SAFETY DATA SHEET

Revision Date 04-May-2026

Revision Number 1

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY UNDERTAKING

1.1 Product Identification

Product Description:	NAD+
Cat No:	PEP0112
CAS No:	53-84-9
Molecular Formula:	C21H27N7O14P2

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

Recommended Use:	Laboratory chemicals.
Uses advised against:	No Information available

1.3 Details of the supplier of the safety data sheet

Company:	Verified Vials Unit 1, Belmont Business Park 232-240 Belmont Road Belfast BT4 2AW
E-mail address:	support@verifiedvials.com

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SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

According to GB-CLP Regulations UK SI-2019/720 and UK SI 2020/1567 Physical hazards

CLP Classification:	Based on the available data; the classification criteria are not met.
Health Hazards:	Based on the available data; the classification criteria are not met.
Environmental Hazards:	Based on the available data; the classification criteria are not met.

2.2 Classification of the substance or mixture

None Required

2.3 Other Hazards

This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSTITION / INFORMATION ON INGREDIENTS

3.1 Substances

Component:	NAD+
CAS Number:	53-84-9
Weight:	<=100
CLP Classification:	N/A

** For full text of hazard statements: see section 16

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SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact: Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

Ingestion: Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Inhalation: Remove to fresh air. Get medical attention immediately if symptoms occur.

Self-Protection of the First Aider: No special precautions required

4.2 Most important symptoms and effects, both acute and delayed

None reasonably foreseeable

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician – Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

No information available.

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5.2 Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapours.

Hazardous Combustion Products
Carbon monoxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx).

5.3 Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required.
Avoid dust formation.

6.2 Environmental precautions

Should not be released into the environment.
See Section 12 for additional Ecological Information.

6.3 Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

6.4 Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

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SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Store in freezer.

Technical Rules for Hazardous Substances (TRGS) 510 Class 11

Storage Class (LGK) (Germany)

7.3 Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region-specific regulatory bodies.

Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

No information available

Predicted No Effect Concentration (PNEC)

No information available.

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8.2 Exposure controls

Engineering Measures
None under normal use conditions.

Personal protective equipment

Eye Protection
Wear safety glasses with side shields (or goggles) (European standard - EN 166)

Hand Protection
Protective gloves

Glove material:	Nitrile rubber, Neoprene, Natural rubber, PVC
Breakthrough time:	See manufacturers recommendations
Glove thickness:	N/A
EU standard:	EN 374
Glove comments:	Minimum Requirement

Skin and body protection
Long sleeved clothing.

Important Notes
Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

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Respiratory Protection:	No protective equipment is needed under normal use conditions.
Large scale/emergency use:	Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced **Recommended Filter type:** Particle filter
Small scale/Laboratory use:	Maintain adequate ventilation
Environmental exposure controls:	No information available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical State:	Solid Lyophilized	
Appearance:	White - Off-white	
Odor:	No information available	
Odor Threshold:	No data available	
Melting Point/Range:	No data available	
Softening Point:	No data available	
Boiling Point/Range:	No information available	
Flammability (liquid):	Not Applicable	
Flammability (solid, gas):	No information available	*Solid*
Explosion Limits:	No data available	
Flash Point:	No information available	
Autoignition:	Temperature No data available	
Decomposition:	Temperature No data available	
pH:	No information available	
Viscosity:	Not Applicable	*Solid*
Water Solubility:	No information available	
Solubility in other solvents:	No information available	
Partition Coefficient (n-octanol/water):	No data available	

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Vapor Pressure:	No data available	
Density / Specific Gravity:	No data available	
Bulk Density:	No data available	
Vapor Density:	Not Applicable	*Solid*
Particle characteristics:	No data available	

9.2 Other Information

Molecular Formula:	C21H27N7O14P2	
Molecular Weight:	No data available	
Evaporation Rate:	Not Applicable	*Solid*

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

None known, based on information available

10.2 Chemical stability

Stable under normal conditions

10.3 Possibility of hazardous reactions

Hazardous Polymerization:	No information available.
Hazardous Reactions:	None under normal processing.

