

**Kit Components**

| Product code | Description   |
|--------------|---|
| <b>A2891</b> | <b>ReliaPrep™ DNA Clean-up and Concentration System</b> |

## Components:

|       |                            |
|-------|----------------------------|
| A254A | Column Wash Solution (CWE) |
| A930  | Membrane Binding Solution  |
| A288A | Buffer B (BWB)             |
| P119  | Nuclease-Free Water        |





## Safety Data Sheet acc. to OSHA HCS

Printing date 01/17/2024

Reviewed on 01/17/2024

### 1 Identification

**Product identifier****Trade name:** Column Wash Solution (CWE)**Article number:** A254A**Application of the substance / the mixture** For Laboratory Use**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Promega Corporation

2800 Woods Hollow Road

Madison, WI 53711

U.S.A.

1-800-356-9526 or (608)-274-4330

**Information department:** SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Emergency telephone number:**

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

### 2 Hazard(s) identification

**Classification of the substance or mixture**

GHS07

Acute Toxicity - Oral 4      H302 Harmful if swallowed.

Acute Toxicity - Inhalation 4      H332 Harmful if inhaled.

Skin Irritation 2      H315 Causes skin irritation.

Eye Irritation 2A      H319 Causes serious eye irritation.

**Label elements****GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).**Hazard pictograms**

GHS07

**Signal word** Warning**Hazard-determining components of labeling:**

guanidinium chloride

**Hazard statements**

Harmful if swallowed or if inhaled.

Causes skin irritation.

Causes serious eye irritation.

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**Trade name: Column Wash Solution (CWE)**

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**Precautionary statements**

*Avoid breathing dust/fume/gas/mist/vapors/spray*

*Wash thoroughly after handling.*

*Do not eat, drink or smoke when using this product.*

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

*Wear eye protection / face protection.*

*If swallowed: Call a poison center/doctor if you feel unwell.*

*If on skin: Wash with plenty of water.*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*Rinse mouth.*

*Take off contaminated clothing and wash it before reuse.*

*If skin irritation occurs: Get medical advice/attention.*

*If eye irritation persists: Get medical advice/attention.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

**Classification system:****NFPA ratings (scale 0 - 4)**

Health = 2

Fire = 0

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = 2

Fire = 0

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200): Irritant****Primary route(s) of entry:**

*Dermal*

*Inhalation*

*Oral*

**Target Organ(s):**

*May affect Nervous system (Neurotoxin)*

*May affect Bones*

**Other hazards****Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

### \* 3 Composition/information on ingredients

**Chemical characterization: Mixtures****Description:**

*The product is made up of a mixture of hazardous and non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.*

**Dangerous components:**

|         |                      |        |
|---------|----------------------|--------|
| 50-01-1 | guanidinium chloride | 50-75% |
|---------|----------------------|--------|

**Additional information:** For the wording of the listed risk phrases refer to section 15.

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**Trade name: Column Wash Solution (CWE)**

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## 4 First-aid measures

### Description of first aid measures

#### General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

#### After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

Seek medical treatment in case of complaints.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

#### After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**After swallowing:** Seek immediate medical advice.

#### Information for doctor:

**Most important symptoms and effects, both acute and delayed**

None

No further relevant information available.

**Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Fire-fighting measures

### Extinguishing media

#### Suitable extinguishing agents:

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

#### Special hazards arising from the substance or mixture

None known

No further relevant information available.

**Advice for firefighters** No special advice.

**Protective equipment:** Mouth respiratory protective device.

## 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Remove persons from danger area.

Wear protective clothing.

#### Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

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

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to Section 13.

Ensure adequate ventilation.

#### Reference to other sections

See Section 7 for information on safe handling.

See Section 13 for disposal information.

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**Trade name: Column Wash Solution (CWE)**

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## 7 Handling and storage

### Handling:

#### Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

**Information about protection against explosions and fires:** The product is not flammable.

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

#### Storage:

**Requirements to be met by storerooms and receptacles:** Store below -65°C. Protected from light.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** Keep receptacle tightly sealed.

**Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

### Control parameters

#### Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists that were valid during the creation were used as basis.

### Exposure controls

#### Personal protective equipment:

#### General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Do not eat or drink while working.

#### Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

**Protection of hands:** Not required.

#### Material of gloves

Gloves impermeable to the specific chemical substance.

Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

#### Eye protection:

Safety glasses

Use equipment for eye protection tested and approved under government NIOSH standards.

