



CAMBRIDGE ISOTOPE LABORATORIES

PRODUCT AND COMPANY IDENTIFICATION

Product Name: SET OF 4 RIBONUCLEOSIDE 5'-TRIPHOSPHATES
(U-D, 98%) CHEM PURITY >90% (NH₄ SALTS/IN SOLN)

Catalog No: DLM-7518-CA

Company: Cambridge Isotope Laboratories Inc.
50 Frontage Road
Andover, MA. 01810
USA

Telephone: 1-800-322-1174 International information 1-978-749-8000
Emergency: 1-800-424-9300 International Emergency 1-703-741-5970

HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Not a hazardous substance or mixture

GHS Classification(s)

Not a hazardous substance or mixture

GHS Label elements, including precautionary statements

Hazard statement(s)

See individual Safety Data Sheets

COMPOSITION

Each kit contains four vials:

DLM-7514-CA	ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT
DLM-7515-CA	CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT
DLM-7516-CA	GUANOSINE 5'-TRIPHOSPHATE (GTP), AMMONIUM
DLM-7517-CA	URIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT



ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90% (IN SOLN)

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 10/03/2015

Revision date:

:

Version: 1.0

DLM-7514-CA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixtures
Product name. : ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90% (IN SOLN)
Product code : DLM-7514-CA

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.
50 Frontage Road
Andover, MA 01810
USA

USA: 1-800-322-1174 Int: 1-978-749-8000
cilsales@isotope.com www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)
International: 1-703-741-5970 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

Classification (GHS-US)

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

No labeling applicable

GHS-US labeling

No labeling applicable

2.3. Other hazards

No additional information available

ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90% (IN SOLN) DLM-7514-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
DEUTERIUM OXIDE (D, 99.9%)	(CAS No) 7789-20-0 (EC no) 232-148-9	94.83	Not classified
ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90%	(CAS No) 56-65-5 (Unlabeled, Free Acid)	5.17	Not classified

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
DEUTERIUM OXIDE (D, 99.9%)	(CAS No) 7789-20-0 (EC no) 232-148-9	94.83	Not classified
ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90%	(CAS No) 56-65-5 (Unlabeled, Free Acid)	5.17	Not classified

Full text of R-, H- and EUH-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician. Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact	: Wash with soap and plenty of water. Consult a physician. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: Flush eyes with water as a precaution. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/injuries after inhalation	: May be harmful if inhaled. Causes respiratory tract irritation.
Symptoms/injuries after skin contact	: May be harmful if absorbed through skin. Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation. Causes serious eye damage.
Symptoms/injuries after ingestion	: May be harmful if swallowed.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

suitable extinguishing media	: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide. Foam. Dry powder. Carbon dioxide. Water spray. Sand.
unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Avoid breathing vapors, mist, or gas. Evacuate unnecessary personnel.
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ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90% (IN SOLN) DLM-7514-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.
Hygiene measures : Wash Both hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in freezer (-20°C). Protect from light.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus. Avoid all unnecessary exposure.



Hand protection : Wear suitable protective clothing and gloves. Wear protective gloves.
Eye protection : Wear safety glasses with side shields (or goggles) and a face shield. Chemical goggles or safety glasses.
Skin and body protection : Wear suitable protective clothing.
Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Wear approved mask.
Other information : When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : Liquid.
Molecular mass : 20.02 g/mol (Labeled)
Color : Colourless.
Odor : No data available.
Odor threshold : No data available
pH : 6.0 - 8.0 at 25 °C (77 °F)
Relative evaporation rate (butyl acetate=1) : No data available
Melting point : 3.8 °C (38.8 °F) - lit. (Labeled)
Freezing point : No data available
Boiling point : 101.4 °C (214.5 °F) - lit. (Labeled)
Flash point : No data available
Self ignition temperature : No data available
Decomposition temperature : No data available

ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90% (IN SOLN) DLM-7514-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.11 g/ml at 20 °C (68 °F) (Labeled)
Solubility	: Water: Completely miscible
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Two years after receipt of order if stored as previously stated in "storage" section. Re QC after two years.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90% (IN SOLN)

LD50 oral rat	> 90000 mg/kg
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DEUTERIUM OXIDE (D, 99.9%) (7789-20-0)

