

**MATERIAL SAFETY DATA SHEET**

**PRODUCT AND COMPANY INFORMATION**

- **Product name:** Capping Kit
- **Catalog number:** CAP-K25
- **Chemical name or synonyms:** none
- **Kit Content**

Component	Quantity	Storage
Ribonuclease inhibitor 40u/μl	50 μl	-20°C
2'O methyltransferase 50u/μl	50 μl	-20°C
Vaccinia capping enzyme 10u/μl	50 μl	-20°C
Capping Buffer 10x	500 μl	-20°C
Nuclease free water	2 ml	-20°C
GTP 10mM	500 μl	-20°C
SAM 32mM	50 μl	-20°C

- **Contact:**

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**SECTION 1-PRODUCT AND COMPANY INFORMATION**

- **Product name:** Ribonuclease Inhibitor 40 u/μl
- **Catalog number:** Component of CAP-K25
- **Chemical name or synonyms:** none

**SECTION 2 – HAZARDS IDENTIFICATION**

**OSHA/HCS status :**

Ribonuclease Inhibitor 40 u/μl

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Emergency overview**

Ribonuclease Inhibitor 40 u/μl

WARNING!



**Hazards Statements**

Ribonuclease Inhibitor 40 u/μl

CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

**Precautions**

Ribonuclease Inhibitor 40 u/μl

Do not ingest. Do not get in eyes. Avoid breathing vapor or mist. Avoid contact with skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

**Potential acute health effects**

**Inhalation**

Ribonuclease Inhibitor 40 u/μl

Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Skin**

Ribonuclease Inhibitor 40 u/μl

Irritating to skin.

**Eyes**

Ribonuclease Inhibitor 40 u/μl

Severely irritating to eyes. Risk of serious damage to eyes.

**Ingestion**

Ribonuclease Inhibitor 40 u/μl

Harmful if swallowed

**Target organs :**

Ribonuclease Inhibitor 40 u/μl

Contains material which may cause damage to the following organs: kidneys, upper respiratory tract,

skin, eye, lens or cornea.

**Potential chronic health effects**

**Carcinogenicity :**

Ribonuclease Inhibitor 40 u/μl

No known significant effects or critical hazards.

**Chronic effects :**

Ribonuclease Inhibitor 40 u/μl

Contains material that may cause target organ damage, based on animal data.

**Mutagenicity :**

Ribonuclease Inhibitor 40 u/μl

No known significant effects or critical hazards.

**Teratogenicity :**

Ribonuclease Inhibitor 40 u/μl

No known significant effects or critical hazards.

**Developmental effects :**

Ribonuclease Inhibitor 40 u/μl

No known significant effects or critical hazards.

**Fertility effects :**

Ribonuclease Inhibitor 40 u/μl

No known significant effects or critical hazards.  
No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

**Inhalation :**

Ribonuclease Inhibitor 40 u/μl

Adverse symptoms may include the following:  
respiratory tract irritation, coughing

**Ingestion :**

Ribonuclease Inhibitor 40 u/μl

No specific data.

**Skin :**

Ribonuclease Inhibitor 40 u/μl

Adverse symptoms may include the following:  
Irritation redness

**Eyes :**

Ribonuclease Inhibitor 40 u/μl

Adverse symptoms may include the following:  
pain or irritation, watering, redness

**Medical conditions**

**aggravated by overexposure**

Ribonuclease Inhibitor 40 u/μl

Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

**SECTION 3 – COMPOSITION, INFORMATION ON INGREDIENTS**

Contains the following hazardous ingredients:

<b><u>Ingredient name</u></b>	<b><u>CAS number</u></b>	<b><u>%</u></b>	<b><u>EINECS</u></b>	<b><u>Classification</u></b>
Glycerol	56-81-5	50%	200-289-5	Skin. Irrit. 2 Eye Irrit. 2
DTT	3483-12-3	< 1%	248-531	Accute tox (O) 4: H302 Eye Irrit. 2A, H319 STOT (SE) 3: H335, H336

**SECTION 4 – FIRST AID MEASURES**

**Eye Contact**

Check for and remove any contact lenses.  
Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

**Skin Contact**

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

**Ingestion**

Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

**Protection of first-aiders**

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

**Notes to physician**

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

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**SECTION 5 – FIRE FIGHTING MEASURES**

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|---|--|
| <ul style="list-style-type: none"> <li>• <b>Extinguishing media:</b></li> <li>• <b>Flammability of the product:</b></li> <li>• <b>Flash Point:</b></li> <li>• <b>Fire hazards in presence of various substances:</b></li> <li>• <b>Fire fighting media and instructions:</b></li> <li>• <b>Protective clothing (fire):</b></li> <li>• <b>Hazardous thermal decomposition products:</b></li> </ul> | <p>Water spray, carbon dioxide, dry chemical powder or appropriate foam.</p> <p>Not available.</p> <p>Not available.</p> <p>Not considered to be flammable.</p> <p>Use an extinguish agent suitable for surrounding fires.</p> <p>Be sure to use an approved/certified respirator or equivalent.</p> <p>Not available.</p> |
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**SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:**

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

**Environmental precautions**

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Methods for Cleaning up**

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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**SECTION 7 – HANDLING AND STORAGE**

- **Handling:** Avoid contact with skin, eyes and clothing. Avoid prolonged or repeated exposure.
- **Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Store at - 20°.
- **Intended use:** Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific application.
- **Packaging materials Suitable:** Use original container.

## SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

### Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be carefully followed.

### Engineering measures :

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal protection

- **Eyes:** Safety glasses.
- **Body:** Lab coat and gloves.
- **Respiratory:** Respirator is not needed under normal and intended conditions of use, if exposures are kept below established limits.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**
  - **Physical State:** Liquid.
  - **Color:** Colorless
  - **Odor:** Not available.
  - **Taste:** Not available.
- **Molecular weight:** Not available.
- **pH:** 7.9
- **Boiling point:** 100°C (212 F).
- **Decomposition temperature:** 100°C (212 F)
- **Melting point:** Not available.
- **Flash point:** Not available.
- **Dispersion properties:** Not applicable.
- **Solubility:** Readily miscible in water.
- **Percent volatile by volume:** N/A
- **Evaporation Rate:** N/A

## SECTION 10 – STABILITY AND REACTIVITY

- **Stability and reactivity:** The product is stable under recommended storage conditions.
- **Conditions to avoid:** Exposure to light, air or moisture over prolonged periods.
- **Materials to avoid:** Strong acids, strong bases, strong oxidizing agents.
- **Hazardous polymerization:** Will not occur.
- **Hazardous decomposition products:** Will not occur.

## SECTION 11 – TOXICOLOGICAL INFORMATION

Product/ingredient	Result	Species	Dose
Glycerol	LD50 Oral	Rat	12600 mg/kg
Glycerol	Eyes Mild Irritant	Rabbit	24h/500 mg
	Skin Mild Irritant	Rabbit	24h/500 mg
DTT	Intraperitoneal LD50	Mouse	154 mg/kg

- **Chronic Toxicological:** DTT - Investigated as a drug.
- **Effects:** Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information. DTT RTECS Number: EK1610000
- **Chronic effects on humans:** Not available
- **Other toxic effects on humans:** Hazardous in case of ingestion, skin or eye contact.
- **IAChronic effects on humans:** Carcinogenic effects: classified none. by NIOSH. By OSHA.
- **Other toxic effects on humans:** None.