10.4 Conditions to avoid

Incompatible products. Excess heat.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO2). Nitrogen oxides (NOx).

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SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/200

Product Information

(a) acute toxicity:	Oral:	No data available
	Dermal:	No data available
	Inhalation:	No data available
(b) skin corrosion/irritation:		No data available
(c) serious eye damage/irritation:		No data available
(d) respiratory or skin sensitization:	Respiratory:	No data available
	Skin:	No data available
(e) germ cell mutagenicity:		No data available
(f) carcinogenicity:		No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity:		No data available
(h) STOT-single exposure:		No data available
(i) STOT-repeated exposure:		No data available
	Target Organs:	No information available
(j) aspiration hazard:		Not applicable Solid
Symptoms / effects, both acute and delayed		No information available

11.2 Information on other hazards

Endocrine Disrupting Properties:	Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endo crine disruptors.

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SECTION 12: STABILITY AND REACTIVITY

12.1 Reactivity None known, based on information available

12.2 Toxicity

Ecotoxicity effects: Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

12.3 Persistence and degradability: No information available

12.4 Bio accumulative potential: No information available

12.5 Mobility in soil: No information available

12.6 Results of PBT and vPvB assessment: No data available for assessment.

12.7 Endocrine disrupting properties

Endocrine Disruptor Information: This product does not contain any known or suspected endocrine disruptors

12.8 Other adverse effects

Persistent Organic Pollutant: This product does not contain any known or suspected substance

Ozone Depletion Potential: This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from Residues/UnusedProducts: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

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Contaminated Packaging:	Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use empty containers.
European Waste Catalogue (EWC):	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Other Information:	Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: TRANSPORT INFORMATION

14.1 IMDG/IMO:	Not regulated
14.2 UN number:	Not regulated
14.3 UN proper shipping name	Not regulated
14.4 Transport hazard class(es):	Not regulated
14.5 Packing group:	Not regulated
14.6 Environmental hazards:	No hazards identified
14.7 Special precautions for user:	No special precautions required.
14.8 Maritime transport in bulk according to IMO:	Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

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Component	CAS Number	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
NAD+	53-84-9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Component	CAS Number	TSCA	TSCA Inventory notification Active-Inactive	DSL	NDSL	AICS	NZIoC	ENCS	PICCS
NAD+	53-84-9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Authorisation/Restrictions according to EU REACH

Component	CAS Number	REACH (1907/2006) Annex XIV - Substances Subject to Authorisation	REACH (1907/2006) Restrictions on Certain Dangerous Substances	REACH Regulation (EC1907/2006) article 59 Candidate List of Substances of Very High Concern (SVHC)
NAD+	53-84-9	N/A	N/A	N/A

Seveso III Directive (2012/18/EC)

Component	CAS Number	Seveso III Directive (2012/18/EC) Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) Qualifying Quantities for Safety Report Requirements
NAD+	53-84-9	N/A	N/A

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Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

National Regulations

UK

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.

WGK Classification

Water endangering class = 3 (self-classification)

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

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

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

WEL - Workplace Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists
DNEL - Derived No Effect Level
RPE - Respiratory Protective Equipment
LC50 - Lethal Concentration 50%

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japanese Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

TWA - Time Weighted Average
IARC - International Agency for Research on Cancer
Predicted No Effect Concentration (PNEC)
LD50 - Lethal Dose 50%
EC50 - Effective Concentration 50%

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NOEC - No Observed Effect Concentration

PBT - Persistent, Bio accumulative, Toxic

POW - Partition coefficient Octanol: Water

vPvB - very Persistent, very Bio accumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International A Transport Association

MARPOL - International Convention for the Prevention of Pollution Ships

ATE - Acute Toxicity Estimate

VOC - (Volatile Organic Compound)

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The informationvPvB - very Persistent, very Bio accumulative relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet