

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 09/02/2009

## 1 Identification

- **Product identifier**
- **Trade name:**  $\beta$ -Nicotinamide adenine dinucleotide phosphate reduced -Na4-salt
- **Article number:** 30316
- **CAS Number:**  
2646-71-1
- **EC number:**  
220-163-3
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
SERVA Electrophoresis GmbH  
Carl-Benz-Str. 7  
D-69115 Heidelberg  
Tel.: +49 6221 13840-0  
FAX: +49 6221 13840-10  
msds.info@serva.de
- **Information department:** Product Safety department Tel.: +49 6221 13840-35
- **Emergency telephone number:**  
Medical Emergency Information in case of poisoning:  
Poison Information Center Mainz - Phone: +49 (0) 6131 19240  
(advisory service in German or English language)



## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The substance is not classified according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**
- |            |   |                |
|------------|---|----------------|
| HEALTH     | 0 | Health = 0     |
| FIRE       | 0 | Fire = 0       |
| REACTIVITY | 0 | Reactivity = 0 |

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

US

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 09/02/2009

**Trade name:** *β-Nicotinamide adenine dinucleotide phosphate reduced -Na4-salt*

(Contd. of page 1)

## 3 Composition/information on ingredients

- **Chemical characterization:** *Substances*
- **CAS No. Description**  
2646-71-1 dihydronicotinamide-adenine dinucleotide phosphate, tetrasodium salt
- **Identification number(s)**
- **EC number:** 220-163-3
- **Description:**
- **Empirical formula:**  $C_{21}H_{26}N_7O_{17}P_3Na_4$
- **MW:** 833.40

## 4 First-aid measures

- **Description of first aid measures**
- **General information:** *No special measures required.*
- **After inhalation:** *Supply fresh air; consult doctor in case of complaints.*
- **After skin contact:** *Immediately rinse with water.*
- **After eye contact:** *Rinse opened eye for several minutes under running water.*
- **After swallowing:**  
*Rinse out mouth and then drink plenty of water.*  
*If symptoms persist consult doctor.*
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*
- **Indication of any immediate medical attention and special treatment needed**  
*No further relevant information available.*

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
*CO<sub>2</sub> extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.*
- **Special hazards arising from the substance or mixture**  
*In case of fire, the following can be released:*  
*Nitrogen oxides (NO<sub>x</sub>)*  
*Phosphorous oxides (e.g. P<sub>2</sub>O<sub>5</sub>)*  
*Carbon monoxide and carbon dioxide*
- **Advice for firefighters**
- **Protective equipment:** *Wear self-contained respiratory protective device.*

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** *Wear protective clothing.*
- **Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*
- **Methods and material for containment and cleaning up:** *Pick up mechanically.*
- **Reference to other sections** *No dangerous substances are released.*

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** *Prevent formation of dust.*
- **Information about protection against explosions and fires:** *No special measures required.*

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 09/02/2009

**Trade name:**  $\beta$ -Nicotinamide adenine dinucleotide phosphate  
reduced -Na4-salt

(Contd. of page 2)

- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store at -15 to -25 °C
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Store in dry conditions.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Suitable respiratory protective device recommended.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**  
Natural rubber, NR  
Nitrile rubber, NBR
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

<b>Form:</b>	Powder
<b>Color:</b>	Whitish
<b>Odor:</b>	Odorless
- **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.
- **Flash point:** Not applicable.

(Contd. on page 4)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 09/02/2009

**Trade name:** *β-Nicotinamide adenine dinucleotide phosphate  
reduced -Na4-salt*

(Contd. of page 3)

- **Flammability (solid, gaseous):** *Product is not flammable.*
- **Danger of explosion:** *Product does not present an explosion hazard.*
- **Density:** *Not determined.*
- **Solubility in / Miscibility with  
Water at 20 °C (68 °F):** *> 50 g/l*
- **Other information** *No further relevant information available.*

## 10 Stability and reactivity

- **Reactivity** *No further relevant information available.*
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **Possibility of hazardous reactions** *No dangerous reactions known.*
- **Conditions to avoid** *No further relevant information available.*
- **Incompatible materials:** *No further relevant information available.*
- **Hazardous decomposition products:** *No dangerous decomposition products known.*

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** *No irritant effect.*
- **on the eye:** *No irritating effect.*
- **Sensitization:** *No sensitizing effects known.*
- **Additional toxicological information:**  
*When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.*  
*The substance is not subject to classification.*
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** *Substance is not listed.*
- **NTP (National Toxicology Program)** *Substance is not listed.*
- **OSHA-Ca (Occupational Safety & Health Administration)** *Substance is not listed.*

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** *No further relevant information available.*
- **Persistence and degradability** *No further relevant information available.*
- **Behavior in environmental systems:**
- **Bioaccumulative potential** *No further relevant information available.*
- **Mobility in soil** *No further relevant information available.*
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 1 (Self-assessment): slightly hazardous for water*  
*Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.*
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 09/02/2009

**Trade name:**  $\beta$ -Nicotinamide adenine dinucleotide phosphate  
reduced -Na4-salt

(Contd. of page 4)

· **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

- |  |  |
|--|--|
| · <b>UN-Number</b>   |  |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Void   |
| · <b>UN proper shipping name</b>   |  |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Void   |
| · <b>Transport hazard class(es)</b>  |  |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   |  |
| · <b>Class</b>   | Void   |
| · <b>Packing group</b>   |  |
| · <b>DOT, ADR, IMDG, IATA</b>  | Void   |
| · <b>Environmental hazards:</b>  | Not applicable.                                      |
| · <b>Special precautions for user</b>  | Not applicable.                                      |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.                                      |
| · <b>Transport/Additional information:</b>                                       | Not dangerous according to the above specifications. |
| · <b>UN "Model Regulation":</b>  | Void   |

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** Substance is not listed.
- **Proposition 65** Substance is not listed.
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **Carcinogenicity categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value established by ACGIH)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void

(Contd. on page 6)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 09/02/2009

**Trade name:** *β-Nicotinamide adenine dinucleotide phosphate reduced -Na4-salt*

(Contd. of page 5)

- **Hazard statements** Void
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Department issuing SDS:** Product safety department

- **Contact:** +49 6221 13840-35

- **Date of preparation / last revision** 05/03/2018 / 2

- **Abbreviations and acronyms:**

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*

*ICAO: International Civil Aviation Organisation*

*PBT: persistent, bioaccumulative, toxic substance (REACH)*

*vPvB: very persistent, very bioaccumulative substance (REACH)*

*REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals*

*CLP: Regulation on classification, labelling and packaging of substances and mixtures*

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*NIOSH: National Institute for Occupational Safety*

*OSHA: Occupational Safety & Health*

*TLV: Threshold Limit Value*

*PEL: Permissible Exposure Limit*

*REL: Recommended Exposure Limit*

- **\* Data compared to the previous version altered.**

US