

NADP, Disodium Salt

sc-205763



The Power is Question

Material Safety Data Sheet

Hazard Alert Code Key:

EXTREME

HIGH

MODERATE

LOW

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

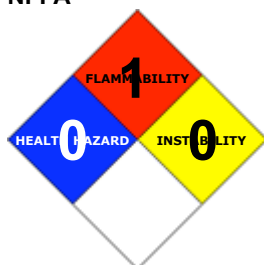
PRODUCT NAME

NADP, Disodium Salt

STATEMENT OF HAZARDOUS NATURE

Not considered a hazardous substance according to OSHA 29 CFR 1910.1200.

NFPA



SUPPLIER

Santa Cruz Biotechnology, Inc.
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EMERGENCY:

ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255
(1-800-CHEMCALL) or call +613 9573 3112

SYNONYMS

C21-H26-N7-O17-P3.2Na, "pyridinium, 3-carbamoyl-1-beta-D-ribofuranosyl-, hydroxide, 5' , 5' -", ester, "with adenosine 2' -(dihydrogen phosphate)-5' -(trihydrogen pyrophosphate)", "inner salt, disodium salt", "adenosine 5' -(trihydrogen diphosphate) 2' -(dihydrogen phosphate) 5' -5' -", "ester with 3-(aminocarbonyl)-1-beta-D-ribofuranosyl-pyridinium, hydroxide", "3-carbamoyl-1-beta-D-ribofuranosylpyridinium hydroxide 5-5' -ester", "with adenosine 2' -(dihydrogen phosphate) 5' -trihydrogen phosphate"

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS

| | Min | Max |
|---------------|-----|---------------------|
| Flammability: | 1 | |
| Toxicity: | 0 | |
| Body Contact: | 1 | Min/Nil=0 Low=1 |
| Reactivity: | 0 | Moderate=2 |
| Chronic: | 0 | High=3 Extreme=4 |

CANADIAN WHMIS SYMBOLS

None

EMERGENCY OVERVIEW RISK

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

■ Although ingestion is not thought to produce harmful effects, the material may still be damaging to the health of the individual following ingestion, especially where pre-existing organ (e.g. liver, kidney) damage is evident.

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■ Considered an unlikely route of entry in commercial/industrial environments.

EYE

■ Although the material is not thought to be an irritant, direct contact with the eye may produce transient discomfort characterized by tearing or conjunctival redness (as with windburn).

■ The dust may produce eye discomfort causing smarting, pain and redness.

SKIN

■ The material is not thought to produce adverse health effects or skin irritation following contact (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

INHALED

■ The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

■ Not normally a hazard due to non-volatile nature of product.

■ Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

CHRONIC HEALTH EFFECTS

■ Principal routes of exposure are usually by skin contact and inhalation of generated dust.

As with any chemical product, contact with unprotected bare skin; inhalation of vapor, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| NAME | CAS RN | % |
|---------------------|------------|-----|
| NADP, disodium salt | 24292-60-2 | >95 |

Section 4 - FIRST AID MEASURES

SWALLOWED

· Immediately give a glass of water. · First aid is not generally required. If in doubt, contact a Poisons Information Center or a doctor.

EYE

■ If this product comes in contact with eyes: · Wash out immediately with water. · If irritation continues, seek medical attention.

SKIN

■ If skin contact occurs: · Immediately remove all contaminated clothing, including footwear · Flush skin and hair with running water (and soap if available).

INHALED

· If dust is inhaled, remove from contaminated area. · Encourage patient to blow nose to ensure clear passage of breathing. · If irritation or discomfort persists seek medical attention.

NOTES TO PHYSICIAN

■ Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

| | |
|---------------------------------|----------------|
| Upper Explosive Limit (%): | Not available. |
| Specific Gravity (water=1): | Not available |
| Lower Explosive Limit (%): | Not available. |
| Relative Vapor Density (air=1): | Not applicable |

EXTINGUISHING MEDIA

· Water spray or fog.
· Foam.

FIRE FIGHTING

· Alert Emergency Responders and tell them location and nature of hazard.
· Wear breathing apparatus plus protective gloves for fire only.

GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

- Combustible.
 - Slight fire hazard when exposed to heat or flame.
- Other combustion products include: carbon dioxide (CO₂), phosphorus oxides (PO_x) and nitrogen oxides (NO_x).

FIRE INCOMPATIBILITY

Avoid contact with oxidising agents.

PERSONAL PROTECTION

- Glasses:
Chemical goggles.
- Gloves:
- Respirator:
Particulate

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Clean up all spills immediately.
- Avoid contact with skin and eyes.

MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Emergency Responders and tell them location and nature of hazard.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Avoid generating and breathing dust.
- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.

RECOMMENDED STORAGE METHODS

- Glass container.
- Plastic container.

Multi-ply woven plastic or paper bag with sealed plastic liner

NOTE: Bags should be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse.