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Trade name: Column Wash Solution (CWE)

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## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

#### Appearance:

|                        |                 |
|------------------------|-----------------|
| <b>Form:</b>           | Fluid           |
| <b>Color:</b>          | Colorless       |
| <b>Odor:</b>           | Not determined  |
| <b>Odor threshold:</b> | Not determined. |

**pH-value at 20 °C (68 °F):** 5.2

#### Change in condition

|                                     |                 |
|-------------------------------------|-----------------|
| <b>Melting point/Melting range:</b> | Undetermined.   |
| <b>Boiling point/Boiling range:</b> | 100 °C (212 °F) |
| <b>Flash point:</b>                 | Not applicable. |

|                                       |                 |
|---------------------------------------|-----------------|
| <b>Flammability (solid, gaseous):</b> | Not applicable. |
| <b>Decomposition temperature:</b>     | Not determined. |

**Ignition temperature:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.

#### Explosion limits:

|                        |                 |
|------------------------|-----------------|
| <b>Lower:</b>          | Not determined. |
| <b>Upper:</b>          | Not determined. |
| <b>Vapor pressure:</b> | Not determined. |

**Density at 20 °C (68 °F):** 1.22722 g/cm<sup>3</sup> (10.24115 lbs/gal)

|                         |                 |
|-------------------------|-----------------|
| <b>Relative density</b> | Not determined. |
| <b>Vapor density</b>    | Not determined. |
| <b>Evaporation rate</b> | Not determined. |

#### Solubility in / Miscibility with

|   |                 |
|---|-----------------|
| <b>Water:</b>                                   | Fully miscible. |
| <b>Partition coefficient (n-octanol/water):</b> | Not determined. |
| <b>Viscosity:</b>                               |                 |
| <b>Dynamic:</b>                                 | Not determined. |
| <b>Kinematic:</b>                               | Not determined. |

#### Solvent separation test

|                     |        |
|---------------------|--------|
| <b>Water:</b>       | 33.2 % |
| <b>VOC content:</b> | 0.00 % |

**Solids content:** 66.8 %

**Other information** No further relevant information available.

## 10 Stability and reactivity

**Reactivity** No further relevant information available.

#### Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Possibility of hazardous reactions** Reacts with strong acids and oxidizing agents.

**Conditions to avoid** No further relevant information available.

**Incompatible materials:** Oxidizing agents

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Trade name: Column Wash Solution (CWE)

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Hazardous decomposition products: No dangerous decomposition products known.

## 11 Toxicological information

### Information on toxicological effects

#### Acute toxicity:

#### LD/LC50 values that are relevant for classification:

#### 50-01-1 guanidinium chloride

|                    |       |                                      |
|--------------------|-------|--------------------------------------|
| Oral               | LD50  | 475 mg/kg (Rat)                      |
| Irritation of eyes | acute | 500 mg (Rabbit)<br>Severe Irritation |

#### Primary irritant effect:

**on the skin:** Causes skin irritation.

**on the eye:** Irritating effect.

#### Sensitization:

In case of skin contact: not sensitising

In case of inhalation: not sensitising

#### Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

OECD test guideline 471, Ames test.

Harmful

Irritant

#### Carcinogenic categories

#### IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

#### NTP (National Toxicology Program)

None of the ingredients are listed.

#### OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

## 12 Ecological information

### Toxicity

**Aquatic toxicity:** Not harmful to the aquatic environment

### Persistence and degradability

Not available

No further relevant information available.

### Bioaccumulative potential

Not known

No further relevant information available.

**Mobility in soil** No further relevant information available.

### Ecotoxicological effects:

**Remark:** Not available

### Additional ecological information:

**General notes:** No data available.

### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

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**Trade name: Column Wash Solution (CWE)**

**Other adverse effects** No further relevant information available.

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## 13 Disposal considerations

### Waste treatment methods

#### Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

#### Uncleaned packagings:

**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

### UN-Number

**DOT, ADR, IMDG, IATA**

UN2810

### UN proper shipping name

**DOT**

None

**ADR**

**IMDG, IATA**

Toxic, liquids, organic, n.o.s.

2810 TOXIC LIQUID, ORGANIC, N.O.S.

TOXIC LIQUID, ORGANIC, N.O.S.

### Transport hazard class(es)

**DOT**

None



**Class**

**Label**

6.1 Toxic substances

6.1

**ADR**



**Class**

**Label**

6.1 (T1) Toxic substances

6.1

**IMDG, IATA**



**Class**

**Label**

6.1 Toxic substances

6.1

### Packing group

**DOT, ADR, IMDG, IATA**

None

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Trade name: Column Wash Solution (CWE)

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**Environmental hazards:****Marine pollutant:** No**Special precautions for user** Warning: Toxic substances**Hazard identification number (Kemler code):** 60**EMS Number:** F-A,S-A**Stowage Category** A**Stowage Code** SW2 Clear of living quarters.**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.**Transport/Additional information:****ADR****Excepted quantities (EQ)** Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml**IMDG****Limited quantities (LQ)** 5L  
**Excepted quantities (EQ)** Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml**UN "Model Regulation":** UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. 6.1, III**15 Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture**  
Sara**Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

**Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

**TSCA (Toxic Substances Control Act) Inventory:**

All components have the value ACTIVE.

**Hazardous Air Pollutants**

None of the ingredients are listed.

**Proposition 65****Chemicals known to cause cancer:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

**New Jersey Right-to-Know List:**

None of the ingredients are listed.

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**Trade name: Column Wash Solution (CWE)**

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**Pennsylvania Right-to-Know List:**

None of the ingredients are listed.

**Carcinogenicity categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**TLV (Threshold Limit Value)**

None of the ingredients are listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

**GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

**Signal word** Warning

**Hazard-determining components of labeling:**

guanidinium chloride

**Hazard statements**

Harmful if swallowed or if inhaled.