## SECTION 12 – ECOLOGICAL INFORMATION

**Ecotoxicity :** No known significant effects or critical hazards

## SECTION 13 – DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements. The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.**

**Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.**

## SECTION 14 – TRANSPORT INFORMATION

**Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**D.O.T.:** Not regulated.

**IATA.:** Not regulated.

**IMDG:** Not regulated.

## SECTION 15 – REGULATORY INFORMATION

<b>HCS Classification</b>	Ribonuclease Inhibitor 40 u/μl	Not regulated.
	Ribonuclease Inhibitor 40 u/μl	Not regulated.
	Ribonuclease Inhibitor 40 u/μl	Irritating material Target organ effects

**U.S. Federal regulations:** **SARA 302/304:** No products were found.  
**SARA 311/312 Hazards identification:** Immediate (acute) health hazard, Delayed (chronic) health hazard

**TSCA 8(a) PAIR** All ingredients are listed on TSCA Inventory of Chemical Substances or exempt from TSCA Inventory requirements.

**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined

**United States inventory (TSCA 8b):** All components are listed or exempted

**Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)** Not listed  
**Clean Air Act Section 602 Class I Substances** Not listed  
**Clean Air Act Section 602 Class II Substances** Not listed  
**DEA List I Chemicals (Precursor Chemicals)** Not listed  
**DEA List II Chemicals (Essential Chemicals)** Not listed

**State Regulations**

Massachusetts	The following compound is listed: GLYCERINE MIST
New York	No compounds are listed
New Jersey	Following compounds are listed: GLYCERIN, GLYCEROL
Pennsylvania	Following compound is listed: GLYCEROL
California Prop 65	No products were found

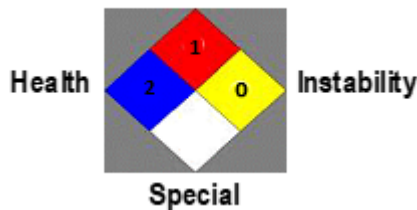
- This product is not classified according to the EU regulations.

**SECTION 16 – OTHER INFORMATION**

**Hazardous Material Information System (U.S.A.):**

<b>Health</b>	<b>2</b>
<b>Fire hazard</b>	<b>1</b>
<b>Reactivity</b>	<b>0</b>
<b>Personal protection</b>	<b>B</b>

**National Fire Protection Association (U.S.A.):**



0 = not significant	3 = high
1 = slight	4 = extreme
2 = moderate	* = chronic

**Hazard statements**

H302 Harmful if swallowed  
H315 Causes skin irritation  
H319 Causes serious eye irritation  
H335 May cause respiratory irritation  
H373 Causes damage to organs through prolonged or repeated exposure category 2 (lungs)  
H372 Causes damage to organs through prolonged or repeated exposure category 1 (gastrointestinal) (oral)  
H411 Toxic to aquatic life with long-lasting effects

**Precautionary statements**

P264 Wash hands thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P302+P352 IF ON SKIN: wash with plenty of soap and water.  
P332+P313 IF SKIN irritation occurs: Get medical advice/attention.  
P362 Take off contaminated clothing and wash before reuse.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 IF eye irritation persists: Get medical advice/attention.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container to hazardous chemical waste.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

◆ **Revisions:**

Issue Date: 01/02/2024

Last Revision Date: 30/10/2024

Revision note: New format. updated Section 2,8,15,16.

◆ **Other Comments:**

To the best of our knowledge, the information contain herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**Restriction of use:** for research use only.

**SECTION 1-PRODUCT AND COMPANY INFORMATION**

- **Product name:** 2'O methyltransferase 50u/μl
- **Catalog number:** Component of CAP-K25
- **Chemical name or synonyms:** none
- **Kit Content**

**SECTION 2 – HAZARDS IDENTIFICATION**

**OSHA/HCS status :**

2'O methyltransferase 50u/μl

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Emergency overview**

2'O methyltransferase 50u/μl

WARNING!



**Hazards Statements**

2'O methyltransferase 50u/μl

CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

**Precautions**

2'O methyltransferase 50u/μl

Do not ingest. Do not get in eyes. Avoid breathing vapor or mist. Avoid contact with skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

**Potential acute health effects**

**Inhalation**

2'O methyltransferase 50u/μl

Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Skin**

2'O methyltransferase 50u/μl

Irritating to skin.

**Eyes**

2'O methyltransferase 50u/μl

Severely irritating to eyes. Risk of serious damage to eyes.

**Ingestion**

2'O methyltransferase 50u/μl

Harmful if swallowed

**Target organs :**

2'O methyltransferase 50u/μl

Contains material which may cause damage to the following organs: kidneys, upper respiratory tract,

skin, eye, lens or cornea.

**Potential chronic health effects**

<b>Carcinogenicity :</b> 2'O methyltransferase 50u/μl	No known significant effects or critical hazards.
<b>Chronic effects :</b> 2'O methyltransferase 50u/μl	Contains material that may cause target organ damage, based on animal data.
<b>Mutagenicity :</b> 2'O methyltransferase 50u/μl	No known significant effects or critical hazards.
<b>Teratogenicity :</b> 2'O methyltransferase 50u/μl	No known significant effects or critical hazards.
<b>Developmental effects :</b> 2'O methyltransferase 50u/μl	No known significant effects or critical hazards.
<b>Fertility effects :</b> 2'O methyltransferase 50u/μl	No known significant effects or critical hazards. No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

<b>Inhalation :</b> 2'O methyltransferase 50u/μl	Adverse symptoms may include the following: respiratory tract irritation, coughing
<b>Ingestion :</b> 2'O methyltransferase 50u/μl	No specific data.
<b>Skin :</b> 2'O methyltransferase 50u/μl	Adverse symptoms may include the following: Irritation redness
<b>Eyes :</b> 2'O methyltransferase 50u/μl	Adverse symptoms may include the following: pain or irritation, watering,redness
<b>Medical conditions aggravated by overexposure</b> 2'O methyltransferase 50u/μl	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

**SECTION 3 – COMPOSITION, INFORMATION ON INGREDIENTS**

Contains the following hazardous ingredients:

<b><u>Ingredient name</u></b>	<b><u>CAS number</u></b>	<b><u>%</u></b>	<b><u>EINECS</u></b>	<b><u>Classification</u></b>
Glycerol	56-81-5	50%	200-289-5	Skin. Irrit. 2 Eye Irrit. 2
DTT	3483-12-3	< 1%	248-531	Eye Irrit. 2A, H319
Triton X-100	9002-93-1	< 1%	N/A	H302 H319 H411

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

**SECTION 4 – FIRST AID MEASURES**

**Eye Contact**

Check for and remove any contact lenses.  
Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

#### Ingestion

Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

#### Protection of first-aiders

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

#### Notes to physician

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

### SECTION 5 – FIRE FIGHTING MEASURES

- |  |   |
|--|---|
| • <b>Extinguishing media:</b>                            | Water spray, carbon dioxide, dry chemical powder or appropriate foam. |
| • <b>Flammability of the product:</b>                    | Not available.  |
| • <b>Flash Point:</b>                                    | Not available.  |
| • <b>Fire hazards in presence of various substances:</b> | Not considered to be flammable.                                       |
| • <b>Fire fighting media and instructions:</b>           | Use an extinguish agent suitable for surrounding fires.               |
| • <b>Protective clothing (fire):</b>                     | Be sure to use an approved/certified respirator or equivalent.        |
| • <b>Hazardous thermal decomposition products:</b>       | Not available.  |

### SECTION 6 – ACCIDENTAL RELEASE MEASURES

#### Personal Precautions:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

#### Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

#### Methods for Cleaning up

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## SECTION 7 – HANDLING AND STORAGE

- **Handling:** Avoid contact with skin, eyes and clothing. Avoid prolonged or repeated exposure.
- **Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Store at - 20°.
- **Intended use:** Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific application.
- **Packaging materials Suitable:** Use original container.

## SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

**Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be carefully followed.

**Engineering measures :**

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal protection**

- **Eyes:** Safety glasses.
- **Body:** Lab coat and gloves.
- **Respiratory:** Respirator is not needed under normal and intended conditions of use, if exposures are kept below established limits.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**
  - **Physical State:** Liquid.
  - **Color:** Colorless
  - **Odor:** Not available.
  - **Taste:** Not available.
- **Molecular weight:** Not available.
- **pH:** 7.9
- **Boiling point:** 100°C (212 F).
- **Decomposition temperature:** 100°C (212 F)
- **Melting point:** Not available.
- **Flash point:** Not available.
- **Dispersion properties:** Not applicable.
- **Solubility:** Readily miscible in water.
- **Percent volatile by volume:** N/A
- **Evaporation Rate:** N/A

## SECTION 10 – STABILITY AND REACTIVITY

- **Stability and reactivity:** The product is stable under recommended storage conditions.
- **Conditions to avoid:** Exposure to light, air or moisture over prolonged periods.
- **Materials to avoid:** Strong acids, strong bases, strong oxidizing agents.
- **Hazardous polymerization:** Will not occur.
- **Hazardous decomposition products:** Will not occur.



## SECTION 11 – TOXICOLOGICAL INFORMATION

Product/ingredient	Result	Species	Dose
Glycerol	LD50 Oral	Rat	12600 mg/kg
Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy	LD50 Oral	Rat	1800 mg/kg
DTT	Intraperitoneal LD50	Mouse	154 mg/kg
Glycerol	Eyes Mild Irritant Skin Mild Irritant	Rabbit Rabbit	24h/500 mg 24h/500 mg
Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy	Eyes moderate irritant Skin Mild Irritant	Rabbit Rabbit	24h 10µL 24h 500 µL

- **Chronic Toxicological:** DTT - Investigated as a drug.
- **Effects:** Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information. DTT RTECS Number: EK1610000
- **Chronic effects on humans:** Not available
- **Other toxic effects on humans:** Hazardous in case of ingestion, skin or eye contact.

## SECTION 12 – ECOLOGICAL INFORMATION

**Ecotoxicity :** No known significant effects or critical hazards

**Aquatic ecotoxicity**

Ingredient	Result	Species	Exposure
Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy	Acute LC50 5.85 mg/l Fresh water	Crustaceans - Ceriodaphnia rigaudi – Neonate	48 h
	Acute LC50 11.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 h
	Acute LC50 4500 µg/l Fresh water	Fish - Pimephales promelas	96 h

## SECTION 13 – DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements. The information presented below only applies to the material as supplied. The identification based on**

**characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.**

**Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.**

## SECTION 14 – TRANSPORT INFORMATION

**Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**D.O.T.:** Not regulated.

**SECTION 15 – REGULATORY INFORMATION**

<b>HCS Classification</b>	2'O methyltransferase 50u/µl	Not regulated.
	2'O methyltransferase 50u/µl	Not regulated.
	2'O methyltransferase 50u/µl	Irritating material Target organ effects

**U.S. Federal regulations: SARA 302/304:** No products were found.

**SARA 311/312 Hazards identification:** Immediate (acute) health hazard, Delayed (chronic) health hazard

**TSCA 8(a) PAIR:** Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy

**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined

**United States inventory (TSCA 8b):** All components are listed or exempted

<b>Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)</b>	Not listed
<b>Clean Air Act Section 602 Class I Substances</b>	Not listed
<b>Clean Air Act Section 602 Class II Substances</b>	Not listed
<b>DEA List I Chemicals (Precursor Chemicals)</b>	Not listed
<b>DEA List II Chemicals (Essential Chemicals)</b>	Not listed

<b>State Regulations</b>	Massachussets	The following compound is listed: GLYCERINE MIST
	New York	No compounds are listed
	New Jersey	Following compounds are listed: GLYCERIN, GLYCEROL
	Pennsylvania	Following compound is listed: GLYCEROL
	California Prop 65	No products were found

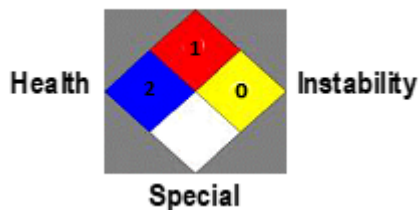
- This product is not classified according to the EU regulations.

**SECTION 16 – OTHER INFORMATION**

**Hazardous Material Information System (U.S.A.):**

<b>Health</b>	<b>2</b>
<b>Fire hazard</b>	<b>1</b>
<b>Reactivity</b>	<b>0</b>
<b>Personal protection</b>	<b>B</b>

**National Fire Protection Association (U.S.A.):**



- |                     |             |
|---------------------|-------------|
| 0 = not significant | 3 = high    |
| 1 = slight          | 4 = extreme |
| 2 = moderate        | * = chronic |

**Hazard statements**

H302 Harmful if swallowed



H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

H373 Causes damage to organs through prolonged or repeated exposure category 2 (lungs)

H372 Causes damage to organs through prolonged or repeated exposure category 1 (gastrointestinal) (oral)

H411 Toxic to aquatic life with long-lasting effects

#### Precautionary statements

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: wash with plenty of soap and water.

P332+P313 IF SKIN irritation occurs: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 IF eye irritation persists: Get medical advice/attention.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container to hazardous chemical waste.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

#### ◆ Revisions:

Issue Date: 01/02/2024

Last Revision Date: 30/10/2024

Revision note: New format. updated Section 2,8,15,16.

#### ◆ Other Comments:

To the best of our knowledge, the information contain herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**Restriction of use:** for research use only.

**SECTION 1-PRODUCT AND COMPANY INFORMATION**

- **Product name:** Vaccinia capping enzyme 10u/μl
- **Catalog number:** Component of CAP-K25
- **Chemical name or synonyms:** none
- **Kit Content**

**SECTION 2 – HAZARDS IDENTIFICATION**

**OSHA/HCS status :**

Vaccinia capping enzyme 10u/μl

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Emergency overview**

Vaccinia capping enzyme 10u/μl

WARNING!



**Hazards Statements**

Vaccinia capping enzyme 10u/μl

CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

**Precautions**

Vaccinia capping enzyme 10u/μl

Do not ingest. Do not get in eyes. Avoid breathing vapor or mist. Avoid contact with skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

**Potential acute health effects**

**Inhalation**

Vaccinia capping enzyme 10u/μl

Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Skin**

Vaccinia capping enzyme 10u/μl

Irritating to skin.

**Eyes**

Vaccinia capping enzyme 10u/μl

Severely irritating to eyes. Risk of serious damage to eyes.

**Ingestion**

Vaccinia capping enzyme 10u/μl

Harmful if swallowed

**Target organs :**

Vaccinia capping enzyme 10u/μl

Contains material which may cause damage to the following organs: kidneys, upper respiratory tract,

skin, eye, lens or cornea.

**Potential chronic health effects**

**Carcinogenicity :**

Vaccinia capping enzyme 10u/μl

No known significant effects or critical hazards.

**Chronic effects :**

Vaccinia capping enzyme 10u/μl

Contains material that may cause target organ damage, based on animal data.

**Mutagenicity :**

Vaccinia capping enzyme 10u/μl

No known significant effects or critical hazards.

**Teratogenicity :**

Vaccinia capping enzyme 10u/μl

No known significant effects or critical hazards.

**Developmental effects :**

Vaccinia capping enzyme 10u/μl

No known significant effects or critical hazards.