- Check that containers are clearly labeled.

Packaging as recommended by manufacturer.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

| Source | Material | TWA mg/m ³ | Notes |
|---|---|-----------------------|-------|
| US - Oregon Permissible Exposure Limits (Z-3) | NADP, disodium salt (Inert or Nuisance Dust: Total dust) | 10 | (d) |
| US OSHA Permissible Exposure Levels (PELs) - Table Z3 | NADP, disodium salt (Inert or Nuisance Dust: (d) Respirable fraction) | 5 | |
| US OSHA Permissible Exposure Levels (PELs) - Table Z3 | NADP, disodium salt (Inert or Nuisance Dust: (d) Total dust) | 15 | |
| US - Hawaii Air Contaminant Limits | NADP, disodium salt (Particulates not other wise regulated - Total dust) | 10 | |
| US - Hawaii Air Contaminant Limits | NADP, disodium salt (Particulates not other wise regulated - Respirable fraction) | 5 | |
| US - Oregon Permissible Exposure Limits (Z-3) | NADP, disodium salt (Inert or Nuisance Dust: Respirable fraction) | 5 | (d) |

| | | | |
|--|--|----|-------------------------------------|
| US ACGIH Threshold Limit Values (TLV) | NADP, disodium salt (Particles (Insoluble or Poorly Soluble) [NOS] Inhalable particles) | 10 | See Appendix B current TLV/BEI Book |
| US - California Permissible Exposure Limits for Chemical Contaminants | NADP, disodium salt (Particulates not otherwise regulated Respirable fraction) | 5 | (n) |
| US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants | NADP, disodium salt (Particulates not otherwise regulated Respirable fraction) | 5 | |
| US - Michigan Exposure Limits for Air Contaminants | NADP, disodium salt (Particulates not otherwise regulated, Respirable dust) | 5 | |
| Canada - Prince Edward Island Occupational Exposure Limits | NADP, disodium salt (Particles (Insoluble or Poorly Soluble) [NOS] Inhalable particles) | 10 | See Appendix B current TLV/BEI Book |
| US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants | NADP, disodium salt (Particulates not otherwise regulated (PNOR)(f)-Respirable fraction) | 5 | |

ENDOELTABLE

PERSONAL PROTECTION



RESPIRATOR

Particulate

Consult your EHS staff for recommendations

EYE

- Safety glasses with side shields
- Chemical goggles.

HANDS/FEET

- Wear general protective gloves: i.e. Disposable polythene gloves or Cotton gloves or Light weight rubber gloves, with Barrier cream preferably Safety footwear.

OTHER

- Overalls.
- Barrier cream.

ENGINEERING CONTROLS

- Use in a well-ventilated area.
- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
- Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Solid.

Mixes with water.

| | | | |
|--------------------------------|----------------|---------------------------|-----------------|
| State | Divided solid | Molecular Weight | 787.38 |
| Melting Range (°F) | Not available | Boiling Range (°F) | Not applicable. |
| Solubility in water (g/L) | Miscible | Flash Point (°F) | Not applicable |
| pH (1% solution) | Not available | Decomposition Temp (°F) | Not available |
| pH (as supplied) | Not applicable | Autoignition Temp (°F) | Not available. |
| Vapour Pressure (mmHG) | Not applicable | Upper Explosive Limit (%) | Not available. |
| Specific Gravity (water=1) | Not available | Lower Explosive Limit (%) | Not available. |
| Relative Vapor Density (air=1) | Not applicable | Volatile Component (%vol) | Not applicable |
| Evaporation Rate | Not applicable | | |

APPEARANCE

Grey/ white powder; mixes with water. pKa1: 3.9; pKa2: 6.1

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.

STORAGE INCOMPATIBILITY

Avoid storage with oxidising agents.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

NADP, DISODIUM SALT

TOXICITY AND IRRITATION

NADP, DISODIUM SALT:

- No significant acute toxicological data identified in literature search.

Section 12 - ECOLOGICAL INFORMATION

No data

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

- Consult manufacturer for recycling options and recycle where possible .
- Consult Waste Management Authority for disposal.

OR if licence and regulations permit:

dissolve in water and dilute to 5% solution, check the pH and adjust to 7 if necessary. Pour solution down drain with flushing for 10 minutes.

Section 14 - TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: DOT, IATA, IMDG

Section 15 - REGULATORY INFORMATION

NADP, disodium salt (CAS: 24292-60-2) is found on the following regulatory lists;

"US - Hawaii Air Contaminant Limits", "US - Oregon Permissible Exposure Limits (Z-3)", "US OSHA Permissible Exposure Levels (PELs) - Table Z3"

Section 16 - OTHER INFORMATION

Reasonable care has been taken in the preparation of this information, but the author makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The author makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. For additional technical information please call our toxicology department on +800 CHEMCALL.

- Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references.

- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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