Causes skin irritation.

Causes serious eye irritation.

**Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear eye protection / face protection.

If swallowed: Call a poison center/doctor if you feel unwell.

If on skin: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Rinse mouth.

Take off contaminated clothing and wash it before reuse.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Chemical safety assessment**

**Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

\*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing SDS:**

Promega Corporation

Chemical Regulatory Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

chemicalregulatory@promega.com

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**Trade name: Column Wash Solution (CWE)**

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**Contact:****Date of preparation / last revision** 01/17/2024**Abbreviations and acronyms:***ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**DOT: US Department of Transportation**IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**OSHA: Occupational Safety & Health**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**Acute Toxicity - Oral 4: Acute toxicity – Category 4**Skin Irritation 2: Skin corrosion/irritation – Category 2**Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A*

US

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 01/17/2024

Reviewed on 01/17/2024

**1 Identification****Product identifier****Trade name:** Membrane Binding Solution**Article number:** A930**Application of the substance / the mixture**

For Laboratory Use

Laboratory chemicals

**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Promega Corporation

2800 Woods Hollow Road

Madison, WI 53711

U.S.A.

1-800-356-9526 or (608)-274-4330

**Information department:** SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Emergency telephone number:**

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

**2 Hazard(s) identification****Classification of the substance or mixture**

GHS05 Corrosion

Skin Corrosion 1C

H314 Causes severe skin burns and eye damage.

Eye Damage 1

H318 Causes serious eye damage.



GHS07

Acute Toxicity - Oral 4

H302 Harmful if swallowed.

Acute Toxicity - Inhalation 4

H332 Harmful if inhaled.

**Label elements****GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).**Hazard pictograms**

GHS05



GHS07

**Signal word** Danger

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**Trade name: Membrane Binding Solution**

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**Hazard-determining components of labeling:**

guanidinium thiocyanate

**Hazard statements***Harmful if swallowed or if inhaled.**Causes severe skin burns and eye damage.***Precautionary statements***Do not breathe dusts or mists.**Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**Use only outdoors or in a well-ventilated area.**Wear protective gloves/protective clothing/eye protection/face protection.**If swallowed: Call a poison center/doctor if you feel unwell.**If swallowed: Rinse mouth. Do NOT induce vomiting.**If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Immediately call a poison center/doctor.**Wash contaminated clothing before reuse.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***Classification system:****NFPA ratings (scale 0 - 4)**

Health = 3

Fire = 0

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = 2

Fire = 0

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):**

Toxic

Highly Toxic

Irritant

**Primary route(s) of entry:**

Dermal

Inhalation

Oral

**Target Organ(s):***May affect Nervous system (Neurotoxin)**May cause Kidney damage (Nephrotoxin)**Risk of damage to eyes**Affects Gastrointestinal System***Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

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**Trade name: Membrane Binding Solution**

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### 3 Composition/information on ingredients

**Chemical characterization: Mixtures**

**Description:**

The product is made up of a mixture of hazardous and non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

**Dangerous components:**

|          |                         |        |
|----------|-------------------------|--------|
| 593-84-0 | guanidinium thiocyanate | 50-75% |
|----------|-------------------------|--------|

**Additional information:** For the wording of the listed risk phrases refer to section 15.

### 4 First-aid measures

**Description of first aid measures**

**General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Take affected persons out into the fresh air.

**After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

Seek medical treatment in case of complaints.

**After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:**

Immediately call a doctor.

Seek immediate medical advice.

**Information for doctor:**

**Most important symptoms and effects, both acute and delayed**

None

No further relevant information available.

**Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### 5 Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards arising from the substance or mixture**

None known

No further relevant information available.

**Advice for firefighters** In the case of fire, wear respiratory protective equipment and chemical protective suit.

**Protective equipment:** Mouth respiratory protective device.

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**Trade name: Membrane Binding Solution**

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## 6 Accidental release measures

### **Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

Remove persons from danger area.

Wear protective equipment. Keep unprotected persons away.

Wear protective clothing.

### **Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

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

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose contaminated material as waste according to Section 13.

Ensure adequate ventilation.

### **Reference to other sections**

See Section 7 for information on safe handling.

See Section 13 for disposal information.

## 7 Handling and storage

### **Handling:**

#### **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

#### **Information about protection against explosions and fires:**

Keep respiratory protective device available.

The product is not flammable.

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

##### **Storage:**

**Requirements to be met by storerooms and receptacles:** Store below -65°C. Protected from light.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** Keep receptacle tightly sealed.

**Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

### **Control parameters**

#### **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists that were valid during the creation were used as basis.

### **Exposure controls**

#### **Personal protective equipment:**

##### **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

Do not eat or drink while working.

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**Trade name: Membrane Binding Solution**

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Clean skin thoroughly immediately after handling the product.

**Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

**Protection of hands:** Not required.

**Material of gloves**

Gloves impermeable to the specific chemical substance.

Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Eye protection:**

Tightly sealed goggles

Use equipment for eye protection tested and approved under government NIOSH standards.