LD50 oral rat	> 90000 mg/kg
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Skin corrosion/irritation	: Not classified No data available pH: 6.0 - 8.0 at 25 °C (77 °F)
Serious eye damage/irritation	: Not classified No data available pH: 6.0 - 8.0 at 25 °C (77 °F)
Respiratory or skin sensitization	: Not available No data available
Germ cell mutagenicity	: Not available
Carcinogenicity	: Not classified
Reproductive toxicity	: Not available
Specific target organ toxicity (single exposure)	: Not classified No data available
Specific target organ toxicity (repeated exposure)	: Not classified No data available
Aspiration hazard	: Not classified

ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90% (IN SOLN) DLM-7514-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Potential Adverse human health effects and symptoms	: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Symptoms/injuries after inhalation	: May be harmful if inhaled. Causes respiratory tract irritation.
Symptoms/injuries after skin contact	: May be harmful if absorbed through skin. Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation. Causes serious eye damage.
Symptoms/injuries after ingestion	: May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90% (56-65-5 (Unlabeled, Free Acid))

Persistence and degradability	Not available.
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DEUTERIUM OXIDE (D, 99.9%) (7789-20-0)

Persistence and degradability	Not available.
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12.3. Bioaccumulative potential

ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90% (56-65-5 (Unlabeled, Free Acid))

Bioaccumulative potential	Not available.
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DEUTERIUM OXIDE (D, 99.9%) (7789-20-0)

Bioaccumulative potential	Not available.
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12.4. Mobility in soil

ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90% (56-65-5 (Unlabeled, Free Acid))

Ecology - soil	Not available.
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DEUTERIUM OXIDE (D, 99.9%) (7789-20-0)

Ecology - soil	Not available.
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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Dispose of as unused product.

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information : No supplementary information available.

Special transport precautions : DOT/IMDG/IATA: Not dangerous goods.

Overland transport

No additional information available

ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90% (IN SOLN) DLM-7514-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Transport by sea

No additional information available

Air transport

No additional information available

14.4. Environmental hazards

Other information : No supplementary information available.

14.5. Special precautions for user

Special transport precautions : DOT/IMDG/IATA: Not dangerous goods.

14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90% (IN SOLN)

Listed on the Canadian DSL (Domestic Substances List) inventory.

15.2.1. National regulations

No additional information available

15.3. US State regulations

ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90% (IN SOLN)()

State or local regulations	U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
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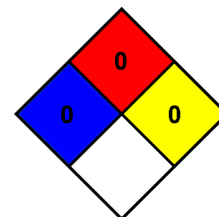
SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

NFPA health hazard : 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 0 Minimal Hazard - No significant risk to health

Flammability : 0 Minimal Hazard

Physical : 0 Minimal Hazard

ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90% (IN SOLN) DLM-7514-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

CIL Multi-Solvent Mixture SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product



CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEM PUR. >90% (IN SOLN)

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 15/12/2014

Revision date: 01/07/2015

Version: 1.0

DLM-7515-CA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixtures
Product name : CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEM PUR. >90% (IN SOLN)
Product code : DLM-7515-CA

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.
50 Frontage Road
Andover, MA 01810
USA

USA: 1-800-322-1174 Int: 1-978-749-8000
cilsales@isotope.com www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)
International: 1-703-741-5970 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

Classification (GHS-US)

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

No labeling applicable

GHS-US labeling

No labeling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEM PUR. >90% (IN SOLN) DLM-7515-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
WATER UNLABELED	(CAS No) 7732-18-5 (EC no) 231-791-2	94.7	Not classified
CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEM PUR. >90%	(CAS No) 65-47-4 (Unlabeled, Free Acid)	5.3	Not classified

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
WATER UNLABELED	(CAS No) 7732-18-5 (EC no) 231-791-2	94.7	Not classified
CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEM PUR. >90%	(CAS No) 65-47-4 (Unlabeled, Free Acid)	5.3	Not classified

Full text of R-, H- and EUH-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician. Assure fresh air breathing. Allow the victim to rest.
- First-aid measures after skin contact : Wash with soap and plenty of water. Consult a physician. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Flush eyes with water as a precaution. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

- Symptoms/injuries after inhalation : May be harmful if inhaled. Causes respiratory tract irritation.
- Symptoms/injuries after skin contact : May be harmful if absorbed through skin. Causes skin irritation.
- Symptoms/injuries after eye contact : Causes eye irritation. Causes serious eye damage.
- Symptoms/injuries after ingestion : May be harmful if swallowed.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide. Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Avoid breathing vapors, mist, or gas. Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEM PUR. >90% (IN SOLN) DLM-7515-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

Hygiene measures : Wash Both hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in freezer (-20°C). Protect from light.

