



EQUIMOLAR MIX:ATP, GTP(RIBOSE-3',4',5',5"-D4,98%); CTP, UTP(5-D1,RIBOSE-3',4',5',5"-D4,98%) NH4+ SALT

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 14/01/2016
DLM-7862

Revision date: 26/08/2019

Supersedes: 14/01/2016

Version: 1.1

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

1.1. Product identifier

Product form : Mixtures
Product name : EQUIMOLAR MIX:ATP, GTP(RIBOSE-3',4',5',5"-D4,98%); CTP, UTP(5-D1,RIBOSE-3',4',5',5"-D4,98%) NH4+ SALT
Product code : DLM-7862

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 w 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]

Skin Irrit. 2 H315
Eye Irrit. 2 H319
STOT SE 3 H335

Full text of hazard classes and H-statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xi; R36/37/38

Full text of R-phrases: see section 16

GHS-US classification

Skin Irrit. 2 H315
Eye Irrit. 2A H319
STOT SE 3 H335

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

EQUIMOLAR MIX:ATP, GTP(RIBOSE-3',4',5',5"-D4,98%); CTP, UTP(5-D1,RIBOSE-3',4',5',5"-D4,98%) NH4+ SALT


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2.2. Label elements

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

Hazard pictograms (CLP)	:	
		GHS07
Signal word (CLP)	:	Warning
Hazard statements (CLP)	:	H315 - Causes skin irritation H319 - Causes serious eye irritation H335 - May cause respiratory irritation
Precautionary statements (CLP)	:	P261 - Avoid breathing dust, mist. P264 - Wash both hands thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P280 - Wear eye protection, face protection, protective clothing, protective gloves. P302+P352 - IF ON SKIN: Wash with plenty of water. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 - Call a POISON CENTER or doctor if you feel unwell.

GHS-US labeling

Hazard pictograms (GHS-US)	:	
		GHS07
Signal word (GHS-US)	:	Warning
Hazard statements (GHS-US)	:	H315 - Causes skin irritation H319 - Causes serious eye irritation H335 - May cause respiratory irritation
Precautionary statements (GHS-US)	:	P261 - Avoid breathing dust, mist. P264 - Wash Both hands thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P280 - Wear eye protection, face protection, protective clothing, protective gloves. P302+P352 - If on skin: Wash with plenty of water P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P312 - Call a poison center or doctor if you feel unwell P332+P313 - If skin irritation occurs: Get medical advice/attention. P337+P313 - If eye irritation persists: Get medical advice/attention. P362 - Take off contaminated clothing and wash before reuse. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P501 - Dispose of contents/container to Comply with applicable regulations

2.3. Other hazards

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
GTP (3',4',5',5"-D4), AMMONIUM SALT	(CAS-No.) 86-01-1 (Unlabeled, Free Acid)	26.08	Xi; R36/37/38
ATP (3',4',5',5"-D4), AMMONIUM SALT	(CAS-No.) 56-65-5 (Unlabeled, Free Acid) (EC-No.) 213-579-1	25.34	Not classified
UTP (5,3',4',5',5"-D5), AMMONIUM SALT	(CAS-No.) 63-39-8 (Unlabeled, Free Acid)	24.31	Not classified

EQUIMOLAR MIX:ATP, GTP(RIBOSE-3',4',5',5"-D4,98%); CTP, UTP(5-D1,RIBOSE-3',4',5',5"-D4,98%) NH4+ SALT

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Name	Product identifier	%	Classification according to Directive 67/548/EEC
CTP (5,3',4',5',5"-D5), AMMONIUM SALT	(CAS-No.) 65-47-4 (Unlabeled, Free Acid)	24.27	Not classified
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
GTP (3',4',5',5"-D4), AMMONIUM SALT	(CAS-No.) 86-01-1 (Unlabeled, Free Acid)	26.08	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
ATP (3',4',5',5"-D4), AMMONIUM SALT	(CAS-No.) 56-65-5 (Unlabeled, Free Acid) (EC-No.) 213-579-1	25.34	Not classified
UTP (5,3',4',5',5"-D5), AMMONIUM SALT	(CAS-No.) 63-39-8 (Unlabeled, Free Acid)	24.31	Not classified
CTP (5,3',4',5',5"-D5), AMMONIUM SALT	(CAS-No.) 65-47-4 (Unlabeled, Free Acid)	24.27	Not classified
Name	Product identifier	%	GHS-US classification
GTP (3',4',5',5"-D4), AMMONIUM SALT	(CAS-No.) 86-01-1 (Unlabeled, Free Acid)	26.08	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

Full text of R- and H- 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	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	: Wash with plenty of soap and water. Wash contaminated clothing before reuse.
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/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects 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.
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5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

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

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Sweep up and shovel. Keep in suitable, closed containers for disposal.
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6.4. Reference to other sections

No additional information available

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- | | |
|-----------------------------------|--|
| Additional hazards when processed | : Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection. |
| Precautions for safe handling | : Use only outdoors or in a well-ventilated area. |
| 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 (-80°C). Protect from light, air and moisture. |
|--------------------|---|

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. |
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- | | |
|--------------------------|---|
| 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 | : Wear suitable protective clothing. |
| 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 | : Solid |
| Appearance | : Solid |
| Color | : White |
| Odor | : No data available |
| Odor threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Melting point | : No data available |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Auto-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 |
| Solubility | : No data available |
| 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 |
| Explosion limits | : No data available |

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9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable if stored under recommended conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Not available.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Formed under fire conditions: Carbon oxides, nitrogen oxides, Phosphorus oxides. sodium oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Causes skin irritation. No data available
Serious eye damage/irritation	: Causes serious eye irritation. No data available
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	: May cause respiratory irritation.
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/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: May be harmful if sw allowed.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

EQUIMOLAR MIX:ATP, GTP(RIBOSE-3',4',5',5"-D4,98%); CTP, UTP(5-D1,RIBOSE-3',4',5',5"-D4,98%) NH4+ SALT

Persistence and degradability	Not available.
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ATP (3',4',5',5"-D4), AMMONIUM SALT (56-65-5 (Unlabeled, Free Acid))

Persistence and degradability	Not available.
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UTP (5,3',4',5',5"-D5), AMMONIUM SALT (63-39-8 (Unlabeled, Free Acid))

Persistence and degradability	Not available.
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CTP (5,3',4',5',5"-D5), AMMONIUM SALT (65-47-4 (Unlabeled, Free Acid))

Persistence and degradability	Not available.
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EQUIMOLAR MIX:ATP, GTP(RIBOSE-3',4',5',5"-D4,98%); CTP, UTP(5-D1,RIBOSE-3',4',5',5"-D4,98%) NH4+ SALT

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12.3. Bioaccumulative potential

EQUIMOLAR MIX:ATP, GTP(RIBOSE-3',4',5',5"-D4,98%); CTP, UTP(5-D1,RIBOSE-3',4',5',5"-D4,98%) NH4+ SALT

Bioaccumulative potential	Not available.
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ATP (3',4',5',5"-D4), AMMONIUM SALT (56-65-5 (Unlabeled, Free Acid))

Bioaccumulative potential	Not available.
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UTP (5,3',4',5',5"-D5), AMMONIUM SALT (63-39-8 (Unlabeled, Free Acid))

Bioaccumulative potential	Not available.
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CTP (5,3',4',5',5"-D5), AMMONIUM SALT (65-47-4 (Unlabeled, Free Acid))

Bioaccumulative potential	Not available.
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12.4. Mobility in soil

EQUIMOLAR MIX:ATP, GTP(RIBOSE-3',4',5',5"-D4,98%); CTP, UTP(5-D1,RIBOSE-3',4',5',5"-D4,98%) NH4+ SALT

Ecology - soil	Not available.
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ATP (3',4',5',5"-D4), AMMONIUM SALT (56-65-5 (Unlabeled, Free Acid))

Ecology - soil	Not available.
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UTP (5,3',4',5',5"-D5), AMMONIUM SALT (63-39-8 (Unlabeled, Free Acid))

Ecology - soil	Not available.
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CTP (5,3',4',5',5"-D5), AMMONIUM SALT (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

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.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

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.

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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

EQUIMOLAR MIX:ATP, GTP(RIBOSE-3',4',5',5"-D4,98%); CTP, UTP(5-D1,RIBOSE-3',4',5',5"-D4,98%) NH4+ SALT

Not listed on the Canadian DSL (Domestic Substances List)

15.2.1. National regulations

No additional information available

15.3. US State regulations

EQUIMOLAR MIX:ATP, GTP(RIBOSE-3',4',5',5"-D4,98%); CTP, UTP(5-D1,RIBOSE-3',4',5',5"-D4,98%) NH4+ SALT()

U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
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.

GTP (3',4',5',5"-D4), AMMONIUM SALT (86-01-1 (Unlabeled, Free Acid))

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	

GTP (3',4',5',5"-D4), AMMONIUM SALT (86-01-1 (Unlabeled, Free Acid))

State or local regulations

U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

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.

Full text of R-, H- and EUH-phrases:

Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

EQUIMOLAR MIX:ATP, GTP(RIBOSE-3',4',5',5"-D4,98%); CTP, UTP(5-D1,RIBOSE-3',4',5',5"-D4,98%) NH4+ SALT

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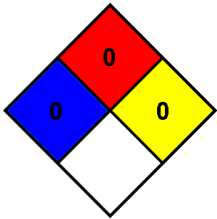
R36/37/38	Irritating to eyes, respiratory system and skin
Xi	Irritant

- NFPA health hazard

: 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.
- NFPA fire hazard

: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
- NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard 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