## \* 9 Physical and chemical properties

**Information on basic physical and chemical properties**

**General Information**

**Appearance:**

|                        |                 |
|------------------------|-----------------|
| <b>Form:</b>           | Fluid           |
| <b>Color:</b>          | Colorless       |
| <b>Odor:</b>           | Not determined  |
| <b>Odor threshold:</b> | Not determined. |

**pH-value at 20 °C (68 °F):** 4.8

**Change in condition**

|                                     |                 |
|-------------------------------------|-----------------|
| <b>Melting point/Melting range:</b> | Undetermined.   |
| <b>Boiling point/Boiling range:</b> | 100 °C (212 °F) |
| <b>Flash point:</b>                 | Not applicable. |

|                                       |                 |
|---------------------------------------|-----------------|
| <b>Flammability (solid, gaseous):</b> | Not applicable. |
| <b>Decomposition temperature:</b>     | Not determined. |

**Ignition temperature:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**

|                        |                 |
|------------------------|-----------------|
| <b>Lower:</b>          | Not determined. |
| <b>Upper:</b>          | Not determined. |
| <b>Vapor pressure:</b> | Not determined. |

|   |   |
|---|---|
| <b>Density at 20 °C (68 °F):</b>                | 1.139 g/cm <sup>3</sup> (9.50496 lbs/gal) |
| <b>Relative density</b>                         | Not determined.                           |
| <b>Vapor density</b>                            | Not determined.                           |
| <b>Evaporation rate</b>                         | Not determined.                           |
| <b>Solubility in / Miscibility with</b>         |   |
| <b>Water:</b>                                   | Fully miscible.                           |
| <b>Partition coefficient (n-octanol/water):</b> | Not determined.                           |

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/17/2024

Reviewed on 01/17/2024

**Trade name: Membrane Binding Solution**

(Contd. of page 5)

**Viscosity:****Dynamic:** Not determined.**Kinematic:** Not determined.**Solvent separation test****Water:** 41.9 %**VOC content:** 0.00 %**Solids content:** 58.1 %**Other information**

No further relevant information available.

## 10 Stability and reactivity

**Reactivity** No further relevant information available.**Chemical stability****Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.**Possibility of hazardous reactions**

Reacts with strong oxidizing agents.

Reacts with acids.

**Conditions to avoid** No further relevant information available.**Incompatible materials:**

Exposure to strong acid will result in the generation of toxic gases

Exposure to bleach may result in the generation of toxic gas

**Hazardous decomposition products:**

Carbon monoxide and carbon dioxide

Nitrogen oxides

Sulfuric acid

## 11 Toxicological information

**Information on toxicological effects****Acute toxicity:****LD/LC50 values that are relevant for classification:****593-84-0 guanidinium thiocyanate**

|        |      |   |
|--------|------|---|
| Oral   | LD50 | 475 mg/kg (Rat)<br>By analogy to guanidine hydrochloride        |
| Dermal | LD50 | >2,000 mg/kg (Rabbit)<br>By analogy to Guanidine hydrochloride. |

**Primary irritant effect:****on the skin:** Irritant to skin and mucous membranes.**on the eye:** Causes serious eye damage.**Sensitization:** Sensitization possible through inhalation.**Additional toxicological information:**The product shows the following dangers according to internally approved calculation methods for preparations:  
OECD test guideline 471, Ames test.

Harmful

Irritant

(Contd. on page 7)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/17/2024

Reviewed on 01/17/2024

**Trade name: Membrane Binding Solution**

(Contd. of page 6)

### Carcinogenic categories

#### IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

#### NTP (National Toxicology Program)

None of the ingredients are listed.

#### OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

## 12 Ecological information

### Toxicity

**Aquatic toxicity:** Not harmful to the aquatic environment

### Persistence and degradability

Not available

No further relevant information available.

### Bioaccumulative potential

Not known

No further relevant information available.

**Mobility in soil** No further relevant information available.

### Ecotoxicological effects:

**Remark:** Not available

### Additional ecological information:

**General notes:** Must not reach bodies of water or drainage ditch undiluted or unneutralized.

### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects** No further relevant information available.

## 13 Disposal considerations

### Waste treatment methods

#### Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

#### Uncleaned packagings:

**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

### UN-Number

DOT, ADR, IMDG, IATA

UN1760

### UN proper shipping name

DOT

Corrosive liquid, n.o.s. solution

ADR

1760 CORROSIVE LIQUID, N.O.S. solution

IMDG, IATA

CORROSIVE LIQUID, N.O.S. solution

(Contd. on page 8)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/17/2024

Reviewed on 01/17/2024

Trade name: *Membrane Binding Solution*

(Contd. of page 7)

**Transport hazard class(es)****DOT**

**Class** 8 Corrosive substances  
**Label** 8

**ADR**

**Class** 8 (C9) Corrosive substances  
**Label** 8

**IMDG, IATA**

**Class** 8 Corrosive substances  
**Label** 8

**Packing group**

**DOT, ADR, IMDG, IATA** II

**Environmental hazards:**

**Marine pollutant:** No

**Special precautions for user** Warning: Corrosive substances

**Hazard identification number (Kemler code):** 80

**EMS Number:** F-A,S-B

**Stowage Category** B

**Stowage Code** SW2 Clear of living quarters.

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

Not applicable.

