

# **CAMBRIDGE ISOTOPE LABORATORIES**

#### PRODUCT AND COMPANY IDENTIFICATION

Product Name:		CLEOSIDE 5'-TRIPHOSPHATE PURITY >90% (NH4 SALTS/	-
Catalog No:	DLM-7518-CA		
Company:	Cambridge Isotope 50 Frontage Road Andover, MA. 018 USA		
Telephone: Emergency:	1-800-322-1174 1-800-424-9300	International information International Emergency	20707.00000

### 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



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**

1.1.	Product identifier	
Product	form	: Mixtures
Product	name.	: ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90% (I SOLN)
Product code		: DLM-7514-CA
1.2.	Relevant identified uses of the su	bstance or mixture and uses advised against
1.2.1.	Relevant identified uses	
	al/Professional use spec	: For professional use only.
1.2.2. No addit	Uses advised against tional information available	
1.3.	Details of the supplier of the safet	ty data sheet
50 Front	dge Isotope Laboratories, Inc. tage Road r, MA 01810	
	-800-322-1174         Int: 1-978-749-8000           @isotope.com         www.isotope.com	
	Emergency telephone number	
Emerge	ncy numbers:	
	ec: 1-800-424-9300 (24 hours) onal: 1-703-741-5970 (24 hours)	
SECTI	<b>ON 2: Hazards identification</b>	
2.1.	Classification of the substance or	mixture
Classifi Not clas	cation according to Regulation (EC) sified	) No. 1272/2008 [CLP]
Classifi Not clas	cation according to Directive 67/548 sified	3/EEC or 1999/45/EC
Classifi Not clas	cation (GHS-US) sified	
	e physicochemical, human health an tional information available	nd environmental effects
2.2.	Label elements	
	g according to Regulation (EC) No. ing applicable	1272/2008 [CLP]

No labeling applicable

**Other hazards** 2.3.

### 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	<b>.</b> . ,

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

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 coultionsly 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. Othain emergency medical attention.         4.2.       Most important symptoms and effects, both acute and delayed         Symptoms/injuries after skin contact       : May be harmful if absorbed through skin. Causes skin 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 availabl	SECTION 4: First aid measures	
anagerous 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 soag and pelvh 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. Sinse 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 absorbed through skin. Causes skin irritation.         Symptoms/injuries after inhalation       : May be harmful if absorbed through skin. Causes skin irritation.         Symptoms/injuries after inhelation       : May be harmful if absorbed through skin. Causes skin irritation.         Symptoms/injuries after inhelation       : May be harmful if swallowed.         4.3.       Indication of any immediate medical attention and special treatment ne	4.1. Description of first aid measures	
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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. Dotain 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 eye contact       : Causes eye irritation. Causes serious eye damage.         Symptoms/injuries after eye contact       : May be harmful if swallowed.         4.3.       Indication of any immediate medical attention and special treatment needed         No additional information available       : 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. Exer	First-aid measures after inhalation	
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       : 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       : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.         5.2.       Special hazards arising from the substance or mixture         No additional in	First-aid measures after skin contact	
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6.1.1. For non-emergency personnel		
Emergency procedures : Avoid breatning vapors, mist, or gas. Evacuate unnecessary personnel.	Emergency procedures	: Avoid breathing vapors, mist, or gas. Evacuate unnecessary personnel.
Example and the state of the st	Firefighting instructions Protection during firefighting SECTION 6: Accidental release mea 6.1. Personal precautions, protective ec 6.1.1. For non-emergency personnel	chemical fire. Avoid (reject) fire-fighting water to enter environment. Do not enter fire area without proper protective equipment, including respiratory protection. Sures uipment and emergency procedures

### 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

according to Regulation (EC) No. 453/2010 and accord	ding 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 to sewers and public waters. Notify authorities	o so. Do not let product enter drains. Discharge into the environment must be avoided. Prevent entry if liquid enters sewers or public waters.
6.3. Methods and material for contain	ment and cleaning up
Methods for cleaning up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collec spillage. Store away from other materials.
6.4. Reference to other sections	
See Heading 8. Exposure controls and person	al 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, inclu	ding 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/per	rsonal 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 safe 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.
<b>SECTION 9: Physical and chemica</b>	l properties
9.1. Information on basic physical and	I 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
pН	: 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)
Floop point	. No data available

- : No data available
- Flash point Self ignition temperature : No data available Decomposition temperature
  - : No data available

### 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

#### **Chemical stability** 10.2.

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	
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Not established.