Incompatible products : Strong bases. strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus. Avoid all unnecessary exposure.



Hand protection : Wear suitable protective clothing and gloves. Wear protective gloves.

Eye protection : Wear safety glasses with side shields (or goggles) and a face shield. Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Wear approved mask.

Other information : When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

The properties listed below are for the solvent, the main component of this mixture.

Physical state : Liquid

Appearance : Liquid.

Molecular mass : 18.02 g/mol

Color : Colourless.

Odor : No data available.

Odor threshold : No data available

pH : 6.0 - 8.0 at 25 °C (77 °F)

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : 0.0 °C (32.0 °F)

Freezing point : No data available

Boiling point : 100.0 °C (212.0 °F)

Flash point : No data available

Self ignition temperature : No data available

Decomposition temperature : No data available

CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEM PUR. >90% (IN SOLN) DLM-7515-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Density	: 1 g/ml at 20 °C (68 °F)
Solubility	: Water: Completely miscible
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Two years after receipt of order if stored as previously stated in "storage" section. Re QC after two years.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEM PUR. >90% (IN SOLN)

LD50 oral rat	> 90000 mg/kg
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WATER UNLABELED (7732-18-5)

LD50 oral rat	> 90000 mg/kg
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Skin corrosion/irritation	: Not classified No data available pH: 6.0 - 8.0 at 25 °C (77 °F)
Serious eye damage/irritation	: Not classified No data available pH: 6.0 - 8.0 at 25 °C (77 °F)
Respiratory or skin sensitization	: Not available No data available
Germ cell mutagenicity	: Not available
Carcinogenicity	: Not classified
Reproductive toxicity	: Not available
Specific target organ toxicity (single exposure)	: Not classified No data available
Specific target organ toxicity (repeated exposure)	: Not classified No data available
Aspiration hazard	: Not classified

CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEM PUR. >90% (IN SOLN) DLM-7515-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Potential Adverse human health effects and symptoms	: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Symptoms/injuries after inhalation	: May be harmful if inhaled. Causes respiratory tract irritation.
Symptoms/injuries after skin contact	: May be harmful if absorbed through skin. Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation. Causes serious eye damage.
Symptoms/injuries after ingestion	: May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEM PUR. >90% (65-47-4 (Unlabeled, Free Acid))

Persistence and degradability	Not available.
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12.3. Bioaccumulative potential

CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEM PUR. >90% (65-47-4 (Unlabeled, Free Acid))

Bioaccumulative potential	Not available.
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12.4. Mobility in soil

CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEM PUR. >90% (65-47-4 (Unlabeled, Free Acid))

Ecology - soil	Not available.
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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.
Waste disposal recommendations	: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Ecology - waste materials	: Dispose of as unused product.

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information	: No supplementary information available.
Special transport precautions	: Not dangerous goods.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEM PUR. >90% (IN SOLN) DLM-7515-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

14.4. Environmental hazards

Other information : No supplementary information available.

14.5. Special precautions for user

Special transport precautions : Not dangerous goods.

14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEM PUR. >90% (IN SOLN)

Listed on the Canadian DSL (Domestic Substances List) inventory.

15.2.1. National regulations

No additional information available

15.3. US State regulations

CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEM PUR. >90% (IN SOLN)()

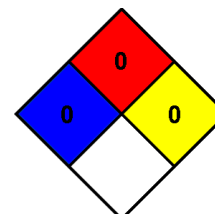
State or local regulations

U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - New Jersey - Right to Know Hazardous Substance List
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

NFPA health hazard : 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard : 0 - Materials that will not burn.
NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 0 Minimal Hazard - No significant risk to health
Flammability : 0 Minimal Hazard
Physical : 0 Minimal Hazard

CIL Mixture SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product



GUANOSINE 5'-TRIPHOSPHATE (GTP), AMMONIUM SALT (D, 97%+) CHEM PURITY >90% IN SOLN

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 10/04/2014

Revision date:

:

Version: 1.0

DLM-7516-CA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixtures
Product name. : GUANOSINE 5'-TRIPHOSPHATE (GTP), AMMONIUM SALT (D, 97%+) CHEM PURITY >90% IN SOLN
Product code : DLM-7516-CA

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.
50 Frontage Road
Andover, MA 01810
USA

USA: 1-800-322-1174 Int: 1-978-749-8000
cilsales@isotope.com www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)
International: 1-703-741-5970 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

Classification (GHS-US)

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

No labeling applicable

GHS-US labeling

No labeling applicable

2.3. Other hazards

No additional information available

GUANOSINE 5'-TRIPHOSPHATE (GTP), AMMONIUM SALT (D, 97%+) CHEM PURITY >90% IN SOLN DLM-7516-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
DEUTERIUM OXIDE (D, 99.9%)	(CAS No) 7789-20-0 (EC no) 232-148-9	94.7	Not classified
GUANOSINE 5'-TRIPHOSPHATE AMMONIUM SALT (15N5, 98-99%)	(CAS No) 86-01-1 (Unlabeled, Free Acid)	5.3	Not classified

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
DEUTERIUM OXIDE (D, 99.9%)	(CAS No) 7789-20-0 (EC no) 232-148-9	94.7	Not classified
GUANOSINE 5'-TRIPHOSPHATE AMMONIUM SALT (15N5, 98-99%)	(CAS No) 86-01-1 (Unlabeled, Free Acid)	5.3	Not classified

Full text of R-, H- and EUH-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Move out of dangerous area. Consult a physician and show this safety data sheet.
First-aid measures after inhalation	: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	: Wash with soap and plenty of water. Consult a physician.
First-aid measures after eye contact	: Flush eyes with water as a precaution.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

Symptoms/injuries after inhalation	: May be harmful if inhaled. May cause respiratory tract irritation.
Symptoms/injuries after skin contact	: May be harmful if absorbed through skin. May cause skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation.
Symptoms/injuries after ingestion	: May be harmful if swallowed.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	: The product itself does not burn.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Avoid breathing vapors, mist, or gas.
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6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

No special environmental precautions required.

6.3. Methods and material for containment and cleaning up

For containment	: Keep in suitable, closed containers for disposal.
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GUANOSINE 5'-TRIPHOSPHATE (GTP), AMMONIUM SALT (D, 97%+)

CHEM PURITY >90% IN SOLN DLM-7516-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in freezer (-20°C). Protect from light.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Personal protective equipment : Safety glasses. Gloves. Protective clothing. Respiratory protection of the dependent type.



Hand protection : Wear suitable protective clothing and gloves.

Eye protection : Wear safety glasses with side shields (or goggles) and a face shield.

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : When appropriate, use NIOSH/CEN approved respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Molecular mass	: 20.02 g/mol (Labeled)
Color	: Colourless.
Odor	: No data available.
Odor threshold	: No data available
pH	: 6.0 - 8.0 at 25 °C (77 °F)
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: 0.0 °C (32.0 °F)
Freezing point	: No data available
Boiling point	: 100.0 °C (212.0 °F)
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.107 g/ml at 20 °C (68 °F) (Labeled)
Solubility	: Water: Completely miscible
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

GUANOSINE 5'-TRIPHOSPHATE (GTP), AMMONIUM SALT (D, 97%+) CHEM PURITY >90% IN SOLN DLM-7516-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Two years after receipt of order if stored as previously stated in "storage" section. Re QC after two years.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

GUANOSINE 5'-TRIPHOSPHATE (GTP), AMMONIUM SALT (D, 97%+) CHEM PURITY >90% IN SOLN

LD50 oral rat	> 90000 mg/kg
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DEUTERIUM OXIDE (D, 99.9%) (7789-20-0)

LD50 oral rat	> 90000 mg/kg
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Skin corrosion/irritation : Not classified

pH: 6.0 - 8.0 at 25 °C (77 °F)

Serious eye damage/irritation : Not classified

pH: 6.0 - 8.0 at 25 °C (77 °F)

Respiratory or skin sensitization : Not available

No data available

Germ cell mutagenicity : Not available

Carcinogenicity : Not classified

Reproductive toxicity : Not available

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : The chemical, physical, and toxicological properties have not been thoroughly investigated.

Symptoms/injuries after inhalation : May be harmful if inhaled. May cause respiratory tract irritation.