**Transport/Additional information:****ADR**

**Excepted quantities (EQ)** Code: E2  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 500 ml

**IMDG**

**Limited quantities (LQ)** IL  
**Excepted quantities (EQ)** Code: E2  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 500 ml

(Contd. on page 9)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/17/2024

Reviewed on 01/17/2024

Trade name: Membrane Binding Solution

(Contd. of page 8)

UN "Model Regulation":

UN 1760 CORROSIVE LIQUID, N.O.S. SOLUTION, 8, II

## 15 Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture**  
Sara

**Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

**Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

**TSCA (Toxic Substances Control Act) Inventory:**

All components have the value ACTIVE.

**Hazardous Air Pollutants**

None of the ingredients are listed.

**Proposition 65**

**Chemicals known to cause cancer:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

**New Jersey Right-to-Know List:**

None of the ingredients are listed.

**Pennsylvania Right-to-Know List:**

None of the ingredients are listed.

**Carcinogenicity categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**TLV (Threshold Limit Value)**

None of the ingredients are listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

**GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

**Signal word** Danger

**Hazard-determining components of labeling:**

guanidinium thiocyanate

**Hazard statements**

Harmful if swallowed or if inhaled.

Causes severe skin burns and eye damage.

**Precautionary statements**

Do not breathe dusts or mists.

Wash thoroughly after handling.

(Contd. on page 10)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 01/17/2024

Reviewed on 01/17/2024

**Trade name: Membrane Binding Solution**

(Contd. of page 9)

*Do not eat, drink or smoke when using this product.*

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

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

*If swallowed: Call a poison center/doctor if you feel unwell.*

*If swallowed: Rinse mouth. Do NOT induce vomiting.*

*If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*Immediately call a poison center/doctor.*

*Wash contaminated clothing before reuse.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

### **Chemical safety assessment**

**Water hazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.*

**Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

## **16 Other information**

*\*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

### **Department issuing SDS:**

*Promega Corporation*

*Chemical Regulatory Department*

*2800 Woods Hollow Road*

*Madison, WI*

*Ph: (608) 274-4330*

*chemicalregulatory@promega.com*

### **Contact:**

**Date of preparation / last revision** *01/17/2024*

### **Abbreviations and acronyms:**

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*

*ICAO: International Civil Aviation Organization*

*ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*VOC: Volatile Organic Compounds (USA, EU)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*NIOSH: National Institute for Occupational Safety*

*OSHA: Occupational Safety & Health*

*TLV: Threshold Limit Value*

*PEL: Permissible Exposure Limit*

*REL: Recommended Exposure Limit*

*Acute Toxicity - Oral 4: Acute toxicity – Category 4*

*Skin Corrosion 1C: Skin corrosion/irritation – Category 1C*

*Eye Damage 1: Serious eye damage/eye irritation – Category 1*

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 01/17/2024

Reviewed on 01/17/2024

**1 Identification****Product identifier****Trade name:** Buffer B (BWB)**Article number:** A288A**Application of the substance / the mixture** For Laboratory Use**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Promega Corporation

2800 Woods Hollow Road

Madison, WI 53711

U.S.A.

1-800-356-9526 or (608)-274-4330

**Information department:** SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Emergency telephone number:**

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

**2 Hazard(s) identification****Classification of the substance or mixture**

The product is not classified as hazardous according to the Globally Harmonized System (GHS).

**Label elements****GHS label elements** Not applicable**Hazard pictograms** Not applicable**Signal word** Not applicable**Hazard statements** Not applicable**Classification system:****NFPA ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** Not applicable**Target Organ(s):** Not applicable or unknown**Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/17/2024

Reviewed on 01/17/2024

Trade name: **Buffer B (BWB)**

(Contd. of page 1)

### 3 Composition/information on ingredients

**Chemical characterization: Mixtures**

**Description:**

The product is made up of a mixture of hazardous and non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

**Dangerous components:** Not applicable

**Additional information:** For the wording of the listed risk phrases refer to section 15.

### 4 First-aid measures

**Description of first aid measures**

**General information:** No special measures required.

**After inhalation:** If the patient feels unwell or is concerned, obtain medical advice.

**After skin contact:** Generally the product does not irritate the skin.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If the patient feels unwell or is concerned, obtain medical advice.

**Information for doctor:**

**Most important symptoms and effects, both acute and delayed**

None

No further relevant information available.

**Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### 5 Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards arising from the substance or mixture**

None known

No further relevant information available.

**Advice for firefighters** No special advice.

**Protective equipment:** No special measures required.

### 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Not required.

**Environmental precautions:** Dilute with plenty of water.

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

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 13 for disposal information.

US

(Contd. on page 3)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/17/2024

Reviewed on 01/17/2024

Trade name: **Buffer B (BWB)**

(Contd. of page 2)

## 7 Handling and storage

### Handling:

**Precautions for safe handling** No special measures required.

**Information about protection against explosions and fires:** The product is not flammable.

**Conditions for safe storage, including any incompatibilities**

### Storage:

**Requirements to be met by storerooms and receptacles:** Store below -65°C. Protected from light.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** None.

**Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

### Control parameters

**Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists that were valid during the creation were used as basis.

### Exposure controls

**Personal protective equipment:**

**General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:** Not required.

**Protection of hands:**

Select the glove material considering penetration time, rate of diffusion and degradation time.

**Material of gloves**

Gloves impermeable to the specific chemical substance.

Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Eye protection:** Not required.

## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

#### Appearance:

|                        |                 |
|------------------------|-----------------|
| <b>Form:</b>           | Fluid           |
| <b>Color:</b>          | Colorless       |
| <b>Odor:</b>           | Not determined  |
| <b>Odor threshold:</b> | Not determined. |

|                                   |     |
|-----------------------------------|-----|
| <b>pH-value at 20 °C (68 °F):</b> | 7.5 |
|-----------------------------------|-----|

(Contd. on page 4)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/17/2024

Reviewed on 01/17/2024

Trade name: Buffer B (BWB)

(Contd. of page 3)

**Change in condition**

**Melting point/Melting range:** 0 °C (32 °F)  
**Boiling point/Boiling range:** 100 °C (212 °F)  
**Flash point:** Not applicable.

**Flammability (solid, gaseous):** Not applicable.  
**Decomposition temperature:** Not determined.

**Ignition temperature:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**  
**Lower:** Not determined.  
**Upper:** Not determined.  
**Vapor pressure:** Not determined.

**Density at 20 °C (68 °F):** 0.99169 g/cm<sup>3</sup> (8.27565 lbs/gal)

**Relative density:** Not determined.

**Vapor density:** Not determined.

**Evaporation rate:** Not determined.

**Solubility in / Miscibility with**

**Water:** Fully miscible.

**Partition coefficient (n-octanol/water):** Not determined.

**Viscosity:**

**Dynamic at 20 °C (68 °F):** 0.0952 mPas

**Kinematic:** Not determined.

**Solvent separation test**

**Water:** 98.0 %

**VOC content:** 0.00 %

**Solids content:** 10.0 %

**Other information** No further relevant information available.

## 10 Stability and reactivity

**Reactivity** No further relevant information available.

**Chemical stability**

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Possibility of hazardous reactions** No dangerous reactions known.

**Conditions to avoid** No further relevant information available.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**Information on toxicological effects****Acute toxicity:**

**LD/LC50 values that are relevant for classification:** No data available

**Primary irritant effect:**

**on the skin:** No irritant effect.

**on the eye:** No irritating effect.

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/17/2024

Reviewed on 01/17/2024

**Trade name: Buffer B (BWB)**

(Contd. of page 4)

**Sensitization:***In case of skin contact: not sensitising**In case of inhalation: not sensitising***Additional toxicological information:***The product is not subject to classification according to internally approved calculation methods for preparations:***Carcinogenic categories****IARC (International Agency for Research on Cancer)***None of the ingredients are listed.***NTP (National Toxicology Program)***None of the ingredients are listed.***OSHA-Ca (Occupational Safety & Health Administration)***None of the ingredients are listed.*

## \* 12 Ecological information

**Toxicity***Aquatic toxicity: Not harmful to the aquatic environment***Persistence and degradability***Not available**No further relevant information available.***Bioaccumulative potential***Not known**No further relevant information available.**Mobility in soil No further relevant information available.***Ecotoxicological effects:***Remark: Not available***Additional ecological information:****General notes:***Not available.**Not known to be hazardous to water.***Results of PBT and vPvB assessment***PBT: Not applicable.**vPvB: Not applicable.**Other adverse effects No further relevant information available.*

## \* 13 Disposal considerations

**Waste treatment methods****Recommendation:***Disposal should be in accordance with applicable regional, national and local laws and regulations.**Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.***Uncleaned packagings:***Recommendation: Disposal must be made according to official regulations.**Recommended cleansing agent: Water, if necessary with cleansing agents.*

US

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/17/2024

Reviewed on 01/17/2024

Trade name: **Buffer B (BWB)**

(Contd. of page 5)

## 14 Transport information

|   |  |
|---|--|
| <b>UN-Number</b><br><b>DOT, ADR, ADN, IMDG, IATA</b>                            | Not hazardous for transportation<br>Not applicable |
| <b>UN proper shipping name</b><br><b>DOT, ADR, ADN, IMDG, IATA</b>              | None<br>Not applicable                             |
| <b>Transport hazard class(es)</b><br><b>DOT, ADR, ADN, IMDG, IATA</b><br>Class  | None<br>Not applicable                             |
| <b>Packing group</b><br><b>DOT, ADR, IMDG, IATA</b>                             | None<br>Not applicable                             |
| <b>Environmental hazards:</b><br><b>Marine pollutant:</b>                       | No   |
| <b>Special precautions for user</b>   | Not applicable.                                    |
| <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b> | Not applicable.                                    |
| <b>UN "Model Regulation":</b>   | Not applicable                                     |

