SAFETY DATA SHEET

Version: v1 Revision Date: 2024-01-22 Print Date: 2024-01-30

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

1.1 Product identifiers

| Product name | : β -Nicotinamide adenine dinucleotide phosphate |
|----------------|--|
| Product Number | : N303921 |
| Brand | : aladdin |
| CAS-No. | : 53-59-8 |
| | |

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

| Identified uses : Laboratory chemicals, Manufacture of substances |
|---|
|---|

1.3 Company

| Company | : ALADDIN SCIENTIFIC CORPORATION |
|----------------------|----------------------------------|
| Address | : 14078 Meridian Parkway, |
| Riverside, CA. 92518 | |
| Telephone | : +1 (833) 552-7181 |
| Fax | : no data available |
| | |

1.4 Emergency telephone number

| CHEMTREC®, Inside the USA | : 1-800-424-9300 |
|----------------------------|------------------|
| CHEMTREC®, Outside the USA | : |

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) CFR 1910.1200:Not classifiable

2.2 GHS Label elements, including precautionary statements

| Pictogram | |
|----------------------------|--|
| Signal word | Warning |
| Hazard statement(s) | |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |
| Precautionary statement(s) | |
| P261 | Avoid breathing dust/fume/gas/mist/vapors/spray. |
| | |

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| P264 | Wash hands [and] thoroughly after handling. |
|----------------|---|
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P302+P352 | IF ON SKIN: wash with plenty of water. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact |
| | lenses if present and easy to do - continue rinsing. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |
| P405 | Store locked up. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P501 | Dispose of contents/container to an approved waste disposal plant. |

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

SECTION 3: Composition/information on ingredients

3.1 Substances

| Synonyms Nucleotide;TPN;NADP;Tripho | : Coenzyme II;β-Triphosphopyridine | |
|--|------------------------------------|--|
| Formula | : C21H28N7017P3 | |
| Molecular weight | : 743.41 | |
| CAS No. | : 53-59-8 | |
| EC-NO. | : no data available | |
| | | |

| Component | Classification | Concentration |
|--|-------------------|---------------|
| β-Nicotinamide adenine dinucleotide phosphate | | |
| | no data available | 90% |

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice no data available

If inhaled

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

In case of skin contact

Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.

In case of eye contact

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Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

If swallowed

Get medical advice/attention if you feel unwell. Rinse mouth.

4.2 Most important symptoms and effects, both acute and delayed

no data available

4.3 Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Dry chemical, foam, water spray, carbon dioxide. Unsuitable extinguishing media no data available

5.2 Special hazards arising from the substance or mixture

These products include: Carbon oxides Nitrogen oxides Phosphates. Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume. Closed containers may explode from heat of a fire.

5.3 Advice for firefighters

Wear self-contained breathing apparatus if possible.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

6.2 Environmental precautions

Prevent product from entering drains.

6.3 Methods and materials for containment and cleaning up

Clean up the dust and collect it in a closed container, taking care not to disperse it. Adhered or aggregated materials shall be disposed of in a timely manner in accordance with local laws and regulations.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent dispersion of dust. Wash hands and face thoroughly after handling. Use a local exhaust if dust or aerosol will be generated. Avoid contact with skin, eyes and clothing. Conditions for safe storage, including any incompatibilities

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store in a freezer. Store away from incompatible materials such as oxidizing agents. Heat-sensitive

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

Follow safe industrial engineering/laboratory practices when handling any chemical. Install a closed system or local exhaust as possible so that workers should not be exposed directly. Also install safety shower and eye bath. Personal protective equipment

Eye/face protection

Safety glasses. A face-shield, if the situation requires.

Skin protection

Gloves must be checked before use. Please use proper methods to remove the gloves (do not touch the outer surface of the gloves), and avoid any skin parts contacting the product. After use, please handle the contaminated gloves carefully according to relevant laws and regulations and effective laboratory rules and procedures. Please clean and blow dry the protective gloves selected for your hands must meet the specifications given in regulation (EU) 2016 / 425 and the en 374 standard derived from it. Body Protection

Protective gloves.Protective clothing. Protective boots, if the situation requires.