#### **Conditions to avoid** 10.4.

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**

#### Information on toxicological effects 11.1.

Acute toxicity

: Not classified ADENOSINE 5'-TRIPHOSPHATE (ATP), AMMONIUM SALT (D, 97%+) CHEM PUR. >90% (IN SOLN)

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

### 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

	MMONIUM SALT (D, 97%+) CHEM PUR. >90% (56-65-5 (Unlabeled, Free Acid)) Not available.
Persistence and degradability	
DEUTERIUM OXIDE (D, 99.9%) (7789-20-0	
Persistence and degradability	Not available.
12.3. Bioaccumulative potential	
	MMONIUM SALT (D, 97%+) CHEM PUR. >90% (56-65-5 (Unlabeled, Free Acid))
Bioaccumulative potential	Not available.
DEUTERIUM OXIDE (D, 99.9%) (7789-20-0	
Bioaccumulative potential	Not available.
12.4. Mobility in soil	
ADENOSINE 5'-TRIPHOSPHATE (ATP), A	MMONIUM SALT (D, 97%+) CHEM PUR. >90% (56-65-5 (Unlabeled, Free Acid))
Ecology - soil	Not available.
DEUTERIUM OXIDE (D, 99.9%) (7789-20-0	
Ecology - soil	Not available.
12.5. Results of PBT and vPvB assess	ment
No additional information available	
12.6. Other adverse effects	
No additional information available	
<b>SECTION 13: Disposal considerati</b>	ions
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.
Eastern	
Ecology - waste materials	: Dispose of as unused product.
	· · ·
	on
SECTION 14: Transport informatic In accordance with ADR / RID / ADNR / IMDG 14.1. UN number	on
SECTION 14: Transport informatic In accordance with ADR / RID / ADNR / IMDG	on
SECTION 14: Transport informatic In accordance with ADR / RID / ADNR / IMDG 14.1. UN number	on
SECTION 14: Transport informatic In accordance with ADR / RID / ADNR / IMDG 14.1. UN number Not applicable	on
SECTION 14: Transport informatic In accordance with ADR / RID / ADNR / IMDG 14.1. UN number Not applicable 14.2. UN proper shipping name	on
SECTION 14: Transport informatic In accordance with ADR / RID / ADNR / IMDG 14.1. UN number Not applicable 14.2. UN proper shipping name Not applicable	on G / ICAO / IATA
SECTION 14: Transport information In accordance with ADR / RID / ADNR / IMDO 14.1. UN number Not applicable 14.2. UN proper shipping name Not applicable 14.3. Additional information	on
SECTION 14: Transport information In accordance with ADR / RID / ADNR / IMDG 14.1. UN number Not applicable 14.2. UN proper shipping name Not applicable 14.3. Additional information Other information Special transport precautions	S / ICAO / IATA : No supplementary information available.
SECTION 14: Transport information In accordance with ADR / RID / ADNR / IMDO 14.1. UN number Not applicable 14.2. UN proper shipping name Not applicable 14.3. Additional information Other information Special transport precautions Overland transport	S / ICAO / IATA : No supplementary information available.
SECTION 14: Transport information In accordance with ADR / RID / ADNR / IMDG 14.1. UN number Not applicable 14.2. UN proper shipping name Not applicable 14.3. Additional information Other information Special transport precautions	S / ICAO / IATA : No supplementary information available.

### 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 in	formation	: 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

ECTION 15: Regulatory information
5.1. US Federal regulations
lo 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

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.	

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

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



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

<b>SECTION 1: Identification of the s</b>	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 s	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 safe	ety 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)	
<b>SECTION 2: Hazards identification</b>	n
2.1. Classification of the substance of	or mixture
Classification according to Regulation (E	C) No. 1272/2008 [CLP]
Not classified	
Classification according to Directive 67/54	48/EEC or 1999/45/EC
Not classified	
Classification (GHS-US) Not classified	
NULUIASSIIIEU	
Adverse physicochemical, human health No additional information available	and environmental effects
	and environmental effects
No additional information available	
No additional information available 2.2. Label elements Labeling according to Regulation (EC) No	

2.3. Other hazards

No additional information available

### **SECTION 3: Composition/information on ingredients**

### 3.1. Substances

Not applicable

## 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]
Name WATER UNLABELED	Product identifier           (CAS No) 7732-18-5           (EC no) 231-791-2	% 94.7	Regulation (EC) No.