**Fertility effects :**

Vaccinia capping enzyme 10u/μl

No known significant effects or critical hazards.  
No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

**Inhalation :**

Vaccinia capping enzyme 10u/μl

Adverse symptoms may include the following:  
respiratory tract irritation, coughing

**Ingestion :**

Vaccinia capping enzyme 10u/μl

No specific data.

**Skin :**

Vaccinia capping enzyme 10u/μl

Adverse symptoms may include the following:  
Irritation redness

**Eyes :**

Vaccinia capping enzyme 10u/μl

Adverse symptoms may include the following:  
pain or irritation, watering, redness

**Medical conditions**

**aggravated by overexposure**

Vaccinia capping enzyme 10u/μl

Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

**SECTION 3 – COMPOSITION, INFORMATION ON INGREDIENTS**

Contains the following hazardous ingredients:

<u>Ingredient name</u>	<u>CAS number</u>	<u>%</u>	<u>EINECS</u>	<u>Classification</u>
Glycerol	56-81-5	50%	200-289-5	Skin. Irrit. 2 Eye Irrit. 2
DTT	3483-12-3	< 1%	248-531	Eye Irrit. 2A, H319
Triton X-100	9002-93-1	< 1%	N/A	H302 H319 H411

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

**SECTION 4 – FIRST AID MEASURES**

**Eye Contact**

Check for and remove any contact lenses.  
Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

**Ingestion**

Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

**Protection of first-aiders**

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

**Notes to physician**

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**SECTION 5 – FIRE FIGHTING MEASURES**

- **Extinguishing media:** Water spray, carbon dioxide, dry chemical powder or appropriate foam.
- **Flammability of the product:** Not available.
- **Flash Point:** Not available.
- **Fire hazards in presence of various substances:** Not considered to be flammable.
- **Fire fighting media and instructions:** Use an extinguish agent suitable for surrounding fires.
- **Protective clothing (fire):** Be sure to use an approved/certified respirator or equivalent.
- **Hazardous thermal decomposition products:** Not available.

**SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:**

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

**Environmental precautions**

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Methods for Cleaning up**

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## SECTION 7 – HANDLING AND STORAGE

- **Handling:** Avoid contact with skin, eyes and clothing. Avoid prolonged or repeated exposure.
- **Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Store at - 20°.
- **Intended use:** Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific application.
- **Packaging materials Suitable:** Use original container.

## SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

**Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be carefully followed.

**Engineering measures :**

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal protection**

- **Eyes:** Safety glasses.
- **Body:** Lab coat and gloves.
- **Respiratory:** Respirator is not needed under normal and intended conditions of use, if exposures are kept below established limits.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**
  - **Physical State:** Liquid.
  - **Color:** Colorless
  - **Odor:** Not available.
  - **Taste:** Not available.
- **Molecular weight:** Not available.
- **pH:** 8.0
- **Boiling point:** 100°C (212 F).
- **Decomposition temperature:** 100°C (212 F)
- **Melting point:** Not available.
- **Flash point:** Not available.
- **Dispersion properties:** Not applicable.
- **Solubility:** Readily miscible in water.
- **Percent volatile by volume:** N/A
- **Evaporation Rate:** N/A

## SECTION 10 – STABILITY AND REACTIVITY

- **Stability and reactivity:** The product is stable under recommended storage conditions.
- **Conditions to avoid:** Exposure to light, air or moisture over prolonged periods.
- **Materials to avoid:** Strong acids, strong bases, strong oxidizing agents.
- **Hazardous polymerization:** Will not occur.
- **Hazardous decomposition products:** Will not occur.

## SECTION 11 – TOXICOLOGICAL INFORMATION

Product/ingredient	Result	Species	Dose
Glycerol	LD50 Oral	Rat	12600 mg/kg
Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy	LD50 Oral	Rat	1800 mg/kg
DTT	Intraperitoneal LD50	Mouse	154 mg/kg
Glycerol	Eyes Mild Irritant Skin Mild Irritant	Rabbit Rabbit	24h/500 mg 24h/500 mg
Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy	Eyes moderate irritant Skin Mild Irritant	Rabbit Rabbit	24h 10µL 24h 500 µL

- **Chronic Toxicological:** DTT - Investigated as a drug.
- **Effects:** Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information. DTT RTECS Number: EK1610000
- **Chronic effects on humans:** Not available
- **Other toxic effects on humans:** Hazardous in case of ingestion, skin or eye contact.

## SECTION 12 – ECOLOGICAL INFORMATION

**Ecotoxicity :** No known significant effects or critical hazards

**Aquatic ecotoxicity**

Ingredient	Result	Species	Exposure
Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy	Acute LC50 5.85 mg/l Fresh water	Crustaceans - Ceriodaphnia rigaudi – Neonate	48 h
	Acute LC50 11.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 h
	Acute LC50 4500 µg/l Fresh water	Fish - Pimephales promelas	96 h

## SECTION 13 – DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements. The information presented below only applies to the material as supplied. The identification based on**

**characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.**

**Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.**

## SECTION 14 – TRANSPORT INFORMATION

**Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**D.O.T.:** Not regulated.

**SECTION 15 – REGULATORY INFORMATION**

<b>HCS Classification</b>	Vaccinia capping enzyme 10u/μl Vaccinia capping enzyme 10u/μl Vaccinia capping enzyme 10u/μl	Not regulated. Not regulated. Irritating material Target organ effects
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**U.S. Federal regulations: SARA 302/304:** No products were found.  
**SARA 311/312 Hazards identification:** Immediate (acute) health hazard, Delayed (chronic) health hazard  
**TSCA 8(a) PAIR:** Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy  
**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**United States inventory (TSCA 8b):** All components are listed or exempted

<b>Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)</b>	Not listed
<b>Clean Air Act Section 602 Class I Substances</b>	Not listed
<b>Clean Air Act Section 602 Class II Substances</b>	Not listed
<b>DEA List I Chemicals (Precursor Chemicals)</b>	Not listed
<b>DEA List II Chemicals (Essential Chemicals)</b>	Not listed

<b>State Regulations</b>	Massachussets New York New Jersey Pennsylvania California Prop 65	The following compound is listed: GLYCERINE MIST No compounds are listed Following compounds are listed: GLYCERIN, GLYCEROL Following compound is listed: GLYCEROL No products were found
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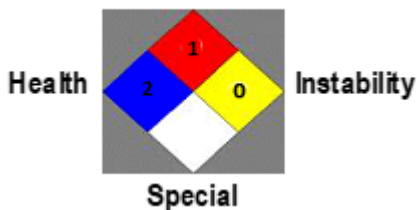
- This product is not classified according to the EU regulations.

**SECTION 16 – OTHER INFORMATION**

**Hazardous Material Information System (U.S.A.):**

<b>Health</b>	<b>2</b>
<b>Fire hazard</b>	<b>1</b>
<b>Reactivity</b>	<b>0</b>
<b>Personal protection</b>	<b>B</b>

**National Fire Protection Association (U.S.A.):**



0 = not significant	3 = high
1 = slight	4 = extreme
2 = moderate	* = chronic

**Hazard statements**  
H302 Harmful if swallowed

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

H373 Causes damage to organs through prolonged or repeated exposure category 2 (lungs)

H372 Causes damage to organs through prolonged or repeated exposure category 1 (gastrointestinal) (oral)

H411 Toxic to aquatic life with long-lasting effects

#### Precautionary statements

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: wash with plenty of soap and water.

P332+P313 IF SKIN irritation occurs: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 IF eye irritation persists: Get medical advice/attention.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container to hazardous chemical waste.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

#### ◆ Revisions:

Issue Date: 01/02/2024

Last Revision Date: 30/10/2024

Revision note: New format. updated Section 2,8,15,16.

#### ◆ Other Comments:

To the best of our knowledge, the information contain herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**Restriction of use:** for research use only.

## SECTION 1-PRODUCT AND COMPANY INFORMATION

- **Product name: Capping Buffer 10X**
- **Catalog number:** Component of CAP-K25
- **Chemical name or synonyms:** none

## SECTION 2 – HAZARDS IDENTIFICATION

- **GHS Label element**
- Signal Word:
- Pictograms:

Warning



### GHS Hazard Phrases

H302: Harmful if swallowed.  
H315: Causes skin irritation.  
H319: Causes serious eye irritation.

### GHS Precautionary Phrases

P264: Wash {hands} thoroughly after handling.  
P280: Wear {protective gloves/protective clothing/eye protection/face protection}.

### GHS Responses Phrases

P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P302+352: IF ON SKIN: Wash with plenty of soap and water.  
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P330: Rinse mouth.  
P332+313: If skin irritation occurs, get medical advice/attention.  
P337+313: If eye irritation persists, get medical advice/attention.  
P362+364: Take off contaminated clothing and wash it before reuse.

- This product contains hazardous ingredients (Yes; No; Not Applicable or no information): **Yes**.
- This product contains hazardous carcinogens (Yes; No; N/A): **No**
- This product contains hazardous ingredients to the environment. (Yes; No; N/A): **No**

## SECTION 3 – COMPOSITION, INFORMATION ON INGREDIENTS

### Contains the following hazardous ingredient:

<u>Ingredient name</u>	<u>CAS number</u>	<u>%</u>	<u>EINECS</u>	<u>Classification</u>
DTT	3483-12-3	< 2%	248-531	Accute tox (O) 4: H302 Eye Irrit. 2A, H319 STOT (SE) 3: H335, H336

No components need to be disclosed according to the applicable regulations.

Ingredients are not hazardous or their concentrations do not exceed the limit specified according to 29 CFR 1910.1200 Hazard Communication Standard (USA) and Directive 1999/45/EC-2001/59/EC (EU).

## SECTION 4 – FIRST AID MEASURES

- **Effects and symptoms:**
  - *Inhalation* May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
  - *Ingestion* May be harmful in case of ingestion.
  - *Skin contact* May cause skin irritation, redness, itching.
  - *Eye contact* Slightly hazardous in case of eye contact.

Aggravating conditions

Chronic exposure may develop allergic reactions in sensitive individuals.

• **First-Aid measures:**

- *Inhalation* If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
- *Ingestion* If swallowed, wash out mouth with water provided person is conscious. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
- *Skin contact* In case of contact, immediately wash skin with soap and copious amounts of water.
- *Eye contact* In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
- *Notes to physician* Not available.
- *Protection of first-aiders* Not available.

**SECTION 5 – FIRE FIGHTING MEASURES**

- **Extinguishing media:** Water spray, carbon dioxide, dry chemical powder or appropriate foam.
- **Flammability of the product:** Not available.
- **Flash Point:** Not available.
- **Fire hazards in presence of various substances:** Not considered to be flammable.
- **Fire fighting media and instructions:** Use an extinguish agent suitable for surrounding fires.
- **Protective clothing (fire):** Be sure to use an approved/certified respirator or equivalent.
- **Hazardous thermal decomposition products:** Not available.

**SECTION 6 – ACCIDENTAL RELEASE MEASURES**

- **Personal precautions:** Safety glasses, lab coat and gloves.
- **Environmental precautions and clean-up methods:** Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow evacuating through the sanitary system.
- **Small spill and leak:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
- **Additional information:** No dangerous substances are released.

**SECTION 7 – HANDLING AND STORAGE**

- **Handling:** Avoid contact with skin, eyes and clothing. Avoid prolonged or repeated exposure.
- **Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Store at - 20°.
- **Intended use:** Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific application.
- **Packaging materials Suitable:** Use original container.

**SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION**

**Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be carefully followed.

**Engineering measures :**

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers

are close to the workstation location.

#### Personal protection

- **Eyes:** Safety glasses.
- **Body:** Lab coat and gloves.
- **Respiratory:** Respirator is not needed under normal and intended conditions of use, if exposures are kept below established limits.

### SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**
  - **Physical State:** Liquid.
  - **Color:** Colorless
  - **Odor:** Not available.
  - **Taste:** Not available.
- **Molecular weight:** Not available.
- **pH:** Around 8
- **Boiling point:** 100°C (212 F).
- **Decomposition temperature:** 100°C (212 F)
- **Melting point:** Not available.
- **Flash point:** Not available.
- **Dispersion properties:** Not applicable.
- **Solubility:** Readily miscible in water.
- **Percent volatile by volume:** N/A
- **Evaporation Rate:** N/A

### SECTION 10 – STABILITY AND REACTIVITY

- **Stability and reactivity:** The product is stable under recommended storage conditions.
- **Conditions to avoid:** Exposure to light, air or moisture over prolonged periods.
- **Materials to avoid:** Strong acids, strong bases, strong oxidizing agents.
- **Hazardous polymerization:** Will not occur.
- **Hazardous decomposition products:** Will not occur.

### SECTION 11 – TOXICOLOGICAL INFORMATION

The toxicological effects of this product have not been thoroughly studied.

**Toxicological Effects:** DTT - Toxicity Data: Intraperitoneal LD50 (mouse): 154 mg/kg;  
**Chronic Toxicological Effects:** DTT - Investigated as a drug.  
**Effects:** Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.  
See actual entry in RTECS for complete information.  
DTT RTECS Number: EK1610000

- **Chronic effects on humans:** Carcinogenic effects: classified none. by NIOSH. By OSHA.
- **Other toxic effects on humans:** None.

### SECTION 12 – ECOLOGICAL INFORMATION

- No data available.

### SECTION 13 – DISPOSAL CONSIDERATIONS

- **Waste stream:** Not available.
- **Waste disposal method:** Contact a licensed professional waste disposal service to dispose of this material. Dispose in accordance with governmental environmental regulations. Observe all federal, state, and local environmental regulations.
- **European waste catalogue (EWC):** Not available.
- **Hazardous waste:** Will not occur.

### SECTION 14 – TRANSPORT INFORMATION

**Note** Please see current shipping paper for most up to date shipping information,

including exemptions and special circumstances.

**D.O.T.:** Not regulated.

**IATA.:** Not regulated.

**IMDG:** Not regulated.

**SECTION 15 – REGULATORY INFORMATION**

**US Federal Regulations**

RCRA (Lists of Hazardous Wastes, 40 CFR 261 Subpart D): Not applicable

CLEAN AIR ACT (SEC. 112. Hazardous Air Pollutants): Not applicable

CLEAN WATER ACT (RQ, 40 CFR): Not applicable

SARA Title III:  
 Section 302 -304, 40 CFR 355: Components present in this product at a level which could require reporting are: none.  
 Section 311 - 312: Components present in this product at a level which could require reporting are: none.  
 Section 313: Not applicable

TSCA Section 8(b) Inventory Status: All ingredients are listed on TSCA Inventory of Chemical Substances or exempt from TSCA Inventory requirements.

AICS Inventory Status: All ingredients are listed on the Australia Inventory of Chemical Substances.

State Lists

This product does not contain any Proposition 65 chemicals.

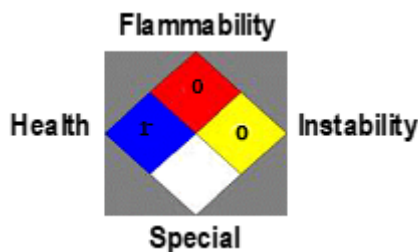
- This product is not classified according to the EU regulations.

**SECTION 16 – OTHER INFORMATION**

◆ **Hazardous Material Information System (U.S.A.):**

<b>Health</b>	<b>1</b>
<b>Fire hazard</b>	<b>0</b>
<b>Reactivity</b>	<b>0</b>
<b>Personal protection</b>	

◆ **National Fire Protection Association (U.S.A.):**



0 = not significant  
 1 = slight  
 2 = moderate  
 3 = high  
 4 = extreme  
 \* = chronic

◆ **Revisions:**

Issue Date: 01/02/2024  
 Last Revision Date: 30/10/2024  
 Revision note: New format. updated Section 2,8,15,16.

◆ **Other Comments:**

To the best of our knowledge, the information contain herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**Restriction of use:** for research use only.

## SECTION 1-PRODUCT AND COMPANY INFORMATION

- **Product name** Nuclease-free water
- **Catalog number:** Component of CAP-K25
- **Chemical name or synonyms:** none

## SECTION 2 – HAZARDS IDENTIFICATION

- **GHS Classification**  
No
- **GHS Label element**
- Signal Word: None
- Hazard Statements: None
- Pictograms: None
- This product contains hazardous ingredients (Yes; No; Not Applicable or no information): **No**.
- This product contains hazardous carcinogens (Yes; No; N/A): **No**
- This product contains hazardous ingredients to the environment. (Yes; No; N/A): **No**

## SECTION 3 – COMPOSITION, INFORMATION ON INGREDIENTS

**Description:** Nuclease-free water

Ingredients are not hazardous or their concentrations do not exceed the limit specified according to 29 CFR 1910.1200 Hazard Communication Standard (USA) and Directive 1999/45/EC-2001/59/EC (EU).

## SECTION 4 – FIRST AID MEASURES

- **Effects and symptoms:**
  - *Inhalation* May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
  - *Ingestion* May be harmful in case of ingestion.
  - *Skin contact* May cause skin irritation, redness, itching.
  - *Eye contact* Slightly hazardous in case of eye contact.
  - *Aggravating conditions* Chronic exposure may develop allergic reactions in sensitive individuals.
- **First-Aid measures:**
  - *Inhalation* If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
  - *Ingestion* If swallowed, wash out mouth with water provided person is conscious. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
  - *Skin contact* In case of contact, immediately wash skin with soap and copious amounts of water.
  - *Eye contact* In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
  - *Notes to physician* Not available.
  - *Protection of first-aiders* Not available.

## SECTION 5 – FIRE FIGHTING MEASURES

- **Extinguishing media:** Water spray, carbon dioxide, dry chemical powder or appropriate foam.
- **Flammability of the product:** Not available.
- **Flash Point:** Not available.
- **Fire hazards in presence of various substances:** Not considered to be flammable.
- **Fire fighting media and instructions:** Use an extinguish agent suitable for surrounding fires.
- **Protective clothing (fire):** Be sure to use an approved/certified respirator or equivalent.

Hazardous thermal decomposition products:

Not available.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

- **Personal precautions:** Safety glasses, lab coat and gloves.
- **Environmental precautions and clean-up methods:** Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow evacuating through the sanitary system.
- **Small spill and leak:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
- **Additional information:** No dangerous substances are released.

## SECTION 7 – HANDLING AND STORAGE

- **Handling:** Avoid contact with skin, eyes and clothing. Avoid prolonged or repeated exposure.
- **Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Store at - 20°.
- **Intended use:** Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific application.
- **Packaging materials Suitable:** Use original container.

## SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

### Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be carefully followed.

### Engineering measures :

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal protection

- **Eyes:** Safety glasses.
- **Body:** Lab coat and gloves.
- **Respiratory:** Respirator is not needed under normal and intended conditions of use, if exposures are kept below established limits.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**
  - **Physical State:** Liquid.
  - **Color:** Colorless.
  - **Odor:** Not available.
  - **Taste:** Not available.
- **Molecular weight:** Not available.
- **pH:** 8.0
- **Boiling point:** 100°C (212 F).
- **Decomposition temperature:** 100°C (212 F)



- **Melting point:** Not available.
- **Flash point:** Not available.
- **Dispersion properties:** Not applicable.
- **Solubility:** Readily miscible in water.
- **Percent volatile by volume:** N/A
- **Evaporation Rate:** N/A

## SECTION 10 – STABILITY AND REACTIVITY

- **Stability and reactivity:** The product is stable under recommended storage conditions.
- **Conditions to avoid:** Exposure to light, air or moisture over prolonged periods.
- **Materials to avoid:** Strong acids, strong bases, strong oxidizing agents.
- **Hazardous polymerization:** Will not occur.
- **Hazardous decomposition products:** Will not occur.

## SECTION 11 – TOXICOLOGICAL INFORMATION

- **Route of exposure:**
  - **Skin absorption:** may be harmful if absorbed through the skin.
  - **Skin contact:** May cause skin irritation.
  - **Eye contact:** May cause eye irritation.
  - **Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
  - **Ingestion:** May be harmful if swallowed.
- **Toxicity on animals:**
  - **LD50:** Not available.
  - **LC50:** Not available.
- **Chronic effects on humans:** Carcinogenic effects: classified none. by NIOSH. By OSHA.
- **Other toxic effects on humans:** None.

## SECTION 12 – ECOLOGICAL INFORMATION

- No data available.

## SECTION 13 – DISPOSAL CONSIDERATIONS

- **Waste stream:** Not available.
- **Waste disposal method:** Contact a licensed professional waste disposal service to dispose of this material. Dispose in accordance with governmental environmental regulations. Observe all federal, state, and local environmental regulations.
- **European waste catalogue (EWC):** Not available.
- **Hazardous waste:** Will not occur.

## SECTION 14 – TRANSPORT INFORMATION

**Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**D.O.T.:** Not regulated.

**IATA.:** Not regulated.

**IMDG:** Not regulated.

## SECTION 15 – REGULATORY INFORMATION

### US Federal Regulations

RCRA (Lists of Hazardous Wastes, 40 CFR 261 Subpart D): Not applicable

CLEAN AIR ACT (SEC. 112. Hazardous Air Pollutants): Not applicable

CLEAN WATER ACT (RQ, 40 CFR): Not applicable



SARA Title III:

Section 302 -304, 40 CFR 355: Components present in this product at a level which could require reporting are: none.  
 Section 311 - 312: Components present in this product at a level which could require reporting are: none.  
 Section 313: Not applicable

TSCA Section 8(b) Inventory Status: All ingredients are listed on TSCA Inventory of Chemical Substances or exempt from TSCA Inventory requirements.

AICS Inventory Status: All ingredients are listed on the Australia Inventory of Chemical Substances.

State Lists

This product does not contain any Proposition 65 chemicals.

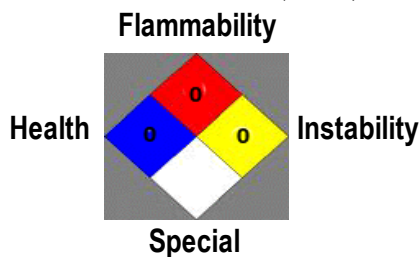
- This product is not classified according to the EU regulations.

SECTION 16 – OTHER INFORMATION

◆ Hazardous Material Information System (U.S.A.):

Health	0
Fire hazard	0
Reactivity	0
Personal protection	

◆ National Fire Protection Association (U.S.A.):



0 = not significant  
 1 = slight  
 2 = moderate  
 3 = high  
 4 = extreme  
 \* = chronic

◆ Revisions:

Issue Date: 01/02/2024  
 Last Revision Date: 30/10/2024  
 Revision note: New format. updated Section 2,8,15,16.

