



# SAFETY DATA SHEET

Revision Date **21-Mar-2012**

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Product Name** beta-NICOTINAMIDE ADENINE DINUCLEOTIDE OXIDIZED FORM  
**Recommended Use** For research use only  
**Registration Number** No information available

### 1.1 Product Identifier

**Catalog Number:** 194714  
**Supplier:** MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
tel: 440-337-1200

**Emergency Telephone Number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

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

## 2. HAZARDS IDENTIFICATION

### GHS - Classification

|  |                            |
|--|----------------------------|
| Aspiration Toxicity                                | Not classified             |
| Acute Oral Toxicity                                | Not classified             |
| Acute Dermal Toxicity                              | Not classified             |
| Acute Inhalation Toxicity - Gas                    | Not classified             |
| Acute Inhalation Toxicity - Vapors                 | Not classified             |
| Acute Inhalation Toxicity - Dusts and Mists        | Not classified             |
| Skin Corrosion/Irritation                          | Not classified             |
| Serious Eye Damage/Eye Irritation                  | Not classified             |
| Respiratory Sensitization                          | Not classified             |
| Skin Sensitization                                 | Not classified             |
| Germ Cell Mutagenicity                             | Not classified             |
| Carcinogenicity                                    | Not classified             |
| Reproductive Toxicity                              | Not classified             |
| Specific Target Organ Toxicity (Single Exposure)   | Not classified             |
| Specific Target Organ Toxicity (Repeated Exposure) | Not classified             |
| Acute Aquatic Toxicity                             | Not classified for acute   |
| Chronic Aquatic Toxicity                           | Not classified for chronic |
| Ozone  | Not applicable             |

### GHS Label elements, including precautionary statements

**Physical Hazards** None

## Risk Combination Phrases

R36/37/38 - Irritating to eyes, respiratory system and skin.

### S-phrases(s)

S20 - When using do not eat or drink.

S25 - Avoid contact with eyes.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

### Safety Combination Phrases:

S37/39 - Wear suitable gloves and eye/face protection.

**Not Hazardous**

Not classified

### NFPA rating:

NFPA Health: 0  
NFPA Flammability: 0  
NFPA Reactivity: 0  
NFPA Special Note: -

### Precautionary Statements

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Synonyms: Not Available  
Formula: C<sub>21</sub>H<sub>27</sub>N<sub>7</sub>O<sub>14</sub>P<sub>2</sub>  
Molecular weight: 663.4 (anhyd.)

| Chemical Name  | EC No.            | CAS Number | Weight % | Classification (67/548) | Classification (Reg. 1272/2008) | REACH Registration Number |
|--|-------------------|------------|----------|-------------------------|---------------------------------|---------------------------|
| beta-NICOTINAMIDE ADENINE DINUCLEOTIDE OXIDIZED FORM | EEC No. 200-184-4 | 53-84-9    | 100      | Xi                      |                                 | No data available         |

For the full text of the R phrases and H statements mentioned in this section, see Section 2

## 4. FIRST AID MEASURES

### 4.1 Description of first-aid measures

**General Advice** If symptoms persist, call a physician.

**Eye Contact** Do not rub affected area. Get medical attention immediately if irritation persists.

**Skin Contact** Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

**Inhalation** Move to fresh air in case of accidental inhalation of vapors. Immediate medical attention is required. Toxic by inhalation

**Rinse mouth** Clean mouth with water and afterwards drink plenty of water.

#### 4.2 Most important symptoms and effects, both acute and delayed

**Main Symptoms** No information available

#### 4.3 Indication of any immediate medical attention and special treatment needed

**Notes to Physician** Treat symptomatically.

### **5. FIRE-FIGHTING MEASURES**

#### 5.1 Extinguishing media

##### **Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

##### **Extinguishing media which must not be used for safety reasons**

No information available

#### 5.2 Special hazards arising from the substance or mixture

No information available.

#### 5.3 Advice for firefighters

Use personal protective equipment.

### **6. ACCIDENTAL RELEASE MEASURES**

#### 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

See Section 12 for additional information.

#### 6.2 Environmental precautions

Refer to protective measures listed in Sections 7 and 8.

#### 6.3 Methods and materials for containment and cleaning up

No information available.