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

: 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).
: 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.
: Wash with soap and plenty of water. Consult a physician. Remove affected clothing and wash exposed skin area with mild soap and water, followed by warm water rinse.
: Flush eyes with water as a precaution. Rinse cautiously with water for several minutes. Remov contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTE or doctor/physician.
: 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.
cts, both acute and delayed
: May be harmful if inhaled. Causes respiratory tract irritation.
: May be harmful if absorbed through skin. Causes skin irritation.
: Causes eye irritation. Causes serious eye damage.
: May be harmful if swallowed.
I attention and special treatment needed
: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide. Foam. Dry powder. Carbon dioxide. Water spray. Sand.
: Do not use a heavy water stream.
bstance or mixture
: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
: Do not enter fire area without proper protective equipment, including respiratory protection.
sures
uipment and emergency procedures
: Avoid breathing vapors, mist, or gas. Evacuate unnecessary personnel.
. There are an and the second of the second se
: Equip cleanup crew with proper protection. : Ventilate area.

### 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.

|--|

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, inc	cluding 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
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: 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	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	
рН	: 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	

### 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	
WATER UNLABELED (7732-18-5)		
LD50 oral rat	> 90000 mg/kg	
Skin corrosion/irritation	: Not classified No data available pH: 6.0 - 8.0 at 25 °C (77 °F)	
Serious eye damage/irritation	<ul> <li>Not classified</li> <li>No data available</li> <li>pH: 6.0 - 8.0 at 25 °C (77 °F)</li> </ul>	
Respiratory or skin sensitization	: Not available No data available	
Germ cell mutagenicity Carcinogenicity	: Not available : Not classified	
Reproductive toxicity Specific target organ toxicity (single exposure)	<ul> <li>Not available</li> <li>Not classified</li> <li>No data available</li> </ul>	
Specific target organ toxicity (repeated exposure)	: Not classified No data available	
Aspiration hazard	: Not classified	

## 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.

<b>SECTION 12: Ecological information</b>	
12.1. Toxicity	
No additional information available	
12.2. Persistence and degradability	
	ALT (D8, 97%+) CHEM PUR. >90% (65-47-4 (Unlabeled, Free Acid))
Persistence and degradability	Not available.
12.3. Bioaccumulative potential	
CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SA	ALT (D8, 97%+) CHEM PUR. >90% (65-47-4 (Unlabeled, Free Acid))
Bioaccumulative potential	Not available.
12.4. Mobility in soil	
CYTIDINE 5'-TRIPHOSPHATE, AMMONIUM SA	ALT (D8, 97%+) CHEM PUR. >90% (65-47-4 (Unlabeled, Free Acid))
Ecology - soil	Not available.
12.5. Results of PBT and vPvB assessmen	t
No additional information available	
12.6. Other adverse effects	
No additional information available	
<b>SECTION 13: Disposal considerations</b>	5
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 / IC	AO / IATA
14.1. UN number	
Not applicable	
14.2. UN proper shipping name	
Not applicable	
14.3. Additional information	
	: No supplementary information available.
	: Not dangerous goods.
Overland transport	
No additional information available	
Transport by sea	
No additional information available	
Air transport	
No additional information available	

### 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. En	vironmental hazards	
Other informa	ation	: No supplementary information available.
14.5. Sp	ecial precautions for user	
Special trans	sport 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 regul	ations
---------------------------	--------

#### 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.

<b>SECTION 16: Other inform</b>	nation
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



### 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

	ubstance/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 su	bstance 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 safe	ty data sheet
Cambridge Isotope Laboratories, Inc. 50 Frontage Road Andover, MA 01810 USA	
USA: 1-800-322-1174 Int: 1-978-749-8000 <u>cilsales@isotope.com</u> www.isotope.com	
Emergency telephone number	
Emergency numbers:	
Chemtrec: 1-800-424-9300 (24 hours) International: 1-703-741-5970 (24 hours)	
<b>SECTION 2: Hazards identification</b>	
2.1. Classification of the substance or	r mixture
Classification according to Regulation (EC Not classified	) No. 1272/2008 [CLP]
Classification according to Directive 67/544 Not classified	8/EEC or 1999/45/EC
Classification (GHS-US) Not classified	
Adverse physicochemical, human health a No additional information available	nd environmental effects
2.2. Label elements	
Labeling according to Regulation (EC) No. No labeling applicable	1272/2008 [CLP]

#### **GHS-US** labeling

No labeling applicable

#### 2.3. Other hazards

### 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]
Name DEUTERIUM OXIDE (D, 99.9%)	Product identifier (CAS No) 7789-20-0 (EC no) 232-148-9	% 94.7	Regulation (EC) No.

#### 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 effect	ts, 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 medica	l 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.	
5.2. Special hazards arising from the su	bstance 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 meas	sures	
6.1. Personal precautions, protective eq	uipment and emergency procedures	
6.1.1. For non-emergency personnel		
Emergency procedures	: Avoid breathing vapors, mist, or gas.	
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.	

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, includi	ng 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/pers	onal 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 c	
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
<b>.</b>	

### 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

according to Regulation (EC) No. 453/2010 and accordin			
Explosive limits	ve limits : No data available		
9.2. Other information			
No additional information available			
<b>SECTION 10: Stability and reactivity</b>			
10.1. Reactivity			
No additional information available			
10.2. Chemical stability			
Two years after receipt of order if stored as prev	viously 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 informat	tion		
	: Not classified		
11.1.         Information on toxicological effects           Acute toxicity         Incompare to the second se	: Not classified		
11.1.         Information on toxicological effects           Acute toxicity         Incompare to the second se			
Information on toxicological effects           Acute toxicity           GUANOSINE 5'-TRIPHOSPHATE (GTP), AMI           LD50 oral rat	: Not classified MONIUM SALT (D, 97%+) CHEM PURITY >90% IN SOLN		
11.1.         Information on toxicological effects           Acute toxicity         GUANOSINE 5'-TRIPHOSPHATE (GTP), AMI	: Not classified MONIUM SALT (D, 97%+) CHEM PURITY >90% IN SOLN		
11.1.       Information on toxicological effects         Acute toxicity       GUANOSINE 5'-TRIPHOSPHATE (GTP), AMI         LD50 oral rat       DEUTERIUM OXIDE (D, 99.9%) (7789-20-0)	: Not classified MONIUM SALT (D, 97%+) CHEM PURITY >90% IN SOLN > 90000 mg/kg		
11.1.       Information on toxicological effects         Acute toxicity       GUANOSINE 5'-TRIPHOSPHATE (GTP), AMI         LD50 oral rat       DEUTERIUM OXIDE (D, 99.9%) (7789-20-0)         LD50 oral rat	<ul> <li>Not classified</li> <li>MONIUM SALT (D, 97%+) CHEM PURITY &gt;90% IN SOLN         <ul> <li>&gt; 90000 mg/kg</li> <li>&gt; 90000 mg/kg</li> </ul> </li> </ul>		
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11.1.       Information on toxicological effects         Acute toxicity       GUANOSINE 5'-TRIPHOSPHATE (GTP), AMI         LD50 oral rat       DEUTERIUM OXIDE (D, 99.9%) (7789-20-0)         LD50 oral rat       Skin corrosion/irritation	<ul> <li>Not classified</li> <li>MONIUM SALT (D, 97%+) CHEM PURITY &gt;90% IN SOLN         <ul> <li>&gt; 90000 mg/kg</li> <li>&gt; 90000 mg/kg</li> <li>Source Not classified pH: 6.0 - 8.0 at 25 °C (77 °F)</li> </ul> </li> </ul>		
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SECTION	SECTION 12: Ecological information			
12.1.	Toxicity			
No additi	onal 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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according to Regulation (EC) No. 453/2010 and accordin	ng 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), AM	MONIUM 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), AM	IMONIUM 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 assessme	ent
No additional information available	
12.6. Other adverse effects	
Other adverse effects	: Not available.
SECTION 13: Disposal consideratio	ns
13.1. Waste treatment methods	Waste metericle should be dispased of under conditions which most Federal State, and Local
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 /	ΙCAO / ΙΑΤΑ
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.
	ex II of MARPOL 73/78 and the IBC Code
Not applicable	
<b>SECTION 15: Regulatory informatio</b>	n

SECTION 15: Regulatory information	
15.1. US Federal regulations	
No additional information available	

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#### **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.

<b>SECTION 16: Other inform</b>	ation
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.

ни	ISI	II Ka	ating	

rinne in reaching	
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



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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	substance/mixture and or the company/undertaking
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 s	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	
<ul> <li>1.3. Details of the supplier of the saf</li> <li>Cambridge Isotope Laboratories, Inc.</li> <li>50 Frontage Road</li> <li>Andover, MA 01810</li> <li>USA</li> </ul>	ery data sneet
USA: 1-800-322-1174 Int: 1-978-749-8000 cilsales@isotope.com www.isotope.com	0
Emergency telephone number	
Emergency numbers:	
Chemtrec: 1-800-424-9300 (24 hours) International: 1-703-741-5970 (24 hours)	
SECTION 2: Hazards identificatio	n
2.1. Classification of the substance	or mixture
Classification according to Regulation (E Not classified	C) No. 1272/2008 [CLP]
Classification according to Directive 67/5 Not classified	48/EEC or 1999/45/EC
Classification (GHS-US) Not classified	
Adverse physicochemical, human health No additional information available	and environmental effects
2.2. Label elements	
Labeling according to Regulation (EC) No No labeling applicable	p. 1272/2008 [CLP]
GHS-US labeling	
No labeling applicable	

#### 2.3. Other hazards

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### 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]
Name WATER UNLABELED	Product identifier (CAS No) 7732-18-5 (EC no) 231-791-2	% 94.69	Regulation (EC) No.

#### 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	<ul> <li>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.</li> </ul>
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 effe	cts, 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 medica	al 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 su	ibstance 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 mea	sures
6.1. Personal precautions, protective ed	quipment and emergency procedures
6.1.1. For non-emergency personnel	
Emergency procedures	: Avoid breathing vapors, mist, or gas. Evacuate unnecessary personnel.

## Safety Data Sheet

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 prities if liquid enters sewers or public waters.
6.3. Methods and material for cor	ntainment 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 pe	ersonal protection.
<b>SECTION 7: Handling and stor</b>	age
7.1. Precautions for safe handling	g
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.
	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	
<b>SECTION 8: Exposure controls</b>	/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 safet glasses.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	<ul> <li>Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Wear approved mask.</li> </ul>
Other information	: When using, do not eat, drink or smoke.
<b>SECTION 9: Physical and chen</b>	nical properties
9.1. Information on basic physica	I and chemical properties
The properties listed below are for the solvent, the man	
Physical state	: Liquid
Appearance	: Liquid.
Molecular mass	: 18.02 g/mol
Color	: Colourless.
Odor Odor threshold	: No data available.

- 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)

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	<b>.</b> .
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

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 previo	ously 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 temperature	es.
10.5. Incompatible materials	
strong acids. Strong bases.	
10.6. Hazardous decomposition products	
fume. Carbon monoxide. Carbon dioxide.	
<b>SECTION 11: Toxicological informati</b>	on
11.1. Information on toxicological effects	
Acute toxicity	: Not classified
URIDINE 5'-TRIPHOSPHATE, AMMONIUM SA	
LD50 oral rat	> 90000 mg/kg
WATER UNLABELED (7732-18-5)	
LD50 oral rat	> 90000 mg/kg
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	: Not classified
exposure)	No data available
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### 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	I SALT (D, 97%+) CHEMICAL PURITY 90%+ (86-01-1 (Unlabeled, Free Acid))
Persistence and degradability	Not available.
12.3. Bioaccumulative potential	
URIDINE 5'-TRIPHOSPHATE, AMMONIUM	/ SALT (D, 97%+) CHEMICAL PURITY 90%+ (86-01-1 (Unlabeled, Free Acid))
Bioaccumulative potential	Not available.
12.4. Mobility in soil	
URIDINE 5'-TRIPHOSPHATE, AMMONIUM	I SALT (D, 97%+) CHEMICAL PURITY 90%+ (86-01-1 (Unlabeled, Free Acid))
Ecology - soil	Not available.
12.5. Results of PBT and vPvB assess	ment
No additional information available	
12.6. Other adverse effects	
No additional information available	
SECTION 13: Disposal considerat	ions
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.
<b>SECTION 14: Transport informatic</b>	on .
In accordance with ADR / RID / ADNR / IMDO	3 / 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	

No additional information available

#### Air transport

#### 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 inf	ormation : 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.

<b>SECTION 16: Other inform</b>	nation
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	
Flammability	
Physical	

- : 0 Minimal Hazard No significant risk to health
- : 0 Minimal Hazard
- : 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