Symptoms/injuries after skin contact : May be harmful if absorbed through skin. May cause skin irritation.

Symptoms/injuries after eye contact : Causes eye irritation.

Symptoms/injuries after ingestion : May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

GUANOSINE 5'-TRIPHOSPHATE (GTP), AMMONIUM SALT (D, 97%+) CHEM PURITY >90% IN SOLN

Persistence and degradability	Not available.
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GUANOSINE 5'-TRIPHOSPHATE (GTP), AMMONIUM SALT (D, 97%+) CHEM PURITY >90% IN SOLN DLM-7516-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DEUTERIUM OXIDE (D, 99.9%) (7789-20-0)	
Persistence and degradability	Not available.

12.3. Bioaccumulative potential

GUANOSINE 5'-TRIPHOSPHATE (GTP), AMMONIUM SALT (D, 97%+) CHEM PURITY >90% IN SOLN	
Bioaccumulative potential	Not available.

DEUTERIUM OXIDE (D, 99.9%) (7789-20-0)	
Bioaccumulative potential	Not available.

12.4. Mobility in soil

GUANOSINE 5'-TRIPHOSPHATE (GTP), AMMONIUM SALT (D, 97%+) CHEM PURITY >90% IN SOLN	
Ecology - soil	Not available.

DEUTERIUM OXIDE (D, 99.9%) (7789-20-0)	
Ecology - soil	Not available.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other adverse effects : Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information : No supplementary information available.

Special transport precautions : Not dangerous goods.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

14.4. Environmental hazards

Other information : No supplementary information available.

14.5. Special precautions for user

Special transport precautions : Not dangerous goods.

14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

GUANOSINE 5'-TRIPHOSPHATE (GTP), AMMONIUM SALT (D, 97%+) CHEM PURITY >90% IN SOLN DLM-7516-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

15.2. International regulations

CANADA

GUANOSINE 5'-TRIPHOSPHATE (GTP), AMMONIUM SALT (D, 97%+) CHEM PURITY >90% IN SOLN

Listed on the Canadian DSL (Domestic Substances List) inventory.

15.2.1. National regulations

No additional information available

15.3. US State regulations

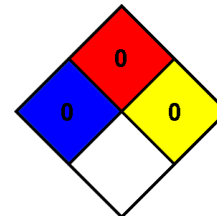
GUANOSINE 5'-TRIPHOSPHATE (GTP), AMMONIUM SALT (D, 97%+) CHEM PURITY >90% IN SOLN()

State or local regulations	U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
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SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

NFPA health hazard : 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard : 0 - Materials that will not burn.
NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 0 Minimal Hazard - No significant risk to health
Flammability : 0 Minimal Hazard
Physical : 0 Minimal Hazard

CIL Multi-Solvent Mixture SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product



URIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEMICAL PURITY 90%+

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 10/03/2015

Revision date: 01/07/2015

Version: 1.0

DLM-7517-CA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixtures
Product name. : URIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEMICAL PURITY 90%+
Product code : DLM-7517-CA

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

1.2.1. Relevant identified uses

Main use category : Professional use
Industrial/Professional use spec : For professional use only.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.
50 Frontage Road
Andover, MA 01810
USA

USA: 1-800-322-1174 Int: 1-978-749-8000
cilsales@isotope.com www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)
International: 1-703-741-5970 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

Classification (GHS-US)

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

No labeling applicable

GHS-US labeling

No labeling applicable

2.3. Other hazards

No additional information available

URIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+)

CHEMICAL PURITY 90%+ DLM-7517-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
WATER UNLABELED	(CAS No) 7732-18-5 (EC no) 231-791-2	94.69	Not classified
URIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D, 97%+) CHEMICAL PURITY 90%+	(CAS No) 86-01-1 (Unlabeled, Free Acid)	5.31	Not classified

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
WATER UNLABELED	(CAS No) 7732-18-5 (EC no) 231-791-2	94.69	Not classified
URIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D, 97%+) CHEMICAL PURITY 90%+	(CAS No) 86-01-1 (Unlabeled, Free Acid)	5.31	Not classified

Full text of R-, H- and EUH-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician. Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact	: Wash with soap and plenty of water. Consult a physician. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: Flush eyes with water as a precaution. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/injuries after inhalation	: May be harmful if inhaled. Causes respiratory tract irritation.
Symptoms/injuries after skin contact	: May be harmful if absorbed through skin. Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation. Causes serious eye damage.
Symptoms/injuries after ingestion	: May be harmful if swallowed.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

suitable extinguishing media	: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide. Foam. Dry powder. Carbon dioxide. Water spray. Sand.
unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Avoid breathing vapors, mist, or gas. Evacuate unnecessary personnel.
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URIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+)

CHEMICAL PURITY 90%+ DLM-7517-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.
Hygiene measures : Wash Both hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in freezer (-20°C). Protect from light.
Incompatible products : Strong bases. strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus. Avoid all unnecessary exposure.