#### 6.4 Reference to other sections

See Section 12 for additional information

### **7. HANDLING AND STORAGE**

#### **Storage**

0°C

DESICCATE

#### 7.1 Precautions for safe handling

Ensure adequate ventilation.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a cool, well-ventilated place

### 7.3 Specific end uses

#### Exposure Scenario

No information available

#### Other Guidelines

No information available

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

|   |   |
|---|---|
| <b>Exposure Limits</b>                          | This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. |
| <b>Derived No Effect Level (DNEL)</b>           | No information available  |
| <b>Predicted No Effect Concentration (PNEC)</b> | No information available  |

### 8.2 Exposure controls

**Engineering Measures** Ensure adequate ventilation, especially in confined areas.

#### Personal Protective Equipment

|  |   |
|--|---|
| <b>Eye Protection</b>                  | Tightly fitting safety goggles            |
| <b>Skin and Body Protection</b>        | Long sleeved clothing                     |
| <b>Hand Protection</b>                 | Protective gloves                         |
| <b>Respiratory Protection</b>          | No special protective equipment required. |
| <b>Other Protective Equipment</b>      | Impervious clothing.                      |
| <b>Environmental Exposure Controls</b> | No information available.                 |

**Hygiene Measures** Provide regular cleaning of equipment, work area and clothing..

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

#### Appearance

**Physical State** Solid.

#### Physical Property Data

|                                   |                           |
|-----------------------------------|---------------------------|
| <b>pH Value</b>                   | No data available         |
| <b>Flash Point</b>                | No information available  |
| <b>Autoignition Temperature</b>   | No data available         |
| <b>Melting/Freezing Point</b>     |                           |
| <b>Boiling Point (°C)</b>         | No information available. |
| <b>Vapor Pressure</b>             | No data available         |
| <b>Vapor Density</b>              | No information available  |
| <b>Water Solubility</b>           | No data available         |
| <b>Evaporation Rate</b>           | No data available.        |
| <b>Flammability (solid, gas)</b>  | No data available         |
| <b>Flammability Limits in Air</b> |                           |
| <b>upper flammability limit</b>   | No data available         |
| <b>lower flammability limit</b>   | No data available         |
| <b>Density</b>                    | No data available         |
| <b>Specific Gravity</b>           | No data available.        |
| <b>Decomposition Temperature</b>  | No data available         |
| <b>Viscosity, Kinematic</b>       | No data available.        |

**Viscosity, Dynamic**  
**Explosive Properties**  
**Oxidizing Properties**  
**VOC Content (%)**

No data available.  
No information available.  
No information available  
No information available

## **9.2 Other Safety Information**

Other Safety Information

# **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**

None under normal processing.

## **10.4 Conditions to avoid**

None in particular

## **10.5 Incompatible Materials**

None in particular

## **10.6 Hazardous Decomposition Products**

None under normal processing.

# **11. TOXICOLOGICAL INFORMATION**

## **11.1 Information on toxicological effects**

|                       |  |
|-----------------------|--|
| <b>Acute Toxicity</b> | Product does not present an acute toxicity hazard based on known or supplied information |
| <b>Inhalation</b>     | No information available.  |
| <b>Eye Irritation</b> | No information available.  |
| <b>Acute toxicity</b> | 0% of the mixture consists of ingredient(s) of unknown toxicity                          |

|                          |   |
|--------------------------|---|
| <b>Mutagenic Effects</b> | Contains no ingredient listed as a mutagen. |
|--------------------------|---|

|                             |             |
|-----------------------------|-------------|
| <b>Carcinogenic Effects</b> | None known. |
|-----------------------------|-------------|

|                              |            |
|------------------------------|------------|
| <b>Reproductive Toxicity</b> | None known |
|------------------------------|------------|

|                               |             |
|-------------------------------|-------------|
| <b>Developmental Toxicity</b> | None known. |
|-------------------------------|-------------|

|                          |            |
|--------------------------|------------|
| <b>Aspiration hazard</b> | None known |
|--------------------------|------------|

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

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

### 12.2 Persistence and degradability

No data is available on the product itself

### 12.3 Bioaccumulative potential

No information available

### 12.4 Mobility in soil

No information available

### 12.5 Results of PBT and vPvB assessment

No information available.

### 12.6 Other adverse effects

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

## 13. DISPOSAL CONSIDERATIONS

### **Waste from Residues/Unused Products**

Dispose of in accordance with local regulations

### **Contaminated Packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. TRANSPORT INFORMATION

### IMDG/IMO

Not regulated

### ICAO

Not regulated

### ICAO/IATA

Not regulated

### DOT

Not regulated

### TDG

Not regulated

### MEX

Not regulated

## 15. REGULATORY INFORMATION

### **International Inventories**

## 15. REGULATORY INFORMATION

| Chemical Name  | TSCA   | EINECS / ELINCS | DSL / NDSL | PICCS | ENCS   | IECSC  | AICS   | KECL   |
|--|--------|-----------------|------------|-------|--------|--------|--------|--------|
| beta-NICOTINAMIDE ADENINE DINUCLEOTIDE OXIDIZED FORM | Listed | Listed          | Listed     |       | Listed | Listed | Listed | Listed |

### Legend

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances / EU List of Notified Chemical Substances

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**PICCS** - Philippine Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

## 16. OTHER INFORMATION

### Disclaimer

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

End of Material Safety Data Sheet

Key literature references and sources for data

[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)