

## SAFETY DATA SHEET

### Section 1. Product and Company Identification

**Product Name:** 500-2, (pH 1.68 buffer solution)  
**Product code:** 3999960028  
**Recommended use:** For laboratory and Industrial use  
**Manufacturer / Supplier:** Horiba Instruments (Singapore) Pte Ltd  
83 Science Park Drive, #02-02A, The Curie  
Singapore-118258  
Contact No: +65 69089600

### Section 2. Hazard identification

**Classification of the Substance or Mixture:** Mixture

Classification according to regulation (EC) 1272/2008, Globally Harmonized System (GHS)

Skin Corrosion/Irritation- Category 1  
Serious Eye damage/Eye irritation- Category 1

#### GHS Label elements:

Hazard pictogram



**Signal word:** Danger  
**Hazard statement:** H314-Causes severe skin burns and eye damage

**Precautionary statements:** P202-Do not handle until all safety precautions have been read and understood  
P280- protective gloves/protective clothing/eye protection/face protection  
P305+P350+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**Other hazards which do not result in classification:** None known

### Section 3. Composition/ information on ingredients

**Substance or Mixture:** Mixture

**CAS Numbers other identifiers:**

Ingredients	CAS Number	Percentage	Regulation (EC) No 1272/2008
Potassium Tetraoxalate Dihydrate	877-24-7	<1.5%	Acute Tox. (Cat 4); Skin Corrosion (Cat 1); Serious eye damage (Cat 1)
Water	7732-18-5	>98.5%	-

The exact percentage of composition has been withheld as a trade secret

Chemical formula: Not applicable

## Section 4. First Aid Measures

### Description of necessary first aid measures

<b>Eye contact:</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Remove any contact lenses. Get medical attention if irritation occurs.
<b>Inhalation:</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
<b>Skin contact:</b>	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion:</b>	Clean mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

### Most important symptoms/effects, both acute and delayed

#### Potential acute health effects:

<b>Eye Contact:</b>	Causes serious eye damage
<b>Inhalation:</b>	No known significant effects or critical hazards.
<b>Skin contact:</b>	Causes severe burns.
<b>Ingestion:</b>	No known significant effects or critical hazards.

#### Over-exposure signs/symptoms:

<b>Eye contact:</b>	Adverse symptoms may include pain, watering, redness
<b>Inhalation:</b>	No specific data.
<b>Skin contact:</b>	Adverse symptoms may include pain, irritation, redness and blistering may occur
<b>Ingestion:</b>	Adverse symptoms may include stomach pain

### Indication of immediate medical attention and special treatment needed, if necessary

<b>Notes to physician:</b>	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
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See toxicological information (Section 11)

## Section 5. Firefighting Measures

### Extinguishing Media

<b>Suitable extinguishing media:</b>	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing Media:</b>	No Information available
<b>Specific hazards arising from the substance or mixture:</b>	No specific information available

<b>Hazardous thermal decomposition products:</b>	Carbon dioxide or carbon monoxide Carbon dioxide or carbon monoxide
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<b>Special protective actions for Fire-fighters:</b>	Promptly isolate the scene by removing all persons from the incident if there is fire.
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No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters**

Fire-fighters should wear appropriate protective equipment and self-contained breathing Apparatus with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release Measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel:** 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

**For emergency responders:** If specialized clothing is required to deal with the spillage, take note of any information in section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel"

**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, water ways, soil and air)

### Methods and material for containment and cleaning up:

**Method for Containment:** Prevent further leakage or spillage if safe to do so.

**Methods of cleaning up:** Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures:** Put on appropriate personal protective equipment (see Section 8).

### Advice on general occupational hygiene:

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

### Conditions for safe storage, including any incompatibilities:

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

**Occupational exposure limits:** None

**Appropriate engineering controls:** Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Environmental exposure controls:** Emissions from ventilation or work process equipment should be checked to ensure

they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

#### Individual protection measures

##### 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.

##### Eye/face protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection

##### Hand protection:

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

##### Body protection:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

##### Other skin protection:

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

##### Respiratory protection:

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## **Section 9. Physical and chemical properties**

#### Appearance

Physical state:	Liquid
Colour:	Colourless
Odour:	Odourless
Odour Threshold:	Not available
pH:	1.68
Melting Point:	Not available
Boiling Point:	100° C
Flash point:	Not available
Evaporation rate:	Not available
Flammability (solid, gas):	Not available
Lower and upper explosive: (Flammable) limits:	Not available
Vapour pressure:	Not available
Vapour density:	Not available
Relative density:	Not available
Partition coefficient n- octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not available

## Section 10. Stability and reactivity

Reactivity:	No specific test data related to reactivity available for this product or its ingredients
Chemical stability:	The product is stable
Possibility of hazardous reaction:	Under normal conditions of storage and use, hazardous reactions will not occur
Conditions to avoid:	No specific data
Incompatible materials:	No information available
Hazardous decomposition Products:	Under normal conditions of storage and use, hazardous decomposition products should be produced.

## Section 11. Toxicological Information

### Information on toxicological effects

Acute toxicity:	Not available
Irritation/Corrosion:	Not available
Sensitization:	Not available
Mutagenicity:	Not available
Carcinogenicity:	Not available
Reproductive toxicity:	Not available
Teratogenicity:	Not available
Specific target organ toxicity (single exposure):	Not available
Specific target organ toxicity (repeated exposure):	Not available
Aspiration hazard:	Not available

Information on the likely routes of exposure:	Not available
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### Potential acute effects:

Eye Contact:	Causes serious eye damage
Inhalation:	No known significant effects or critical hazards.
Skin contact:	Causes severe burns.
Ingestion:	No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

Eye contact:	Adverse symptoms may include pain, watering, redness
Inhalation:	No specific data.
Skin contact:	Adverse symptoms may include pain, irritation, redness and blistering may occur
Ingestion:	Adverse symptoms may include stomach pain

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

Potential immediate effects:	Not available
Potential delayed effects:	Not available

#### Long term exposure

Potential immediate effects:	Not available
Potential delayed effects:	Not available

#### Potential chronic health effects:

General:	Not available
Carcinogenicity:	No known significant effects or critical hazards
Mutagenicity:	No known significant effects or critical hazards

Teratogenicity: No known significant effects or critical hazards  
 Developmental effects: No known significant effects or critical hazards  
 Fertility effects: No known significant effects or critical hazards

Numerical measures of toxicity

Acute toxicity estimates: Not available

**Section 12. Ecological information**

Toxicity: Not available  
 Persistence/degradability: Not available  
 Bio accumulative potential: Not available  
Mobility in soil  
 Soil/water partition coefficient (KOC): Not available

Other adverse effects: No known significant effects or critical hazards.

**Section 13. Disposal consideration**

**Disposal methods:** 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. 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. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Section 14. Transport information**

	UN	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Additional information	-	-	-

**Special precautions for user:** Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## Section 15. Regulatory information

[Safety, health and environmental regulations/legislation specific for the substance or mixture.](#)

International Inventories:

USINV	Complies
CANINV	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

[Key of abbreviation:](#)

USINV / TSCA: United States Toxic Substances Control Act Section 8(b) Inventory

CANINV / DSL/NDSL: Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS: European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS: Japanese Existing and New Chemical Substances

IECSC: Chinese Inventory of Existing Chemical Substances

KECL: Korean Existing and Evaluated Chemical Substances

PICCS: Philippines Inventory of Chemical and Chemical Substances

AICS: Australian Inventory of Chemical Substances

[Chemical safety assessment:](#)

A chemical safety assessment according to regulation (EC) No: 1907/2006 is not required.

## Section 16. Other information

[History:](#)

[Date of issue:](#) 6 March 2018

[Key of abbreviation:](#)

ATE: Acute Toxicity Estimate

BCF: Bio concentration Factor

GHS: Globally harmonized System of classification and labelling of chemicals

IATA: International Air Transport Association

IBC= Intermediate Bulk Container

IMDG International maritime Dangerous goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

[Notice to reader:](#)

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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.