

## Material Safety Data Sheet

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Version 1.3

According to 91/155/EEC

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1 - Product and Company Information

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Product Name	B-NICOTINAMIDE ADENINE DINUCLEOTIDE, REDUCED FORM DISODIUM
Product Number	N6005
Company	Sigma-Aldrich Pty, Ltd Unit 2, 14 Anella Avenue Castle Hill NSW 1765
Technical Phone #	+61 2 9841 0555
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2 - Composition/Information on Ingredients

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Product Name	CAS #	EC no	Annex I Index Number
B-NAD REDUCED, DISODIUM SOLUTION	None	None	None

Ingredient Name	Percent	CAS #	EC no	Annex I Index Number
THE FOLLOWING SUBSTANCES ARE PRESENT AS RESIDUAL COMPONENTS OF PRODUCTION.		None	None	None

ETHYL ALCOHOL, DENATURED <= 6	None	None	None
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Symbols: F Xn

R-Phrases: 11 36/37/38 20/21/22

Highly flammable. Irritating to eyes, respiratory system and skin.  
Harmful by inhalation, in contact with skin and if swallowed.

METHANOL	<= 1	67-56-1	200-659-6	603-001-00-X
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Symbols: F T

R-Phrases: 11 23/24/25 39/23/24/25

Highly flammable. Toxic by inhalation, in contact with skin and if  
swallowed. Toxic: danger of very serious irreversible effects  
through inhalation, in contact with skin and if swallowed.

Formula C<sub>21</sub>H<sub>27</sub>N<sub>7</sub>O<sub>14</sub>P<sub>2</sub>.2Na  
Molecular Weight 709.4 AMU

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3 - Hazards Identification

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SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT  
Not hazardous according to Directive 67/548/EC.

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4 - First Aid Measures

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## AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give  
artificial respiration. If breathing is difficult, give oxygen.

#### AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

#### AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

#### AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

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### 5 - Fire Fighting Measures

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#### EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

#### SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

#### SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

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### 6 - Accidental Release Measures

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#### 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 bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

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### 7 - Handling and Storage

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#### HANDLING

Directions for Safe Handling: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

#### STORAGE

Conditions of Storage: Keep tightly closed. Store with desiccant. Store at 2-8°C

SPECIAL REQUIREMENTS: Light sensitive. Hygroscopic.

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### 8 - Exposure Controls / Personal Protection

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#### ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

#### GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

#### EXPOSURE LIMITS

Country	Source	Type	Value
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Poland	NDS	100 MG/M3
Poland	NDSch	300 MG/M3
Poland	NDSP	-

#### PERSONAL PROTECTIVE EQUIPMENT

Special Protective Measures: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

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### 9 - Physical and Chemical Properties

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Appearance	Physical State: Solid Color: Yellow Form: Powder	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Flash Point	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
SG/Density	N/A	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

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### 10 - Stability and Reactivity

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#### STABILITY

Stable: Stable.

Conditions to Avoid: Light. Moisture.

Materials to Avoid: Acids, Acid chlorides, Alkali metals, Ammonia, Peroxides, Oxidizing agents, Reducing agents.

#### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Phosphorous oxides.

#### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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### 11 - Toxicological Information

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#### SIGNS AND SYMPTOMS OF EXPOSURE

Exposure can cause: Gastrointestinal disturbances. Damage to the heart. Can cause CNS depression. Narcotic effect. May cause

convulsions. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

#### ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes eye irritation.

Inhalation: May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

#### TARGET ORGAN INFORMATION

Eyes. Nerves. Liver. Heart. Kidneys. Blood.

#### CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

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#### 12 - Ecological Information

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No data available.

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#### 13 - Disposal Considerations

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#### SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

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#### 14 - Transport Information

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##### RID/ADR

Non-hazardous for road transport.

##### IMDG

Non-hazardous for sea transport.

##### IATA

Non-hazardous for air transport.

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#### 15 - Regulatory Information

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Not hazardous according to Directive 67/548/EC.

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#### 16 - Other Information

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#### WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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