Respiratory protection

Dust respirator. Follow local and national regulations.

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| a) Appearance | form: Crystal - Powder Solid color: White - Pale yellow |
|--------------------|---|
| b) Odour | no data available |
| c) Odour Threshold | no data available |

| d) pH | no data available |
|--|--|
| e) Melting point/freezing point | no data available |
| f) Initial boiling point and boiling range | no data available |
| g) Flash point | no data available |
| h) Evaporation rate | no data available |
| i) Flammability (solid, gas) | no data available |
| j) Upper/lower flammability or | |
| explosive limits | no data available |
| k) Vapour pressure | no data available |
| I) Vapour density | no data available |
| m) Relative density | no data available |
| n) Water solubility | Water:Soluble;Slightly Soluble:Ethanol In;Soluble:Ether, Ethyl acetate |
| o) Partition coefficient: n-octanol/water | no data available |
| p) Auto-ignition temperature | no data available |
| q) Decomposition temperature | no data available |
| r) Viscosity | no data available |
| s) Explosive properties N | no data available |
| t) Oxidizing properties N | no data available |
| | |

9.2 Other safety information

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Oxidizing agents

10.6 Hazardous decomposition products

Carbon dioxide, Carbon monoxide, Nitrogen oxides (NOx), Phosphorus oxide

SECTION 11: Toxicological information

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11.1 Information on toxicological effects

Acute toxicity ipr-mus LD50:3166 mg/kg

Skin corrosion/irritation no data available Serious eye damage/eye irritation no data available Respiratory or skin sensitisation no data available Germ cell mutagenicity no data available Carcinogenicity no data available 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 RTECS Number: UU3440000

SECTION 12: Ecological information

12.1 Toxicity

no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects



no data available

SECTION 13:

13.1 Disposal considerations

Product

Disposal of product: Recycle to process if possible. It is the generator's responsibility to comply with Federal, State and Local rules and regulations. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. This section is intended to provide assistance but does not replace these laws, nor does compliance in accordance with this section ensure regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous Waste are listed in 40 CFR Parts 261. The product should not be allowed to enter the environment, drains, water ways, or the soil.Other considerations: Observe all federal, state and local regulations when disposing of the substance. Contaminated packaging

Disposal of container: Dispose of as unused product.

SECTION 14: Transport information

| DOT (US) | | |
|--|---|---|
| UN number: no data available | Packing group: no data available | Class: no data available |
| Proper shipping name: no data available | Reportable Quantity(RQ): no data available | Poison Inhalation Hazard: no data available |
| Environmental Hazards: no data availat | ble | |
| IMDG | | |
| UN number: no data available | Packing group: no data available | EMS-No: no data available |
| Proper shipping name: no data available | | |
| ΙΑΤΑ | | |
| UN number: no data available Proper shipping name: no data availabl | Packing group: no data available e | Class: no data available |

SECTION 15: Regulatory information

Toxic Substance Control Act

This product is ON the EPA Toxic Substances Control Act (TSCA) inventory. US Federal Regulations

US Federal Regulations

SARA 313: Not Listed

SARA 302: Not Listed

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State Regulations

Massachusetts Not Listed

New Jersey Not Listed

Pennsylvania Not Listed

Other Information

NFPA Rating: HMIS Classification: Health: 0 Health: 0 Flammability: 0 Flammability: 0 Instability: 0 Physical: 0

International Inventories

Canada: DSL On DSL

EC-No: 200-178-1

SECTION 16: Other information

| Prepared By | Regulatory Affairs ALADDIN SCIENTIFIC CORPORATION Email: QualityAssurance@aladdinsci.com |
|------------------|--|
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