

Safety Data Sheet



1. Identification

Product Identifier	β-Nicotinamide Adenine Dinucleotide (NAD ⁺)
Other means of identification	
Internal item number	82393-0509
CAS number	53-84-9
Chemical name	[[[(2R,3S,4R,5R)-5-(6-aminopurin-9-yl)-3,4-dihydroxyoxolan-2-yl]methoxy-hydroxyphosphoryl] [(2R,3S,4R,5R)-5-(3-carbamoylpyridin-1-ium-1-yl)-3,4-dihydroxyoxolan-2-yl]methyl hydrogen phosphate
Relevant use and restrictions:	No further information available.
Application of substance:	Active pharmaceutical ingredient.
Manufacturer/Supplier information	
Company name	Pharma Source Direct
Address	8591 Prairie Trail Drive, Ste C-600 Englewood, CO 80112
Website	www.pharmasd.com
Emergency phone number	Infotrac: 1-800-535-5053

2. Hazard(s) Identification

Physical hazards	Not classified
Health hazards	Not classified
Environmental hazards	Not classified
OSHA defined hazards	Not classified
Label elements	None

Hazard Symbol	None
Signal word	None
Hazard statement	Not available
Precautionary statement	
Prevention	Not available
Response	Not available
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/ international regulations.
Hazards not otherwise classified (HNOC)	None known
Supplemental information	Pharmacologically active material.

3. Composition/Information on Ingredients

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Substance

Chemical name	Common name and synonyms	CAS number	%
β -Nicotinamide Adenine Dinucleotide	NAD+	53-84-9	100

4. First-aid Measures

Inhalation	Remove to fresh air. Get medical attention immediately.
Skin contact	Wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing and shoes thoroughly before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes lifting lower and upper eyelids occasionally. Get medical attention immediately.
Ingestion	If swallowed, INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Most important symptoms/effects, acute and delayed	Not available.
Indication of immediate medical attention and special treatment needed	Not available.
General Information	Remove from exposure. Remove contaminated clothing. For treatment advice, seek guidance from an occupational health physician or other licensed health-care provider familiar with workplace chemical exposures. In the United States, the national poison control center phone number is 1-800-222-1222. If person is not breathing, give artificial respiration. If breathing is difficult, give oxygen if available. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention.

5. Fire-fighting Measures

Suitable extinguishing media	Use water spray, dry chemical, carbon dioxide, or chemical foam.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	Not available.
Special protective equipment and precautions for firefighters	As in any fire, wear a self-contained breathing apparatus in pressure-demand, and full protective wear.
Fire fighting equipment/instructions	As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental Release Measures

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Personal precautions, protective equipment and emergency procedures	Use proper personal protective equipment as indicated in section-8.
Methods and materials for containment and cleaning up	Ventilate area of spill. Isolate hazard area. Keep away unnecessary and unprotected personnel from entering. Flush with water. Use wet mop or vacuum to pick up spilled product. Dispose the collected powder and washings as per local laws.
Environmental precautions	Not available

7. Handling and Storage

Precautions for safe handling	Avoid breathing powder, vapor, mist, or gas. Avoid contact with skin and eyes.
Conditions for safe storage, including any incompatibilities	Preserve in airtight container and store at 2-8°C.

8. Exposure Controls & Personal Protection

Occupational exposure limits	Not available
Exposure limit values	Not available
Biological limit values	Not available
Appropriate engineering controls	Facilities storing or utilizing this material should be equipped with an eye wash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations.
Skin protection	
Hand protection	Wear appropriate protective gloves to prevent skin exposure.
Other	Wear appropriate protective clothing to prevent skin exposure.
Respiratory protection	Follow the OSHA respirator regulations.
Thermal hazards	Not available
General hygiene considerations	Not available

9. Physical and Chemical Properties

Appearance	Appearance descriptions are general information and not specific to any lot.
Physical state	Solid
Form	Powder
Color	White
Odor	Not available
Odor threshold	Not available.
pH	Not available

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Melting point/freezing point	Not available
Initial boiling point and boiling range	Not available
Flash point	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Upper/lower flammability or explosive limits	Not available
Vapor pressure	Not available
Vapor density	Not available
Relative density	Not available
Solubility(ies)	
Solubility (water)	Not available
Solubility (other)	Not available
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Chemical family	Not available
Dust explosion properties	Not available
Molecular formula	C ₂₁ H ₂₇ N ₇ O ₁₄ P ₂
Molecular weight	663.4
pH in aqueous solution	Not available

10. Stability and Reactivity

Reactivity	Not available
Chemical stability	Stable at 2-8°C in closed containers
Possibility of hazardous reactions	Not available
Conditions to avoid	Not available
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	Hydrogen bromide, Nitrogen oxides, Carbon monoxide
Hazardous polymerization	Has not been reported

11. Toxicological Information

Information on likely routes of exposure

Inhalation	Knowledge about health hazard is incomplete.
Skin contact	Knowledge about health hazard is incomplete.
Eye contact	Causes irritation if contact is made with eyes
Ingestion	Harmful if swallowed in large amounts

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Symptoms related to the physical, chemical, and toxicological characteristics	Knowledge about health hazard is incomplete.
Information on toxicological effects	Knowledge about health hazard is incomplete.
Skin corrosion/irritation	Knowledge about health hazard is incomplete.
Serious eye damage/eye irritation	Knowledge about health hazard is incomplete.
Respiratory or skin sensitization	
Respiratory sensitization	Knowledge about health hazard is incomplete.
Skin sensitization	Knowledge about health hazard is incomplete.
Germ cell mutagenicity	Knowledge about health hazard is incomplete.
Carcinogenicity	Knowledge about health hazard is incomplete.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Not available	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	
Not available	
US. National Toxicology Program (NTP) Report on Carcinogens	
Not available	
Reproductive toxicity	Knowledge about health hazard is incomplete.
Specific target organ toxicity - single exposure	Knowledge about health hazard is incomplete.
Specific target organ toxicity - repeated exposure	Knowledge about health hazard is incomplete.
Aspiration hazard	Knowledge about health hazard is incomplete.
Further information	Not available

12. Ecological Information

Ecotoxicity	Not available
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available
Mobility in soil	No data available
Other adverse effects	Not available

13. Disposal Considerations

Disposal instructions	Not available
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner. Dispose of in accordance with local regulations.

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Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

DOT	Not regulated
IATA	Not regulated
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable
General information	It is the shipper's responsibility to determine the correct transport classification at the time of shipment.

15. Regulatory Information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Not available

SARA 302 Extremely hazardous substance Not listed

SARA 311/312 Hazardous chemical Not regulated

SARA 313 (TRI reporting) Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated

Drug Enforcement Administration (DEA) (21 CFR 1308.11-15) Not scheduled

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16. Other Information

Disclaimer

The information in this SDS has been compiled from sources considered dependable, but has not been independently verified. The company cannot guarantee the accuracy of information herein, and the statements contained should not be considered an official expression. The company will not assume liability for any loss, damage, and/or expense resulting from the use and/or misuse of this product in regards to handling, storage, and/or disposal.

Issue date

30 Sep 2025

Version

2.0

Issued by

Pharma Source Direct – Quality Assurance