Hand protection : Wear suitable protective clothing and gloves. Wear protective gloves.
Eye protection : Wear safety glasses with side shields (or goggles) and a face shield. Chemical goggles or safety glasses.
Skin and body protection : Wear suitable protective clothing.
Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Wear approved mask.
Other information : When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

The properties listed below are for the solvent, the main component of this mixture.

Physical state : Liquid
Appearance : Liquid.
Molecular mass : 18.02 g/mol
Color : Colourless.
Odor : No data available.
Odor threshold : No data available
pH : 6.0 - 8.0 at 25 °C (77 °F)
Relative evaporation rate (butyl acetate=1) : No data available
Melting point : 0.0 °C (32.0 °F)
Freezing point : No data available
Boiling point : 100.0 °C (212.0 °F)
Flash point : No data available

URIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+)

CHEMICAL PURITY 90%+ DLM-7517-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Density	: 1 g/ml at 20 °C (68 °F)
Solubility	: Water: Completely miscible
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Two years after receipt of order if stored as previously stated in "storage" section. Re QC after two years.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

URIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEMICAL PURITY 90%+

LD50 oral rat	> 90000 mg/kg
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WATER UNLABELED (7732-18-5)

LD50 oral rat	> 90000 mg/kg
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Skin corrosion/irritation	: Not classified No data available pH: 6.0 - 8.0 at 25 °C (77 °F)
Serious eye damage/irritation	: Not classified No data available pH: 6.0 - 8.0 at 25 °C (77 °F)
Respiratory or skin sensitization	: Not available No data available
Germ cell mutagenicity	: Not available
Carcinogenicity	: Not classified
Reproductive toxicity	: Not available
Specific target organ toxicity (single exposure)	: Not classified No data available
Specific target organ toxicity (repeated exposure)	: Not classified No data available

URIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+)

CHEMICAL PURITY 90%+ DLM-7517-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Symptoms/injuries after inhalation	: May be harmful if inhaled. Causes respiratory tract irritation.
Symptoms/injuries after skin contact	: May be harmful if absorbed through skin. Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation. Causes serious eye damage.
Symptoms/injuries after ingestion	: May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

URIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D, 97%+) CHEMICAL PURITY 90%+ (86-01-1 (Unlabeled, Free Acid))

Persistence and degradability	Not available.
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12.3. Bioaccumulative potential

URIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D, 97%+) CHEMICAL PURITY 90%+ (86-01-1 (Unlabeled, Free Acid))

Bioaccumulative potential	Not available.
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12.4. Mobility in soil

URIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D, 97%+) CHEMICAL PURITY 90%+ (86-01-1 (Unlabeled, Free Acid))

Ecology - soil	Not available.
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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Dispose of as unused product.

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

URIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+)

CHEMICAL PURITY 90%+ DLM-7517-CA

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

14.4. Environmental hazards

Other information : No supplementary information available.

14.5. Special precautions for user

14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

URIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEMICAL PURITY 90%+

Listed on the Canadian DSL (Domestic Substances List) inventory.

15.2.1. National regulations

No additional information available

15.3. US State regulations

URIDINE 5'-TRIPHOSPHATE, AMMONIUM SALT (D8, 97%+) CHEMICAL PURITY 90%+()

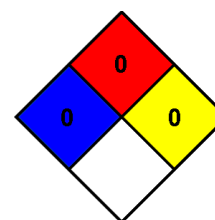
State or local regulations

U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - New Jersey - Right to Know Hazardous Substance List
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

NFPA health hazard : 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard : 0 - Materials that will not burn.
NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 0 Minimal Hazard - No significant risk to health
Flammability : 0 Minimal Hazard
Physical : 0 Minimal Hazard

CIL Mixture SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product