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SECTION 1: COMPANY AND PRODUCT INFORMATION

1.1 Product identifiers

Product name : Adenine sulfate
Product code : 40100040
CAS number : 321-30-2
Synonyms : Adenine
6-Aminopurine

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

Identified uses : Laboratory chemicals, manufacture of substances

1.3 Details of the supplier of the safety data sheet

Address : 4150 Tuller Rd.
Suite 228
Dublin, OH 43017
Email : tech@bio-world.com
Phone : 614-792-8680, Toll free: 1-888-bio-PLUS
Fax : 614-792-8685

1.4 Emergency telephone number

Emergency phone : 1-888-bio-PLUS

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Not a hazardous substance or mixture.

2.2 GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Not a hazardous substance or mixture.

2.3 Label elements and precautionary statements

Pictogram : 

Signal word : Warning

Hazard statement(s) : HARMFUL IF SWALLOWED

Precautionary statement(s) : Wash face, hands and any exposed skin thoroughly after handling

2.4 Hazards not otherwise classified (HNOC) or not covered by GHS

None

2.5 NFPA Rating

Health hazard : 0

Fire hazard : 1
Reactivity hazard : Not available

2.6 HMIS Rating

Health hazard : 0
Chronic health hazard : 0
Reactivity hazard : 0
Flammability : 1
Physical hazard : 0

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Substance	CAS#	EC#	Concentration
Adenine sulfate M.F: C ₅ H ₅ N ₅ 1/2H ₂ SO ₄ M.W: 184.17 g/mol	321-30-2	206-286-5	<=98%

3.2 Hazardous components & classification

Not a hazardous mixture

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

In case of inhalation

Immediate medical attention is required. Remove to fresh air. If not breathing, give artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Artificial respiration and/or oxygen may be necessary. Call a physician. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician.

In case of skin contact

Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Immediate medical attention is not required.

In case of eye contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately. Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. If symptoms persist, call a physician.

In case of ingestion

Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Drink plenty of water. Clean mouth with water and drink afterwards plenty of water. Call a physician.

4.2 Most important symptoms and effects, both acute and delayed

Not available

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Unsuitable extinguishing media

None

5.3 Special hazards arising from the substance

Carbon oxides, Nitrogen oxides (NO_x), Sulphur oxides

5.4 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapors, mist or gas. For personal protection see section 8.

For personal protection see section 8

6.2 Environmental precautions

No special environmental precautions required

6.3 Methods and material for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

For proper disposal see section 13

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas

For precautions see section 2

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions : Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use with local exhaust ventilation.

Incompatible materials : None known based on information supplied

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Contains no substances with occupational exposure limit values

8.2 Engineering controls

General industrial hygiene practice

8.3 Personal protective equipment

Eye/face protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection	: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body protection	: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
Control of environmental exposure	: No special environmental precautions required.
General hygiene considerations	: When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	: Solid
b)	Physical states	: powder
c)	Odor	: Odorless
d)	Odor threshold	: Not available
e)	Melting point	: 205 °C (401 °F)
f)	Boiling point range	: 553.5 ° C
g)	pH	: 322. 7° C
h)	Density	: Not available
i)	Flash point	: Not available
j)	Evaporation rate	: Not available
k)	Flammability	: Not available
l)	Upper/lower flammability or explosive limits:	: Not available
m)	Vapor pressure	: Not available
n)	Vapor density	: Not available
o)	Relative density	: Not available
p)	Water solubility	: Not available
q)	Partition coefficient:n-octanol/water	: Not available
r)	Autoignition temperature	: Not available

- s) Decomposition temperature : Not available
t) Kinematic viscosity : Not available
u) Explosive properties : Not available
v) Oxidizing properties : Not available
w) Solubility in other solvents : Not available
x) Surface tension : Not available
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SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Not available

10.2 Chemical stability

Stable under recommended storage conditions

10.3 Stability note(s)

Not available

10.4 Polymerization

Not available

10.5 Possibility of hazardous reactions

None under normal processing

10.6 Incompatible materials

Strong oxidizing agents

10.7 Hazardous decomposition products

Carbon oxides. Nitrogen oxides (NO_x)

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Acute toxicity

LD50 Oral : Not available

LD50 Dermal : Not available

LC50 Inhalation : Not available

11.2 Skin corrosion/irritation

Not available

11.3 Serious eye damage/eye irritation

Not available

11.4 Respiratory or skin sensitization

Not available

11.5 Germ cell mutagenicity

Not available

11.6 Carcinogenicity

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

11.7 Reproductive toxicity

Not available

11.8 Specific target organ toxicity – single exposure

Not available

11.9 Specific target organ toxicity – repeated exposure

Not available

11.10 Aspiration hazard

Not available

11.11 Additional Information

Not available

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Not available

12.2 Aquatic toxicity

Not available

12.3 Persistence and degradability

Not available

12.4 Bioaccumulative potential

Not available

12.5 Mobility in soil

Not available

12.6 Results of PBT and vPvB assessment

Not available

12.7 Other adverse effect

Not available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Product

Offer surplus and non - recyclable solutions to a licensed disposal company.

13.2 Packaging

Dispose of as unused product.

13.3 Recommendation

Not available

SECTION 14: TRANSPORTATION INFORMATION

14.1 DOT (US)

Not dangerous goods

14.2 IMDG

Not dangerous goods

14.3 IATA

Not dangerous goods

SECTION 15: REGULATORY INFORMATION

15.1 SARA

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

SARA 313 Components: 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 SARA Hazards

15.2 Clean water act (CWA)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

15.3 Right to know components

Massachusetts : No components are subject to the Massachusetts Right to Know Act

Pennsylvania : Diadenine sulphate; CAS - No.: 321-30-2

New Jersey : Diadenine sulphate; CAS - No.: 321-30-2

California proposition : This product does not contain any chemicals known to State of California to cause
65 components cancer, birth defects, or any other reproductive harm.

SECTION 16: OTHER INFORMATION

16.1 Disclaimer

This product is offered by bioWORLD for research, laboratory or further manufacturing use. Not for human use or consumption. The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchant-ability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall bio-WORLD.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if bio-WORLD.com has been advised of the possibility of such damages.

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16.2 Preparation Information

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