SAFETY DATA SHEET

MOLTOX®
Molecular Toxicology, Inc.

NAME OF PRODUCT NADPH Regensys B

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product/Catalog Number(s):

60-201
60-251

Product name:	NADPH Regensys B (Plus)
Synonyms:	β-Nicotinamide-adenine dinucleotide, phosphate, oxidized (NADP)
Manufacturer:	Molecular Toxicology Inc.
Address:	157 Industrial Park Drive, Boone, North Carolina, 28607
Phone:	(1) 828-264-9099 (hours 8:30 – 17:00 EST)
Fax:	828-264-0103
Emergency contact (Chemtrec):	Contact 1-800-424-9300 (USA) or 703-527-3887 (International) at other times Email: chemtrec@chemtrec.com; http://www.chemtrec.com/
Recommended use:	Sterile solution for washing, diluting bacteria and cells etc.; general laboratory reagent, no uses advised against
Restrictions on use:	Not for clinical use

SECTION 2. HAZARDS IDENTIFICATION

Caution

Physical hazards	None
Health hazards	Skin irritation (Category 2) Eye Irritation (Category 2A)
Environmental hazards	None
Hazard Statements	**H315** Causes skin irritation **H319** Causes serious eye irritation **H335** May cause respiratory irritation
Precautionary Statements	**P261** Avoid breathing dust/fume/gas/mist/vapours/spray **P264** Wash skin thoroughly after handling **P271** Use only outdoors or in a well-ventilated area **P302+352** IF ON SKIN: Wash with plenty of soap and water **P301+330+331** IF SWALLOWED: Rinse mouth. Do not induce vomiting **P305+351+338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses. **P312** Call a POISON CENTER or doctor/physician if you feel unwell

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	EC-No.	Weight %
$C_{21}H_{28}N_7O_{17}P_3 \cdot XH_2O$ β-Nicotinamide-adenine dinucleotide, phosphate, oxidized (NADP)	1184-16-3	214-664-6	100

SECTION 4. FIRST AID MEASURES

Eye Contact	Flush eyes with water thoroughly. Seek medical attention if irritation persists.
Skin Contact	Wash with plenty of soap and water. Seek medical attention if irritation persists.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water.
Inhalation	Move victim to fresh air. If not breathing, give artificial respiration.
Symptoms/Effects	None known
Notes to Physician	None

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media

Any extinguisher suitable for Class A, B, C fires including water, dry chemical, CO_2, or foam.

Specific hazards during firefighting

None

Special protective equipment

Wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH-approved or equivalent and full protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Avoid aerosol formation.
Refer to protective measures listed in Sections 8 and 13.

Environmental precautions

No special precautions.

Methods and material for containment and cleaning up

Mop up spill and collect in suitable container for disposal. Rinse area with water.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Avoid aerosol formation. No eating, drinking, or smoking in the work area.

Conditions for safe storage, including any incompatibilities

Use general laboratory chemical storage conditions. Keep container tightly closed. Store away from direct sunlight at ambient laboratory temperature; avoid freezing. No specific incompatibilities.

Store at 2-8°C.

Do not store with strong oxidizing agents, strong bases, or strong acids

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits

Permissible Exposure Limits and Threshold Limit Values not specified by OSHA.

Control parameters

Exposure limits

This product, as supplied, does not contain any hazardous materials or specified occupational exposure limits.

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

Exposure controls

Engineering Measures

- Ensure adequate ventilation, especially in confined areas.
- Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimize release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

Personal protective equipment

Eye Protection

- If splashes are likely to occur, wear safety glasses with side-shields (European standard – EN 166)

Hand Protection

- Protective gloves - Inspect gloves before use.
- Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)
- Ensure gloves are suitable for the task: chemical compatibility, dexterity, operational conditions, user susceptibility, e.g. sensitization effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.
- Remove gloves with care avoiding skin contamination.

Skin and body protection

- Long sleeved clothing

Respiratory Protection

- Respiratory protection is not required under normal conditions of use.

Large scale/emergency use

- In case of insufficient ventilation wear suitable respiratory equipment

Small scale/Laboratory use

- For general chemical use, employ a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- When respiratory protection is used, a face piece Fit Test should be conducted.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls

No information available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	White lyophilized powder
Auto-ignition temperature	N/A
Boiling point	No data available
Decomposition temperature	No data available
Evaporation Rate	N/A
Flammability limits	Not flammable
Flash point	N/A
Formula	$C_{21}H_{28}N_7O_{17}P_3 \cdot XH_2O$
Melting point	No data available
Molecular weight	743.41 g/mol
Odor	No odor
Odor threshold	No odor
Osmolality	No data available
pH	No data available
Partition coefficient	N/A
Solubility in water	Soluble
Specific gravity	No data available
Vapor density	N/A
Vapor pressure	N/A
Viscosity	N/A

N/A Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive.

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

Hazardous polymerization does not occur.
Hazardous Reactions do not occur under normal conditions.

Conditions to avoid

Chemically stable under conditions of storage and use.

Incompatible materials

Strong oxidizing agents, strong acids, strong bases

Hazardous decomposition products

None under normal use conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

Oral LD50
Inhalation LC50
Dermal LD50
no data available

Other information on acute toxicity
No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
Not carcinogenic according to IARC, ACGIH, NTP, OSHA standards

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
No data available

Teratogenicity
No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
No data available

Aspiration hazard
No data available

Potential health effects
Inhalation May cause respiratory irritation
Ingestion No data available
Skin May cause skin irritation.
Eyes Causes eye irritation.
Synergistic effects
No data available

Additional toxicological information:
RTECS: CA9275000

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Aquatic ecotoxicity: No further relevant information available.
Persistance and degradability: No further relevant information available.
Behavior in environment systems: No further relevant information available.
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Additional ecological information:
General notes:
Do not allow undiluted product or large quantities of it to reach ground water, water course, or sewage system.
Do not allow material to be released to the environment without proper governmental permits.

Results of PBT and vPVB Assessment
PBT: Not applicable
vPvB: Not applicable

Other adverse effects: No further relevant information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Safe handling practices

Refer to Section 8 for information on exposure controls and personal protection.

Waste treatment methods

Dispose of in accordance with National, Federal and Local regulations. No special considerations. Sewage disposal is discouraged.

SECTION 14. TRANSPORT INFORMATION

Not regulated by IATA or US DOT, not listed by UN.
Special precautions for user: Not applicable

Transport/Additional information: None available
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

SECTION 15. REGULATORY INFORMATION

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the
threshold (De Minimis) reporting levels established by SARA Title III, Section 313

SARA 311/312 Hazards
No hazards identified

Massachusetts Right To Know Components
No components are subject to reporting requirements

Pennsylvania Right To Know Components
No components are subject to reporting requirements

New Jersey Right To Know Components
No components are subject to reporting requirements

California Prop. 65 Components
No components are subject to reporting requirements

SECTION 16. OTHER INFORMATION

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 applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Molecular Toxicology, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. See www.moltox.com and/or the invoice or packing slip for additional terms and conditions of sale.