Material Safety Data Sheet

Section 1 - Product and Company Information

Product Name: β-Nicotinamide adenine dinucleotide phosphate hydrate
Product Number: N5755
Brand: Sigma Chemical
Company: Sigma-Aldrich
Address: 3080 Spruce Street
City, State, Zip, Country: SAINT LOUIS, MO 63101 US
Technical Phone: 800-325-5832
Fax: 600-325-5052
Emergency Phone: 314-776-5555

Section 2 - Composition/Information on ingredient

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>SARA 313</th>
<th>EC no</th>
<th>Annex I Index Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-Nicotinamide adenine dinucleotide phosphate hydrate</td>
<td>None</td>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Formula: C2H38N7O17P3·xH2O
Synonyms:

Section 3 - Hazards Identification

Emergency Overview
Inhalation: Irritating to eyes, respiratory system and skin.
Target organs: Liver, kidneys.

HMIS Rating
Health: 2
Flammability: 0
Reactivity: 0

NFPA Rating
Health: 2
Flammability: 0
Reactivity: 0

*Additional chronic hazard(s) present.
For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Eye Exposure
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A
Extinguishing Media
Suitable: Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting
Protective Equipment
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s)
Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s)
Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up
Sweep up, place in a log and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment
Other
Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

General Hygiene Measures
Wash contaminated clothing before reuse. Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance
Physical State: Solid

Molecular Weight: 743.4 AMU

pH: N/A
BP/BP Range: N/A
MP/MF Range: N/A
Freezing Point: N/A
Vapor Pressure: N/A
Vapor Density: N/A
Saturated Vapor Conc. S/V Density: N/A
Bulk Density: N/A
Odor Threshold: N/A
Volatile: N/A
VOC Content: N/A

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Section 10 - Stability and Reactivity

Stability
Stable

Materials to Avoid
Strong oxidizing agents

Hazardous Decomposition Products
Carbon monoxide, carbon dioxide, and nitrogen oxides, Phosphorous oxides

Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Route of Exposure
Inhalation: Material is irritating to mucous membranes and upper respiratory tract.

Mucosal irritation is likely to occur upon contact with eyes or skin.

Target Organ(s) or System(s)
Liver, Kidneys

US Classification and Label Info

DOT
Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be nonhazardous for transport

IATA
Non-Hazardous for Air Transport: Non-hazardous for air transport

Section 15 - Regulatory Information

Additional Classification
EU: NA

US Additional Classification
Symbol of Danger: Xi
Indication of Danger
Irritant

Risk Statements
R: 36/37/38
Irritating to eyes, respiratory system, and skin.

Safety Statements
S: 26
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

Section 16 - Other Information

Disclaimer
For R&D use only. Not for drug, household or other uses.

Warranty
The information herein is for guidance and shall be used at the user's own risk. The information is based on the present state of our knowledge and is applicable to the product with regard to safe handling. The user shall be solely responsible for any consequences resulting from application of the product.

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