## 15 Regulatory information

|  |                                       |
|--|---------------------------------------|
| <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b><br><b>Sara</b> |                                       |
| <b>Section 355 (extremely hazardous substances):</b>   | None of the ingredients are listed.   |
| <b>Section 313 (Specific toxic chemical listings):</b>   | None of the ingredients are listed.   |
| <b>TSCA (Toxic Substances Control Act) Inventory:</b>  | All components have the value ACTIVE. |
| <b>Hazardous Air Pollutants</b>  | None of the ingredients are listed.   |
| <b>Proposition 65</b>  |                                       |
| <b>Chemicals known to cause cancer:</b>  | None of the ingredients are listed.   |
| <b>Chemicals known to cause reproductive toxicity for females:</b>   | None of the ingredients are listed.   |
| <b>Chemicals known to cause reproductive toxicity for males:</b>   | None of the ingredients are listed.   |
| <b>Chemicals known to cause developmental toxicity:</b>  | None of the ingredients are listed.   |
| <b>New Jersey Right-to-Know List:</b>  | None of the ingredients are listed.   |
| <b>Pennsylvania Right-to-Know List:</b>  | None of the ingredients are listed.   |

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/17/2024

Reviewed on 01/17/2024

**Trade name: Buffer B (BWB)**

(Contd. of page 6)

### Cancerogenity categories

#### EPA (Environmental Protection Agency)

None of the ingredients are listed.

#### TLV (Threshold Limit Value)

None of the ingredients are listed.

#### NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

**GHS label elements** Not applicable

**Signal word** Not applicable

**Hazard statements** Not applicable

**Chemical safety assessment**

**Water hazard class:** Generally not hazardous for water.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

\*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### Department issuing SDS:

Promega Corporation

Chemical Regulatory Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

chemicalregulatory@promega.com

### Contact:

**Date of preparation / last revision** 01/17/2024

### Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit



## Safety Data Sheet acc. to OSHA HCS

Printing date 01/17/2024

Reviewed on 12/28/2023

### 1 Identification

**Product identifier**

**Trade name:** Nuclease-Free Water

**Article number:** P119

**CAS Number:**

7732-18-5

**EC number:**

231-791-2

**Application of the substance / the mixture** For Laboratory Use

**Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

Promega Corporation

2800 Woods Hollow Road

Madison, WI 53711

U.S.A.

1-800-356-9526 or (608)-274-4330

**Information department:** SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)

**Emergency telephone number:**

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

### 2 Hazard(s) identification

**Classification of the substance or mixture**

The substance is not classified as hazardous according to the Globally Harmonized System (GHS).

**Label elements**

**GHS label elements** Not applicable

**Hazard pictograms** Not applicable

**Signal word** Not applicable

**Hazard statements** Not applicable

**Classification system:**

**NFPA ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** Not applicable

**Target Organ(s):** Not applicable or unknown

**Other hazards**

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/17/2024

Reviewed on 12/28/2023

**Trade name: Nuclease-Free Water**

**vPvB:** Not applicable.

(Contd. of page 1)

### \* 3 Composition/information on ingredients

**Chemical characterization: Substances**

**CAS No. Description**

7732-18-5 water

**EC number:** 231-791-2

### \* 4 First-aid measures

**Description of first aid measures**

**General information:** No special measures required.

**After inhalation:** If the patient feels unwell or is concerned, obtain medical advice.

**After skin contact:** Generally the product does not irritate the skin.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If the patient feels unwell or is concerned, obtain medical advice.

**Information for doctor:**

**Most important symptoms and effects, both acute and delayed**

None

No further relevant information available.

**Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### \* 5 Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards arising from the substance or mixture**

None known

No further relevant information available.

**Advice for firefighters** No special advice.

**Protective equipment:** No special measures required.

### \* 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Not required.

**Environmental precautions:** Dilute with plenty of water.

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

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 13 for disposal information.

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## 7 Handling and storage

### Handling:

**Precautions for safe handling** No special measures required.

**Information about protection against explosions and fires:** The product is not flammable.

**Conditions for safe storage, including any incompatibilities**

### Storage:

**Requirements to be met by storerooms and receptacles:** Store below -65°C. Protected from light.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** None.

**Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

### Control parameters

**Components with limit values that require monitoring at the workplace:** Not required.

**Additional information:** The lists that were valid during the creation were used as basis.

### Exposure controls

#### Personal protective equipment:

#### General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:** Not required.

#### Protection of hands:

Select the glove material considering penetration time, rate of diffusion and degradation time.

#### Material of gloves

Gloves impermeable to the specific chemical substance.

Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.

