thaw.                                                                                                                                               |
| Storage class           | Non-combustible solids (TRGS 510 class 13).                                                                                                                                                                                            |
| Incompatible materials  | Strong oxidizing agents, strong acids and bases.                                                                                                                                                                                       |

**7.3 Specific end use(s)**

Apart from the uses in Section 1.2 no other specific uses are stipulated.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters**

| Component | CAS No. | Value | Control parameter                                                           | Basis |
|-----------|---------|-------|-----------------------------------------------------------------------------|-------|
| NAD+      | 53-84-9 | None  | No occupational exposure limit established (OSHA PEL, ACGIH TLV, NIOSH REL) |       |

**8.2 Exposure controls**

|                                   |                                                                                                                                                                                                                                                                           |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Appropriate engineering controls  | Handle in accordance with good industrial hygiene and safety practice. General laboratory ventilation; use a ventilated enclosure or fume hood when handling the dry powder in quantities that may generate dust. Wash hands before breaks and at the end of the workday. |
| Eye/face protection               | Safety glasses with side-shields conforming to ANSI Z87.1 or EN 166.                                                                                                                                                                                                      |
| Skin protection                   | Handle with gloves. Nitrile rubber gloves inspected before use; use proper glove removal technique. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practice. Laboratory coat.                                            |
| Respiratory protection            | Not required under normal handling. Where dust is generated outside a ventilated enclosure, use a NIOSH-approved N95 particulate respirator (or EN 149 FFP2).                                                                                                             |
| Control of environmental exposure | Do not let product enter drains.                                                                                                                                                                                                                                          |

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| Property                                        | Value                                                                    |
|-------------------------------------------------|--------------------------------------------------------------------------|
| a) Appearance                                   | Form: lyophilized powder. Color: white to off-white.                     |
| b) Odor                                         | Odorless                                                                 |
| c) Odor threshold                               | No data available                                                        |
| d) pH                                           | Not applicable (solid); reconstituted aqueous solutions are near neutral |
| e) Melting point/freezing point                 | No data available; peptides decompose before melting                     |
| f) Initial boiling point and boiling range      | Not applicable                                                           |
| g) Flash point                                  | Not applicable                                                           |
| h) Evaporation rate                             | Not applicable                                                           |
| i) Flammability (solid, gas)                    | Not flammable                                                            |
| j) Upper/lower flammability or explosive limits | Not applicable                                                           |
| k) Vapor pressure                               | Not applicable                                                           |
| l) Vapor density                                | Not applicable                                                           |
| m) Relative density                             | No data available                                                        |
| n) Water solubility                             | Soluble                                                                  |
| o) Partition coefficient: n-octanol/water       | No data available                                                        |
| p) Auto-ignition temperature                    | No data available                                                        |
| q) Decomposition temperature                    | No data available                                                        |
| r) Viscosity                                    | Not applicable                                                           |
| s) Explosive properties                         | Not explosive                                                            |
| t) Oxidizing properties                         | None                                                                     |

### 9.2 Other safety information

Molecular weight: 663.4 g/mol. No further data available.

## SECTION 10: Stability and reactivity

|                                         |                                                                                                                                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 10.1 Reactivity                         | No data available. No hazardous reactions known under normal laboratory conditions.                                                             |
| 10.2 Chemical stability                 | Stable under recommended storage conditions (Section 7.2). Solutions are less stable than the lyophilized solid.                                |
| 10.3 Possibility of hazardous reactions | No data available.                                                                                                                              |
| 10.4 Conditions to avoid                | Heat, prolonged light exposure, moisture ingress into the sealed vial, repeated freeze-thaw of solutions.                                       |
| 10.5 Incompatible materials             | Strong oxidizing agents, strong acids, strong bases.                                                                                            |
| 10.6 Hazardous decomposition products   | Hazardous decomposition products formed under fire conditions: carbon oxides, nitrogen oxides. Other decomposition products: no data available. |

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

|                                   |                                                                                                                                                                                                    |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Acute toxicity                    | No data available (oral, dermal, inhalation).                                                                                                                                                      |
| Skin corrosion/irritation         | No data available.                                                                                                                                                                                 |
| Serious eye damage/eye irritation | No data available.                                                                                                                                                                                 |
| Respiratory or skin sensitization | No data available.                                                                                                                                                                                 |
| Germ cell mutagenicity            | No data available.                                                                                                                                                                                 |
| Carcinogenicity                   | IARC: no component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC. NTP: not listed. OSHA: not listed. |

|                                                   |                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reproductive toxicity                             | No data available.                                                                                                                                                                                                                                                                                                        |
| Specific target organ toxicity, single exposure   | No data available.                                                                                                                                                                                                                                                                                                        |
| Specific target organ toxicity, repeated exposure | No data available.                                                                                                                                                                                                                                                                                                        |
| Aspiration hazard                                 | No data available.                                                                                                                                                                                                                                                                                                        |
| Additional information                            | The product is a research compound with biological activity in living systems that is the subject of research and is not characterized for the purpose of this data sheet. RTECS: not available. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. |

## SECTION 12: Ecological information

|                                         |                                                                                |
|-----------------------------------------|--------------------------------------------------------------------------------|
| 12.1 Toxicity                           | No data available.                                                             |
| 12.2 Persistence and degradability      | No data available.                                                             |
| 12.3 Bioaccumulative potential          | Not expected to bioaccumulate; no data available.                              |
| 12.4 Mobility in soil                   | No data available.                                                             |
| 12.5 Results of PBT and vPvB assessment | PBT/vPvB assessment not available; chemical safety assessment not carried out. |
| 12.6 Other adverse effects              | No data available.                                                             |

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

|                        |                                                                                                                                                                                                                                                                                                                      |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product                | Offer surplus and non-recyclable solutions to a licensed disposal company. Dispose of in accordance with federal, state and local regulations. Do not discharge to drains. Not a listed hazardous waste under 40 CFR 261 as supplied; the generator is responsible for waste determination at the point of disposal. |
| Contaminated packaging | Dispose of as unused product. Empty vials may be rinsed and handled as laboratory glass.                                                                                                                                                                                                                             |

## SECTION 14: Transport information

|                                   | DOT (US, 49 CFR)                                                    | IMDG                | IATA                |
|-----------------------------------|---------------------------------------------------------------------|---------------------|---------------------|
| 14.1 UN number                    | Not dangerous goods                                                 | Not dangerous goods | Not dangerous goods |
| 14.2 UN proper shipping name      | Not regulated                                                       | Not regulated       | Not regulated       |
| 14.3 Transport hazard class(es)   | None                                                                | None                | None                |
| 14.4 Packing group                | None                                                                | None                | None                |
| 14.5 Environmental hazards        | No                                                                  | No                  | No                  |
| 14.6 Special precautions for user | Ships at ambient temperature in a sealed vial in a cushioned carton |                     |                     |

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: not applicable.

## SECTION 15: Regulatory information

|                      |                                                                                                                                                                                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SARA 302 Components  | No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.                                                                           |
| SARA 313 Components  | This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313. |
| SARA 311/312 Hazards | No SARA hazards.                                                                                                                                                                  |
| CERCLA               | Not listed.                                                                                                                                                                       |

|                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Massachusetts, New Jersey, Pennsylvania Right to Know California Proposition 65 | Not listed.                                                                                                                                                                                                                                                                                                                                                                      |
| TSCA                                                                            | This product does not contain any chemicals known to the State of California to cause cancer, birth defects or any other reproductive harm, to the knowledge of the supplier.<br>Research and development substance supplied in small quantities solely for research purposes (40 CFR 720.36). Not otherwise listed on the TSCA inventory. NAD+ is listed on the TSCA inventory. |
| Controlled substances                                                           | Not a controlled substance under 21 U.S.C. 812. Not a DEA List I or List II chemical (21 CFR 1310.02).                                                                                                                                                                                                                                                                           |
| Drug status                                                                     | Research chemical. Not an approved drug. Not for human or animal use.                                                                                                                                                                                                                                                                                                            |

## SECTION 16: Other information

### Full text of H-Statements referred to under Sections 2 and 3

None.

### Abbreviations and acronyms

ACGIH: American Conference of Governmental Industrial Hygienists. CAS: Chemical Abstracts Service. GHS: Globally Harmonized System of Classification and Labelling of Chemicals. IARC: International Agency for Research on Cancer. IATA: International Air Transport Association. IMDG: International Maritime Dangerous Goods Code. NIOSH: National Institute for Occupational Safety and Health. NTP: National Toxicology Program. OSHA: Occupational Safety and Health Administration. PBT: persistent, bioaccumulative and toxic. PEL: permissible exposure limit. REL: recommended exposure limit. RTECS: Registry of Toxic Effects of Chemical Substances. SARA: Superfund Amendments and Reauthorization Act. TLV: threshold limit value. TSCA: Toxic Substances Control Act. vPvB: very persistent and very bioaccumulative.

### Revision history

Version 1.0, 30 September 2026: first issue. Prepared by Averix Labs from the manufacturer's certificate of analysis and the published properties of the compound.

### Further information

The lot-specific certificate of analysis for this product is published at [averixlabs.com/coa/](https://averixlabs.com/coa/) and can be verified at the testing laboratory (Horizon Analytical).

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Averix LLC shall not be held liable for any damage resulting from handling or from contact with the above product. This product is supplied for laboratory research use only and is not for human or animal use.