◆ Other Comments:

To the best of our knowledge, the information contain herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**Restriction of use:** for research use only.

SECTION 1-PRODUCT AND COMPANY INFORMATION

- **Product name:** GTP (75mM) in H<sub>2</sub>O rnase free
- **Catalog number:** Component of CAP-K25
- **Chemical name or synonyms:** none

SECTION 2 – HAZARDS IDENTIFICATION

- **GHS Classification**  
No
- **GHS Label element**
- Signal Word: None
- Hazard Statements: None
- Pictograms: None
- This product contains hazardous ingredients (Yes; No; Not Applicable or no information): **No**.
- This product contains hazardous carcinogens (Yes; No; N/A): **No**
- This product contains hazardous ingredients to the environment. (Yes; No; N/A): **No**

SECTION 3 – COMPOSITION, INFORMATION ON INGREDIENTS

**Description:** Guanosine 5'- triphosphate sodium salt in solution in rnase-free water.

Formula: C<sub>10</sub>H<sub>13</sub>N<sub>5</sub>Na<sub>3</sub>O<sub>14</sub>P<sub>3</sub>  
Molecular Weight : 589.18g/mol

No components need to be disclosed according to the applicable regulations.

Ingredients are not hazardous or their concentrations do not exceed the limit specified according to 29 CFR 1910.1200 Hazard Communication Standard (USA) and Directive 1999/45/EC-2001/59/EC (EU).

SECTION 4 – FIRST AID MEASURES

- **Effects and symptoms:**
  - *Inhalation* May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
  - *Ingestion* May be harmful in case of ingestion.
  - *Skin contact* May cause skin irritation, redness, itching.
  - *Eye contact* Slightly hazardous in case of eye contact.
  - *Aggravating conditions* Chronic exposure may develop allergic reactions in sensitive individuals.
- **First-Aid measures:**
  - *Inhalation* If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
  - *Ingestion* If swallowed, wash out mouth with water provided person is conscious. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
  - *Skin contact* In case of contact, immediately wash skin with soap and copious amounts of water.
  - *Eye contact* In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
  - *Notes to physician* Not available.
  - *Protection of first-aiders* Not available.

SECTION 5 – FIRE FIGHTING MEASURES

- **Extinguishing media:** Water spray, carbon dioxide, dry chemical powder or appropriate foam.
- **Flammability of the product:** Not available.
- **Flash Point:** Not available.
- **Fire hazards in presence of various substances:** Not considered to be flammable.

**Fire fighting media and instructions:**

Use an extinguish agent suitable for surrounding fires.

**Protective clothing (fire):**

Be sure to use an approved/certified respirator or equivalent.

• **Hazardous thermal decomposition products:**

Not available.

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## SECTION 6 – ACCIDENTAL RELEASE MEASURES

- **Personal precautions:** Safety glasses, lab coat and gloves.
- **Environmental precautions and clean-up methods:** Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow evacuating through the sanitary system.
- **Small spill and leak:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
- **Additional information:** No dangerous substances are released.

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## SECTION 7 – HANDLING AND STORAGE

- **Handling:** Avoid contact with skin, eyes and clothing. Avoid prolonged or repeated exposure.
- **Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Store at - 20°.
- **Intended use:** Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific application.
- **Packaging materials Suitable:** Use original container.

---

## SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

### Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be carefully followed.

### Engineering measures :

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal protection

- **Eyes:** Safety glasses.
- **Body:** Lab coat and gloves.
- **Respiratory:** Respirator is not needed under normal and intended conditions of use, if exposures are kept below established limits.

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## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**
  - **Physical State:** Liquid.
  - **Color:** Colorless.
  - **Odor:** Not available.
  - **Taste:** Not available.
- **Molecular weight:** Not available.
- **pH:** Between 4 and 11
- **Boiling point:** 100°C (212 F).
- **Decomposition temperature:** 100°C (212 F)

- **Melting point:** Not available.
- **Flash point:** Not available.
- **Dispersion properties:** Not applicable.
- **Solubility:** Readily miscible in water.
- **Percent volatile by volume:** N/A
- **Evaporation Rate:** N/A

## SECTION 10 – STABILITY AND REACTIVITY

- **Stability and reactivity:** The product is stable under recommended storage conditions.
- **Conditions to avoid:** Exposure to light, air or moisture over prolonged periods.
- **Materials to avoid:** Strong acids, strong bases, strong oxidizing agents.
- **Hazardous polymerization:** Will not occur.
- **Hazardous decomposition products:** Will not occur.

## SECTION 11 – TOXICOLOGICAL INFORMATION

- **Route of exposure:**
  - **Skin absorption:** may be harmful if absorbed through the skin.
  - **Skin contact:** May cause skin irritation.
  - **Eye contact:** May cause eye irritation.
  - **Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
  - **Ingestion:** May be harmful if swallowed.
- **Toxicity on animals:**
  - **LD50:** Not available.
  - **LC50:** Not available.
- **Chronic effects on humans:** Carcinogenic effects: classified none. by NIOSH. By OSHA.
- **Other toxic effects on humans:** None.

## SECTION 12 – ECOLOGICAL INFORMATION

- No data available.

## SECTION 13 – DISPOSAL CONSIDERATIONS

- **Waste stream:** Not available.
- **Waste disposal method:** Contact a licensed professional waste disposal service to dispose of this material. Dispose in accordance with governmental environmental regulations. Observe all federal, state, and local environmental regulations.
- **European waste catalogue (EWC):** Not available.
- **Hazardous waste:** Will not occur.

## SECTION 14 – TRANSPORT INFORMATION

**Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**D.O.T.:** Not regulated.

**IATA.:** Not regulated.

**IMDG:** Not regulated.

## SECTION 15 – REGULATORY INFORMATION

### US Federal Regulations

RCRA (Lists of Hazardous Wastes, 40 CFR 261 Subpart D): Not applicable

CLEAN AIR ACT (SEC. 112. Hazardous Air Pollutants): Not applicable

CLEAN WATER ACT (RQ, 40 CFR): Not applicable

**SARA Title III:**

Section 302 -304, 40 CFR 355: Components present in this product at a level which could require reporting are:  
none.  
Section 311 - 312: Components present in this product at a level which could require reporting are:  
none.  
Section 313: Not applicable

TSCA Section 8(b) Inventory Status: All ingredients are listed on TSCA Inventory of Chemical Substances or exempt from TSCA Inventory requirements.

AICS Inventory Status: All ingredients are listed on the Australia Inventory of Chemical Substances.

State Lists

This product does not contain any Proposition 65 chemicals.

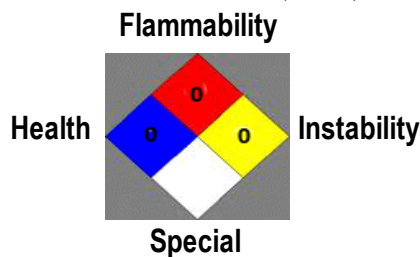
- This product is not classified according to the EU regulations.

**SECTION 16 – OTHER INFORMATION**

◆ **Hazardous Material Information System (U.S.A.):**

<b>Health</b>	<b>0</b>
<b>Fire hazard</b>	<b>0</b>
<b>Reactivity</b>	<b>0</b>
<b>Personal protection</b>	

◆ **National Fire Protection Association (U.S.A.):**



0 = not significant  
1 = slight  
2 = moderate

3 = high  
4 = extreme  
\* = chronic

◆ **Revisions:**

Issue Date: 01/02/2024  
Last Revision Date: 30/10/2024  
Revision note: New format. updated Section 2,8,15,16.

◆ **Other Comments:**

To the best of our knowledge, the information contain herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.  
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**Restriction of use:** for research use only.

**SECTION 1-PRODUCT AND COMPANY INFORMATION**

- **Product name:** S-adenosylmethionine (SAM), 32mM in H<sub>2</sub>O mase free
- **Catalog number:** Component of CAP-K25
- **Chemical name or synonyms:** none

**SECTION 2 – HAZARDS IDENTIFICATION**

- **GHS Classification**  
No
- **GHS Label element**
- Signal Word: None
- Hazard Statements: None
- Pictograms: None
- This product contains hazardous ingredients (Yes; No; Not Applicable or no information): **No**.
- This product contains hazardous carcinogens (Yes; No; N/A): **No**
- This product contains hazardous ingredients to the environment. (Yes; No; N/A): **No**

**SECTION 3 – COMPOSITION, INFORMATION ON INGREDIENTS**

**Description:** S-adenosylmethionine in solution in mase-free water.

Formula: C<sub>15</sub>H<sub>22</sub>N<sub>6</sub>O<sub>5</sub>S  
Molecular Weight : 398.44 g·mol<sup>-1</sup>

No components need to be disclosed according to the applicable regulations.

Ingredients are not hazardous or their concentrations do not exceed the limit specified according to 29 CFR 1910.1200 Hazard Communication Standard (USA) and Directive 1999/45/EC-2001/59/EC (EU).

**SECTION 4 – FIRST AID MEASURES**

- **Effects and symptoms:**
  - *Inhalation* May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
  - *Ingestion* May be harmful in case of ingestion.
  - *Skin contact* May cause skin irritation, redness, itching.
  - *Eye contact* Slightly hazardous in case of eye contact.
  - *Aggravating conditions* Chronic exposure may develop allergic reactions in sensitive individuals.
- **First-Aid measures:**
  - *Inhalation* If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
  - *Ingestion* If swallowed, wash out mouth with water provided person is conscious. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
  - *Skin contact* In case of contact, immediately wash skin with soap and copious amounts of water.
  - *Eye contact* In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
  - *Notes to physician* Not available.
  - *Protection of first-aiders* Not available.

**SECTION 5 – FIRE FIGHTING MEASURES**

- **Extinguishing media:** Water spray, carbon dioxide, dry chemical powder or appropriate foam.
- **Flammability of the product:** Not available.
- **Flash Point:** Not available.

**Fire hazards in presence of various substances:**

Not considered to be flammable.

**Fire fighting media and instructions:**

Use an extinguish agent suitable for surrounding fires.

- **Protective clothing (fire):**

Be sure to use an approved/certified respirator or equivalent.

- **Hazardous thermal decomposition products:**

Not available.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

- **Personal precautions:** Safety glasses, lab coat and gloves.
- **Environmental precautions and clean-up methods:** Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow evacuating through the sanitary system.
- **Small spill and leak:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
- **Additional information:** No dangerous substances are released.

## SECTION 7 – HANDLING AND STORAGE

- **Handling:** Avoid contact with skin, eyes and clothing. Avoid prolonged or repeated exposure.
- **Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Store at - 20°.
- **Intended use:** Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific application.
- **Packaging materials Suitable:** Use original container.

## SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

### Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be carefully followed.

### Engineering measures :

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal protection

- **Eyes:** Safety glasses.
- **Body:** Lab coat and gloves.
- **Respiratory:** Respirator is not needed under normal and intended conditions of use, if exposures are kept below established limits.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**
  - **Physical State:** Liquid.
  - **Color:** Colorless
  - **Odor:** Not available.
  - **Taste:** Not available.
- **Molecular weight:** Not available.
- **pH:** Between 4 and 11
- **Boiling point:** 100°C (212 F).

- **Decomposition temperature:** 100°C (212 F)
- **Melting point:** Not available.
- **Flash point:** Not available.
- **Dispersion properties:** Not applicable.
- **Solubility:** Readily miscible in water.
- **Percent volatile by volume:** N/A
- **Evaporation Rate:** N/A

#### SECTION 10 – STABILITY AND REACTIVITY

- **Stability and reactivity:** The product is stable under recommended storage conditions.
- **Conditions to avoid:** Exposure to light, air or moisture over prolonged periods.
- **Materials to avoid:** Strong acids, strong bases, strong oxidizing agents.
- **Hazardous polymerization:** Will not occur.
- **Hazardous decomposition products:** Will not occur.

#### SECTION 11 – TOXICOLOGICAL INFORMATION

- **Route of exposure:**
  - **Skin absorption:** may be harmful if absorbed through the skin.
  - **Skin contact:** May cause skin irritation.
  - **Eye contact:** May cause eye irritation.
  - **Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
  - **Ingestion:** May be harmful if swallowed.
- **Toxicity on animals:**
  - **LD50:** Not available.
  - **LC50:** Not available.
- **Chronic effects on humans:** Carcinogenic effects: classified none. by NIOSH. By OSHA.
- **Other toxic effects on humans:** None.

#### SECTION 12 – ECOLOGICAL INFORMATION

- No data available.

#### SECTION 13 – DISPOSAL CONSIDERATIONS

- **Waste stream:** Not available.
- **Waste disposal method:** Contact a licensed professional waste disposal service to dispose of this material. Dispose in accordance with governmental environmental regulations. Observe all federal, state, and local environmental regulations.
- **European waste catalogue (EWC):** Not available.
- **Hazardous waste:** Will not occur.

#### SECTION 14 – TRANSPORT INFORMATION

**Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**D.O.T.:** Not regulated.

**IATA.:** Not regulated.

**IMDG:** Not regulated.

#### SECTION 15 – REGULATORY INFORMATION

##### US Federal Regulations

RCRA (Lists of Hazardous Wastes, 40 CFR 261 Subpart D): Not applicable

CLEAN AIR ACT (SEC. 112. Hazardous Air Pollutants): Not applicable

CLEAN WATER ACT (RQ, 40 CFR): Not applicable

SARA Title III:

Section 302 -304, 40 CFR 355: Components present in this product at a level which could require reporting are:  
none.  
Section 311 - 312: Components present in this product at a level which could require reporting are:  
none.  
Section 313: Not applicable

TSCA Section 8(b) Inventory Status: All ingredients are listed on TSCA Inventory of Chemical Substances or exempt from TSCA Inventory requirements.

AICS Inventory Status: All ingredients are listed on the Australia Inventory of Chemical Substances.

State Lists

This product does not contain any Proposition 65 chemicals.

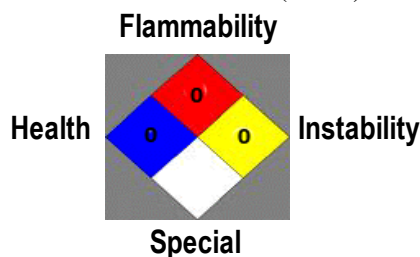
- This product is not classified according to the EU regulations.

SECTION 16 – OTHER INFORMATION

◆ Hazardous Material Information System (U.S.A.):

Health	0
Fire hazard	0
Reactivity	0
Personal protection	

◆ National Fire Protection Association (U.S.A.):



0 = not significant  
1 = slight  
2 = moderate

3 = high  
4 = extreme  
\* = chronic

◆ Revisions:

Issue Date: 01/02/2024  
Last Revision Date: 30/10/2024  
Revision note: New format. updated Section 2,8,15,16.

◆ Other Comments:

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