**Eye protection:** Not required.

## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

#### Appearance:

|                        |                 |
|------------------------|-----------------|
| <b>Form:</b>           | Fluid           |
| <b>Color:</b>          | Colorless       |
| <b>Odor:</b>           | Odorless        |
| <b>Odor threshold:</b> | Not determined. |

#### Change in condition

|                                     |                 |
|-------------------------------------|-----------------|
| <b>Melting point/Melting range:</b> | 0 °C (32 °F)    |
| <b>Boiling point/Boiling range:</b> | 100 °C (212 °F) |
| <b>Flash point:</b>                 | Not applicable. |

|                                       |                 |
|---------------------------------------|-----------------|
| <b>Flammability (solid, gaseous):</b> | Not applicable. |
| <b>Decomposition temperature:</b>     | Not determined. |

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|   |   |
|---|---|
| <b>Ignition temperature:</b>                    | Not determined.                               |
| <b>Danger of explosion:</b>                     | Product does not present an explosion hazard. |
| <b>Explosion limits:</b>                        |   |
| <b>Lower:</b>                                   | Not determined.                               |
| <b>Upper:</b>                                   | Not determined.                               |
| <b>Vapor pressure:</b>                          | Not determined.                               |
| <b>Density at 20 °C (68 °F):</b>                | 1 g/cm <sup>3</sup> (8.345 lbs/gal)           |
| <b>Relative density</b>                         | Not determined.                               |
| <b>Vapor density</b>                            | Not determined.                               |
| <b>Evaporation rate</b>                         | Not determined.                               |
| <b>Solubility in / Miscibility with</b>         |   |
| <b>Water:</b>                                   | Fully miscible.                               |
| <b>Partition coefficient (n-octanol/water):</b> | Not determined.                               |
| <b>Viscosity:</b>                               |   |
| <b>Dynamic at 20 °C (68 °F):</b>                | 0.0952 mPas                                   |
| <b>Kinematic:</b>                               | Not determined.                               |
| <b>Water:</b>                                   | 100.0 %                                       |
| <b>VOC content:</b>                             | 0.00 %  |
| <b>Solids content:</b>                          | 0.0 %   |
| <b>Other information</b>                        | No further relevant information available.    |

## 10 Stability and reactivity

**Reactivity** No further relevant information available.

**Chemical stability**

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Possibility of hazardous reactions** No dangerous reactions known.

**Conditions to avoid** No further relevant information available.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**Information on toxicological effects**

**Acute toxicity:**

**LD/LC50 values that are relevant for classification:** No data available

**Primary irritant effect:**

**on the skin:** No irritant effect.

**on the eye:** No irritating effect.

**Sensitization:**

**In case of skin contact:** not sensitising

**In case of inhalation:** not sensitising

**Additional toxicological information:** The substance is not subject to classification.

**Carcinogenic categories**

**IARC (International Agency for Research on Cancer)**

Substance is not listed.

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**NTP (National Toxicology Program)**

Substance is not listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

## \* 12 Ecological information

**Toxicity**

**Aquatic toxicity:** Not harmful to the aquatic environment

**Persistence and degradability**

Not available

No further relevant information available.

**Bioaccumulative potential**

Not known

No further relevant information available.

**Mobility in soil** No further relevant information available.

**Ecotoxicological effects:**

**Remark:** Not available

**Additional ecological information:**

**General notes:**

Not available.

Not known to be hazardous to water.

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects** No further relevant information available.

## \* 13 Disposal considerations

**Waste treatment methods**

**Recommendation:**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleansing agent:** Water, if necessary with cleansing agents.

## \* 14 Transport information

**UN-Number**

Not hazardous for transportation

**DOT, ADR, ADN, IMDG, IATA**

Not applicable

**UN proper shipping name**

None

**DOT, ADR, IMDG, IATA**

Not applicable

**ADN**

**Transport hazard class(es)**

None

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**DOT, ADR, ADN, IMDG, IATA**Class *Not applicable***Packing group**DOT, ADR, IMDG, IATA *None*  
*Not applicable***Environmental hazards:****Marine pollutant:** *No***Special precautions for user** *Not applicable.***Transport in bulk according to Annex II of  
MARPOL 73/78 and the IBC Code** *Not applicable.***UN "Model Regulation":** *Not applicable***15 Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture**  
**Sara****Section 355 (extremely hazardous substances):***Substance is not listed.***Section 313 (Specific toxic chemical listings):***Substance is not listed.***TSCA (Toxic Substances Control Act) Inventory:***ACTIVE***Hazardous Air Pollutants***Substance is not listed.***Proposition 65****Chemicals known to cause cancer:***Substance is not listed.***Chemicals known to cause reproductive toxicity for females:***Substance is not listed.***Chemicals known to cause reproductive toxicity for males:***Substance is not listed.***Chemicals known to cause developmental toxicity:***Substance is not listed.***New Jersey Right-to-Know List:***Substance is not listed.***Pennsylvania Right-to-Know List:***Substance is not listed.***Carcinogenicity categories****EPA (Environmental Protection Agency)***Substance is not listed.***TLV (Threshold Limit Value)***Substance is not listed.*

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**NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

**GHS label elements** Not applicable

**Signal word** Not applicable

**Hazard statements** Not applicable

**Chemical safety assessment**

**Water hazard class:** Generally not hazardous for water.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

*\*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

**Department issuing SDS:**

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**Date of preparation / last revision** 01/17/2024

**Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit