

| Product code   | Description                              |
|----------------|--|
| <b>7022110</b> | <b>MPure Forensic DNA Extraction Kit</b> |

## Components:

|          |                        |
|----------|------------------------|
| 7022210A | Proteinase K Solution  |
| 7022400D | Lysis Buffer 3         |
| 7022210F | Binding Buffer 1       |
| 7022126D | Magnetic Bead Solution |
| 7022210H | Washing Buffer 1       |
| 7022210I | Washing Buffer 2       |
| 7022210J | Elution Buffer 1       |
| 7022120L | BL2B Buffer            |

## Safety Data Sheet acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 06/10/2020

### 1 Identification

- **Product identifier**
- **Trade name:** Proteinase K Solution
- **Article number:** 7022210A
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

### 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
Proteinase K
- **Hazard statements**  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- **Precautionary statements**  
Avoid breathing dust/fume/gas/mist/vapors/spray  
[In case of inadequate ventilation] wear respiratory protection.  
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.  
If experiencing respiratory symptoms: Call a poison center/doctor.  
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 1  
Fire = 0  
Reactivity = 0

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

|            |    |                |
|------------|----|----------------|
| HEALTH     | *1 | Health = *1    |
| FIRE       | 0  | Fire = 0       |
| REACTIVITY | 0  | Reactivity = 0 |

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture: consisting of the following components.

- **Dangerous components:**

|                                      |              |           |
|--------------------------------------|--------------|-----------|
| CAS: 56-81-5<br>EINECS: 200-289-5    | Glycerol     | 10-50%    |
| CAS: 39450-01-6<br>EINECS: 254-457-8 | Proteinase K | ≥2.5-<10% |

### 4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Flush eyes with running water as a precaution.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed** 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:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.  
For personal protection see section 8.
- **Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.

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Trade name: **Proteinase K Solution**

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- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Pick up mechanically, 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 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

|                 |          |                         |
|-----------------|----------|-------------------------|
| · <b>PAC-1:</b> |          |                         |
| 56-81-5         | Glycerol | 45 mg/m <sup>3</sup>    |
| · <b>PAC-2:</b> |          |                         |
| 56-81-5         | Glycerol | 180 mg/m <sup>3</sup>   |
| · <b>PAC-3:</b> |          |                         |
| 56-81-5         | Glycerol | 1,100 mg/m <sup>3</sup> |

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace. Avoid direct contact with skin and eyes.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special requirements.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15-30°C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:**
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see Section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the remaining constituent has no known exposure limits.

| 56-81-5 Glycerol |   |
|------------------|---|
| PEL              | Long-term value: 15* 5** mg/m <sup>3</sup><br>mist; *total dust **respirable fraction |
| TLV              | TLV withdrawn-insufficient data human occup. exp.                                     |

- **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.

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Trade name: **Proteinase K Solution**

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- **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:**

*The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.*

*Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.*

*Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*

- **Material of gloves**

*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.*

- **Penetration time of glove material**

*The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.*

- **Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

|                        |                                    |
|------------------------|------------------------------------|
| <b>Form:</b>           | Solution                           |
| <b>Color:</b>          | According to product specification |
| <b>Odor:</b>           | Indeterminate                      |
| <b>Odor threshold:</b> | Not determined.                    |

- **pH-value:** Not determined.

- **Change in condition**

**Boiling point/Boiling range:** Undetermined.

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not applicable.

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** See section 10

- **Explosion limits:**

**Lower:** Not Applicable

**Upper:** Not Applicable

- **Vapor pressure:** Not Applicable

- **Density:** Not Applicable

- **Relative density** Not determined.

- **Vapor density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with** Not Determined

- **Water:** Soluble.

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

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- |                            |  |
|----------------------------|--|
| <b>· Viscosity:</b>        |  |
| <b>Dynamic:</b>            | Not determined.                            |
| <b>Kinematic:</b>          | Not determined.                            |
| <b>· Solvent content:</b>  |  |
| <b>Water:</b>              | 45.0 %                                     |
| <b>VOC content:</b>        | 0.00 %                                     |
|                            | 0.0 g/l / 0.00 lb/gal                      |
| <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.  
Avoid contact with acids. Contact liberates a toxic gas.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritant and potentially harmful
- **Sensitization:** Sensitization possible through inhalation.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful
- **Carcinogenic categories**

|   |
|---|
| <b>· IARC (International Agency for Research on Cancer)</b> |
|---|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|  |
|--|
| <b>· NTP (National Toxicology Program)</b> |
|--|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|  |
|--|
| <b>· OSHA-Ca (Occupational Safety &amp; Health Administration)</b> |
|--|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.

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**Trade name: Proteinase K Solution**

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- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **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:**  
Can not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Discard must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleaning agents.

### 14 Transport information

|  |                 |
|--|-----------------|
| <b>· UN-Number</b>   |                 |
| <b>· DOT, ADR, IMDG, IATA</b>  | Not regulated   |
| <b>· UN proper shipping name</b>   |                 |
| <b>· DOT, ADR, IMDG, IATA</b>  | Not regulated   |
| <b>· Transport hazard class(es)</b>  |                 |
| <b>· DOT, ADR, IMDG, IATA</b>  |                 |
| <b>· Class</b>   | Not regulated   |
| <b>· Packing group</b>   |                 |
| <b>· DOT, ADR, IMDG, IATA</b>  | Not regulated   |
| <b>· Environmental hazards:</b>  | Not applicable. |
| <b>· Special precautions for user</b>  | Not applicable. |
| <b>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| <b>· UN "Model Regulation":</b>  | Not regulated   |

### 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 is listed.

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

None of the ingredients is listed.

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

|           |          |        |
|-----------|----------|--------|
| 56-81-5   | Glycerol | ACTIVE |
| 7732-18-5 | Water    | ACTIVE |

**· Hazardous Air Pollutants**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

**· Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

**· Carcinogenic categories**
**· EPA (Environmental Protection Agency)**

None of the ingredients is listed.

**· TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

**· Hazard pictograms**


GHS08

**· Signal word** *Danger*
**· Hazard-determining components of labeling:**
*Proteinase K*
**· Hazard statements**
*May cause allergy or asthma symptoms or breathing difficulties if inhaled.*
**· Precautionary statements**
*Avoid breathing dust/fume/gas/mist/vapors/spray**[In case of inadequate ventilation] wear respiratory protection.**If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.**If experiencing respiratory symptoms: Call a poison center/doctor.**Dispose of contents/container in accordance with local/regional/national/international regulations.*
**· 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:** *Quality Control Dept.*

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**Trade name: Proteinase K Solution**

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· **Date of preparation / last revision** 08/07/2020 / -· **Abbreviations and acronyms:***Resp. Sens. 1: Respiratory sensitisation – Category 1*

US

## Safety Data Sheet acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 08/07/2020

### 1 Identification

- **Product identifier**
- **Trade name:** Lysis Buffer 3
- **Article number:** 7022400D
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

### 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

- **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
- **Hazard-determining components of labeling:**  
Guanidine Hydrochloride  
TRITON® X-100
- **Hazard statements**  
Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye damage.
- **Precautionary statements**  
Wash thoroughly after handling.

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Reviewed on 08/07/2020

Trade name: Lysis Buffer 3

(Contd. of page 1)

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

Wear protective gloves / eye protection / face protection.

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

If on skin: Wash with plenty of water.

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.

Specific treatment (see on this label).

Rinse mouth.

Take off contaminated clothing and wash it before reuse.

If skin irritation occurs: Get medical advice/attention.

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 = \*3

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture: consisting of the following components.

· **Dangerous components:**

|  |                         |        |
|--|-------------------------|--------|
| CAS: 50-01-1<br>EINECS: 200-002-3                          | Guanidine Hydrochloride | 10-50% |
| CAS: 9002-93-1<br>EC number: 618-344-0<br>RTECS: MD0907700 | TRITON® X-100           | 10-50% |

### 4 First-aid measures

· **Description of first aid measures**

· **General information:**

Consult your Doctor. Show the safety data sheet to the Doctor. Away from the dangerous area.

· **After inhalation:** If breathed in, supply fresh air. If not breathing, give artificial respiration. Consult a Doctor.

· **After skin contact:** Wash off with soap and plenty of water. Consult a Doctor.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Never give anything by mouth to an unconscious person. Rinse mouth with water. If symptoms persist consult a Doctor.

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Trade name: Lysis Buffer 3

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- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed** 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:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **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.  
Pick up mechanically, dispose contaminated material as waste according to Section 13.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

|                 |
|-----------------|
| · <b>PAC-1:</b> |
|-----------------|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|                 |
|-----------------|
| · <b>PAC-2:</b> |
|-----------------|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|                 |
|-----------------|
| · <b>PAC-3:</b> |
|-----------------|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Avoid direct contact with skin. Use protective clothing including gloves, lab coat, face/eye protection.
- **Information about protection against explosions and fires:** No special requirements.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15 - 30°C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:**
- **Specific end use(s)** No further relevant information available.

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Trade name: Lysis Buffer 3

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## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see Section 7.
- **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.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
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.
  - **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

|               |                                    |
|---------------|------------------------------------|
| <b>Form:</b>  | Liquid                             |
| <b>Color:</b> | According to product specification |
- **Odor:** Indeterminate
- **Odor threshold:** Not determined.
- **pH-value:** Not determined.

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Trade name: Lysis Buffer 3

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|   |   |
|---|---|
| · <b>Change in condition</b><br><b>Boiling point/Boiling range:</b>                                   | Undetermined.   |
| · <b>Flash point:</b>   | Not applicable.   |
| · <b>Flammability (solid, gaseous):</b>   | Not applicable.   |
| · <b>Decomposition temperature:</b>   | Not determined.   |
| · <b>Auto igniting:</b>   | Product is not selfigniting.  |
| · <b>Danger of explosion:</b>   | See section 10  |
| · <b>Explosion limits:</b><br><b>Lower:</b><br><b>Upper:</b>  | Not Applicable<br>Not Applicable  |
| · <b>Vapor pressure:</b>  | Not Applicable  |
| · <b>Density:</b><br>· <b>Relative density</b><br>· <b>Vapor density</b><br>· <b>Evaporation rate</b> | Not Applicable<br>Not determined.<br>Not determined.<br>Not determined. |
| · <b>Solubility in / Miscibility with</b><br>· <b>Water:</b>  | Not Determined<br>Soluble.  |
| · <b>Partition coefficient (n-octanol/water):</b>   | Not determined.   |
| · <b>Viscosity:</b><br><b>Dynamic:</b><br><b>Kinematic:</b>   | Not determined.<br>Not determined.                                      |
| · <b>Solvent content:</b><br><b>Water:</b><br><b>VOC content:</b>                                     | 40.0 %<br>0.00 %<br>0.0 g/l / 0.00 lb/gal                               |
| · <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.  
Avoid contact with acids. Contact liberates a toxic gas.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

US

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Trade name: Lysis Buffer 3

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## 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

|                                      |      |          |
|--------------------------------------|------|----------|
| <b>ATE (Acute Toxicity Estimate)</b> |      |          |
| Oral                                 | LD50 | 43 mg/kg |

|  |      |                 |
|--|------|-----------------|
| <b>50-01-1 Guanidine Hydrochloride</b> |      |                 |
| Oral                                   | LD50 | 500 mg/kg (ATE) |

|                                |      |                      |
|--------------------------------|------|----------------------|
| <b>9002-93-1 TRITON® X-100</b> |      |                      |
| Oral                           | LD50 | 1,800 mg/kg (rat)    |
| Dermal                         | LD50 | 8,000 mg/kg (rabbit) |

- **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.

- **on the eye:** Strong irritant with the danger of severe eye injury.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

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

Harmful

Irritant

- **Carcinogenic categories**

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

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

|                                |             |   |
|--------------------------------|-------------|---|
| <b>9002-93-1 TRITON® X-100</b> |             |   |
| Oral                           | LC50 / 96 h | 8.9 mg/L ( <i>Pimephales promelas</i> ) |

- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

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

- **Additional ecological information:**

- **General notes:**

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

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

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Trade name: Lysis Buffer 3



(Contd. of page 6)

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

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Can not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Discard must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleaning agents.

## 14 Transport information

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>  | UN3082  |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>                             | Environmentally hazardous substance, liquid, n.o.s.<br>3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRITON® X-100), MARINE POLLUTANT<br>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>   | <div style="display: flex; align-items: center; gap: 10px;">   </div>                     |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>   | 9 Miscellaneous dangerous substances and articles<br>9  |
| <ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>  | III   |
| <ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> <li>· <b>Special marking (ADR):</b></li> <li>· <b>Special marking (IATA):</b></li> </ul> | Yes (DOT)<br>Symbol (fish and tree)<br>Symbol (fish and tree)<br>Symbol (fish and tree)   |
| <ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Stowage Category</b></li> </ul>   | Warning: Miscellaneous dangerous substances and articles<br>F-A,S-F<br>A  |
| <ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>   | Not applicable.   |

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· **Transport/Additional information:**

· **DOT**

· **Quantity limitations**

On passenger aircraft/rail: No limit

On cargo aircraft only: No limit

· **Remarks:**

Special marking with the symbol (fish and tree).

· **ADR**

· **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 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID, N.O.S., 9, 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 is listed.

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

None of the ingredients is listed.

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

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

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Trade name: Lysis Buffer 3

(Contd. of page 8)

· **Hazard pictograms**



GHS05 GHS07

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

Guanidine Hydrochloride  
TRITON® X-100

· **Hazard statements**

Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye damage.

· **Precautionary statements**

Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Wear protective gloves / eye protection / face protection.  
If swallowed: Call a poison center/doctor if you feel unwell.  
If on skin: Wash with plenty of water.  
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.  
Specific treatment (see on this label).  
Rinse mouth.  
Take off contaminated clothing and wash it before reuse.  
If skin irritation occurs: Get medical advice/attention.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **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:** Quality Control Dept.
- **Date of preparation / last revision** 08/07/2020 / -
- **Abbreviations and acronyms:**  
Acute Tox. 4: Acute toxicity – Category 4  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

## Safety Data Sheet acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 06/10/2020

### 1 Identification

- **Product identifier**
- **Trade name:** Binding Buffer 1
- **Article number:** 7022210F
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

### 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

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



GHS02 GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
Isopropyl Alcohol
- **Hazard statements**  
Highly flammable liquid and vapor.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.
- **Precautionary statements**  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Ground/bond container and receiving equipment.

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## Trade name: Binding Buffer 1

(Contd. of page 1)

Use explosion-proof electrical/ventilating/lighting/equipment.  
 Use only non-sparking tools.  
 Take precautionary measures against static discharge.  
 Avoid breathing dust/fume/gas/mist/vapors/spray  
 Wash thoroughly after handling.  
 Use only outdoors or in a well-ventilated area.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 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.  
 Call a poison center/doctor if you feel unwell.  
 If eye irritation persists: Get medical advice/attention.  
 In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.  
 Store in a well-ventilated place. Keep container tightly closed.  
 Store in a well-ventilated place. Keep cool.  
 Store locked up.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

## 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture: consisting of the following components.

· **Dangerous components:**

|                   |                   |        |
|-------------------|-------------------|--------|
| CAS: 67-63-0      | Isopropyl Alcohol | 50-90% |
| EINECS: 200-661-7 |                   |        |
| RTECS: NT8050000  |                   |        |

## 4 First-aid measures

· **Description of first aid measures**

· **General information:**

Consult your Doctor. Show the safety data sheet to the Doctor. Away from the dangerous area.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Immediately rinse with water.

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# Safety Data Sheet

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**Trade name: Binding Buffer 1**

(Contd. of page 2)

- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed** 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:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **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).  
Pick up mechanically, 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 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

|          |                            |                       |
|----------|----------------------------|-----------------------|
| 67-63-0  | Isopropyl Alcohol          | 400 ppm               |
| 631-61-8 | Ammonium Acetate Anhydrous | 3.8 mg/m <sup>3</sup> |

· **PAC-2:**

|          |                            |                      |
|----------|----------------------------|----------------------|
| 67-63-0  | Isopropyl Alcohol          | 2000* ppm            |
| 631-61-8 | Ammonium Acetate Anhydrous | 42 mg/m <sup>3</sup> |

· **PAC-3:**

|          |                            |                       |
|----------|----------------------------|-----------------------|
| 67-63-0  | Isopropyl Alcohol          | 12000** ppm           |
| 631-61-8 | Ammonium Acetate Anhydrous | 250 mg/m <sup>3</sup> |

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace. Avoid direct contact with skin and eyes.  
Prevent formation of aerosols.

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**Trade name: Binding Buffer 1**

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- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15 - 30°C
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see Section 7.
- **Control parameters**

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

### 67-63-0 Isopropyl Alcohol

|     |  |
|-----|--|
| PEL | Long-term value: 980 mg/m <sup>3</sup> , 400 ppm   |
| REL | Short-term value: 1225 mg/m <sup>3</sup> , 500 ppm<br>Long-term value: 980 mg/m <sup>3</sup> , 400 ppm |
| TLV | Short-term value: 984 mg/m <sup>3</sup> , 400 ppm<br>Long-term value: 492 mg/m <sup>3</sup> , 200 ppm  |
| BEI |  |

- **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.
- **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:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**  
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.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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Trade name: Binding Buffer 1

(Contd. of page 4)

## · Eye protection:



Tightly sealed goggles

## 9 Physical and chemical properties

## · Information on basic physical and chemical properties

## · General Information

## · Appearance:

|                   |                                    |
|-------------------|------------------------------------|
| Form:             | Liquid                             |
| Color:            | According to product specification |
| · Odor:           | Indeterminate                      |
| · Odor threshold: | Not determined.                    |

· pH-value: Not determined.

## · Change in condition

Boiling point/Boiling range: Undetermined.

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

· Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Not determined.

## · Explosion limits:

|        |                |
|--------|----------------|
| Lower: | Not Applicable |
| Upper: | Not Applicable |

· Vapor pressure: Not Applicable

· Density: Not Applicable

· Relative density: Not determined.

· Vapor density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with

· Water: Soluble.

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

## · Viscosity:

|            |                 |
|------------|-----------------|
| Dynamic:   | Not determined. |
| Kinematic: | Not determined. |

## · Solvent content:

VOC content: 0.00 %  
0.0 g/l / 0.00 lb/gal

· Other information: No further relevant information available.

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Trade name: **Binding Buffer 1**

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### 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.  
Avoid contact with acids. Contact liberates a toxic gas.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant
- **Carcinogenic categories**

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

67-63-0 | Isopropyl Alcohol

3

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

US

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Trade name: Binding Buffer 1

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## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Can not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Discard must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleaning agents.

## 14 Transport information

|  |  |
|--|--|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>  | <p style="margin: 0;">UN1219</p>   |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul>  | <p style="margin: 0;">Isopropanol<br/>1219 ISOPROPANOL (ISOPROPYL ALCOHOL)<br/>ISOPROPANOL (ISOPROPYL ALCOHOL)</p>                                       |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT</b></li> </ul>  | <div style="text-align: center;">  <p style="margin: 0;">3</p> </div>  |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>   | <p style="margin: 0;">3 Flammable liquids<br/>3</p>  |
| <ul style="list-style-type: none"> <li>· <b>ADR, IMDG, IATA</b></li> </ul>   | <div style="text-align: center;">  <p style="margin: 0;">3</p> </div> |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>   | <p style="margin: 0;">3 Flammable liquids<br/>3</p>  |
| <ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>  | <p style="margin: 0;">II</p>   |
| <ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> </ul>  | <p style="margin: 0;">Not applicable.</p>  |
| <ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>Hazard identification number (Kemler code):</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Stowage Category</b></li> </ul> | <p style="margin: 0;">Warning: Flammable liquids<br/>30<br/>F-E,S-D<br/>B</p>  |
| <ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>   | <p style="margin: 0;">Not applicable.</p>  |
| <ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> <li>· <b>DOT</b></li> <li>· <b>Quantity limitations</b></li> </ul>  | <p style="margin: 0;">On passenger aircraft/rail: Forbidden<br/>On cargo aircraft only: Forbidden</p>  |

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Trade name: **Binding Buffer 1**

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|                                   |   |
|-----------------------------------|---|
| · <b>ADR</b>                      |   |
| · <b>Excepted quantities (EQ)</b> | Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |
| · <b>IMDG</b>                     |   |
| · <b>Limited quantities (LQ)</b>  | 0   |
| · <b>Excepted quantities (EQ)</b> | Code: E0<br>Not permitted as Excepted Quantity  |
| · <b>UN "Model Regulation":</b>   | UN 1219 ISOPROPANOL (ISOPROPYL ALCOHOL), 3, II  |

## 15 Regulatory information

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

|  |
|--|
| · <b>Section 355 (extremely hazardous substances):</b> |
|--|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|  |
|--|
| · <b>Section 313 (Specific toxic chemical listings):</b> |
|--|

|                             |
|-----------------------------|
| 67-63-0   Isopropyl Alcohol |
|-----------------------------|

|   |
|---|
| · <b>TSCA (Toxic Substances Control Act):</b> |
|---|

|                                       |
|---------------------------------------|
| All components have the value ACTIVE. |
|---------------------------------------|

|                                   |
|-----------------------------------|
| · <b>Hazardous Air Pollutants</b> |
|-----------------------------------|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|                         |
|-------------------------|
| · <b>Proposition 65</b> |
|-------------------------|

|   |
|---|
| · <b>Chemicals known to cause cancer:</b> |
|---|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|  |
|--|
| · <b>Chemicals known to cause reproductive toxicity for females:</b> |
|--|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|  |
|--|
| · <b>Chemicals known to cause reproductive toxicity for males:</b> |
|--|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|   |
|---|
| · <b>Chemicals known to cause developmental toxicity:</b> |
|---|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|                                  |
|----------------------------------|
| · <b>Carcinogenic categories</b> |
|----------------------------------|

|  |
|--|
| · <b>EPA (Environmental Protection Agency)</b> |
|--|

|                                       |   |
|---------------------------------------|---|
| 631-61-8   Ammonium Acetate Anhydrous | D |
|---------------------------------------|---|

|   |
|---|
| · <b>TLV (Threshold Limit Value established by ACGIH)</b> |
|---|

|                             |    |
|-----------------------------|----|
| 67-63-0   Isopropyl Alcohol | A4 |
|-----------------------------|----|

|   |
|---|
| · <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b> |
|---|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

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

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US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 06/10/2020

Trade name: **Binding Buffer 1**

(Contd. of page 8)

· **Hazard pictograms**

GHS02 GHS07

· **Signal word** *Danger*· **Hazard-determining components of labeling:***Isopropyl Alcohol*· **Hazard statements***Highly flammable liquid and vapor.**Causes serious eye irritation.**May cause drowsiness or dizziness.*· **Precautionary statements***Keep away from heat/sparks/open flames/hot surfaces. - No smoking.**Ground/bond container and receiving equipment.**Use explosion-proof electrical/ventilating/lighting/equipment.**Use only non-sparking tools.**Take precautionary measures against static discharge.**Avoid breathing dust/fume/gas/mist/vapors/spray**Wash thoroughly after handling.**Use only outdoors or in a well-ventilated area.**Wear protective gloves/protective clothing/eye protection/face protection.**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.**Call a poison center/doctor if you feel unwell.**If eye irritation persists: Get medical advice/attention.**In case of fire: Use for extinction: CO2, powder or water spray.**Store in a well-ventilated place. Keep container tightly closed.**Store in a well-ventilated place. Keep cool.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*· **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:** *Quality Control Dept.*· **Date of preparation / last revision** *08/07/2020 / -*· **Abbreviations and acronyms:***Flam. Liq. 2: Flammable liquids – Category 2**Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*

## Safety Data Sheet acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 05/27/2020

### 1 Identification

- **Product identifier**
- **Trade name:** Magnetic Bead Solution
- **Article number:** 7022126D
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

### 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The product is not classified, according to the Globally Harmonized System (GHS).

- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



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



- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture: consisting of the following components.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 05/27/2020

**Trade name: Magnetic Bead Solution**

(Contd. of page 1)

**· Dangerous components:**

|   |                   |           |
|---|-------------------|-----------|
| CAS: 67-63-0<br>EINECS: 200-661-7<br>RTECS: NT8050000 | Isopropyl Alcohol | ≥2.5-<10% |
|---|-------------------|-----------|

## 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Flush eyes with running water as a precaution.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed** 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:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.  
For personal protection see section 8.
- **Environmental precautions:** 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).
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

**· PAC-1:**

|         |                   |         |
|---------|-------------------|---------|
| 67-63-0 | Isopropyl Alcohol | 400 ppm |
|---------|-------------------|---------|

**· PAC-2:**

|         |                   |           |
|---------|-------------------|-----------|
| 67-63-0 | Isopropyl Alcohol | 2000* ppm |
|---------|-------------------|-----------|

**· PAC-3:**

|         |                   |             |
|---------|-------------------|-------------|
| 67-63-0 | Isopropyl Alcohol | 12000** ppm |
|---------|-------------------|-------------|

US

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 05/27/2020

Trade name: **Magnetic Bead Solution**

(Contd. of page 2)

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special requirements.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15-30°C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:**
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see Section 7.
- **Control parameters**

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

### 67-63-0 Isopropyl Alcohol

|     |  |
|-----|--|
| PEL | Long-term value: 980 mg/m <sup>3</sup> , 400 ppm   |
| REL | Short-term value: 1225 mg/m <sup>3</sup> , 500 ppm |
|     | Long-term value: 980 mg/m <sup>3</sup> , 400 ppm   |
| TLV | Short-term value: 984 mg/m <sup>3</sup> , 400 ppm  |
|     | Long-term value: 492 mg/m <sup>3</sup> , 200 ppm   |
| BEI |  |

- **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:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
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.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Goggles recommended during refilling.

US

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 05/27/2020

Trade name: **Magnetic Bead Solution**

(Contd. of page 3)

## 9 Physical and chemical properties

|   |                                    |
|---|------------------------------------|
| · <b>Information on basic physical and chemical properties</b>        |                                    |
| · <b>General Information</b>  |                                    |
| · <b>Appearance:</b>  |                                    |
| · <b>Form:</b>  | Solution                           |
| · <b>Color:</b>   | According to product specification |
| · <b>Odor:</b> Indeterminate  |                                    |
| · <b>Odor threshold:</b> Not determined.                              |                                    |
| · <b>pH-value:</b> Not determined.                                    |                                    |
| · <b>Change in condition</b>  |                                    |
| · <b>Boiling point/Boiling range:</b>                                 | Undetermined.                      |
| · <b>Flash point:</b> Not applicable.                                 |                                    |
| · <b>Flammability (solid, gaseous):</b> Not applicable.               |                                    |
| · <b>Decomposition temperature:</b> Not determined.                   |                                    |
| · <b>Auto igniting:</b> Product is not selfigniting.                  |                                    |
| · <b>Danger of explosion:</b> See section 10                          |                                    |
| · <b>Explosion limits:</b>  |                                    |
| · <b>Lower:</b>   | Not Applicable                     |
| · <b>Upper:</b>   | Not Applicable                     |
| · <b>Vapor pressure:</b> Not Applicable                               |                                    |
| · <b>Density:</b> Not Applicable                                      |                                    |
| · <b>Relative density</b> Not determined.                             |                                    |
| · <b>Vapor density</b> Not determined.                                |                                    |
| · <b>Evaporation rate</b> Not determined.                             |                                    |
| · <b>Solubility in / Miscibility with</b> Not Determined              |                                    |
| · <b>Water:</b> Not determined.<br>Insoluble.                         |                                    |
| · <b>Partition coefficient (n-octanol/water):</b> Not determined.     |                                    |
| · <b>Viscosity:</b>   |                                    |
| · <b>Dynamic:</b>   | Not determined.                    |
| · <b>Kinematic:</b>   | Not determined.                    |
| · <b>Solvent content:</b>   |                                    |
| · <b>Water:</b>   | 95.0 %                             |
| · <b>VOC content:</b>   | 0.00 %                             |
|   | 0.0 g/l / 0.00 lb/gal              |
| · <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.

(Contd. on page 5)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 05/27/2020

**Trade name: Magnetic Bead Solution**

(Contd. of page 4)

- **Conditions to avoid**  
No further relevant information available.  
Avoid contact with acids. Contact liberates a toxic gas.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritant and potentially harmful
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**

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

|                           |   |
|---------------------------|---|
| 67-63-0 Isopropyl Alcohol | 3 |
|---------------------------|---|

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **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:**  
Can not be disposed of together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 6)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 05/27/2020

Trade name: **Magnetic Bead Solution**

(Contd. of page 5)

- **Uncleaned packagings:**
- **Recommendation:** Discard must be made according to official regulations.

## 14 Transport information

- |  |                 |
|--|-----------------|
| · <b>UN-Number</b>   |                 |
| · <b>DOT, ADR, IMDG, IATA</b>  | Not regulated   |
| · <b>UN proper shipping name</b>   |                 |
| · <b>DOT, ADR, IMDG, IATA</b>  | Not regulated   |
| · <b>Transport hazard class(es)</b>  |                 |
| · <b>DOT, ADR, IMDG, IATA</b>  |                 |
| · <b>Class</b>   | Not regulated   |
| · <b>Packing group</b>   |                 |
| · <b>DOT, ADR, IMDG, IATA</b>  | Not regulated   |
| · <b>Environmental hazards:</b>  | Not applicable. |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | Not regulated   |

## 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 is listed.

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

67-63-0 Isopropyl Alcohol

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

All components have the value ACTIVE.

- **Hazardous Air Pollutants**

None of the ingredients is listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

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# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 05/27/2020

**Trade name: Magnetic Bead Solution**

(Contd. of page 6)

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

67-63-0 Isopropyl Alcohol

A4

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

None of the ingredients is listed.

· **GHS label elements** Void

· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

· **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:** Quality Control Dept.

· **Date of preparation / last revision** 08/07/2020 / -

US

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

Printing date 08/07/2020

Reviewed on 07/24/2020

**1 Identification**

- **Product identifier**
- **Trade name:** Washing Buffer 1
- **Article number:** 7022210H
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS07

- Acute Tox. 4 H302 Harmful if swallowed.
- Skin Irrit. 2 H315 Causes skin irritation.
- Eye Irrit. 2A H319 Causes serious eye irritation.
- Flam. Liq. 4 H227 Combustible liquid.

- **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:**  
Guanidine Hydrochloride  
TRITON® X-100
- **Hazard statements**  
Combustible liquid.  
Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye irritation.
- **Precautionary statements**  
Keep away from flames and hot surfaces. – No smoking.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 07/24/2020

**Trade name: Washing Buffer 1**

(Contd. of page 1)

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

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

Rinse mouth.

If on skin: Wash with plenty of water.

Specific treatment (see on this label).

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

Continue rinsing.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

Store in a well-ventilated place. Keep cool.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 2

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = \*2

Fire = 2

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture: consisting of the following components.

· **Dangerous components:**

|  |                         |         |
|--|-------------------------|---------|
| CAS: 64-17-5<br>EINECS: 200-578-6<br>RTECS: KQ 6300000     | ethyl alcohol           | 10-50%  |
| CAS: 50-01-1<br>EINECS: 200-002-3                          | Guanidine Hydrochloride | 10-50%  |
| CAS: 9002-93-1<br>EC number: 618-344-0<br>RTECS: MD0907700 | TRITON® X-100           | ≥3-<10% |

### 4 First-aid measures

· **Description of first aid measures**

· **General information:**

Consult your Doctor. Show the safety data sheet to the Doctor. Away from the dangerous area.

· **After inhalation:** If breathed in, supply fresh air. If not breathing, give artificial respiration. Consult a Doctor.

· **After skin contact:** Wash off with soap and plenty of water. Consult a Doctor.

(Contd. on page 3)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 07/24/2020

Trade name: Washing Buffer 1

(Contd. of page 2)

- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Never give anything by mouth to an unconscious person. Rinse mouth with water. If symptoms persist consult a Doctor.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed** 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:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** 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).  
Pick up mechanically, 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 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

|                 |               |           |
|-----------------|---------------|-----------|
| · <b>PAC-1:</b> |               |           |
| 64-17-5         | ethyl alcohol | 1,800 ppm |

|                 |               |           |
|-----------------|---------------|-----------|
| · <b>PAC-2:</b> |               |           |
| 64-17-5         | ethyl alcohol | 3300* ppm |

|                 |               |            |
|-----------------|---------------|------------|
| · <b>PAC-3:</b> |               |            |
| 64-17-5         | ethyl alcohol | 15000* ppm |

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Avoid direct contact with skin. Use protective clothing including gloves, lab coat, face/eye protection.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15-30°C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:**

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 07/24/2020

Trade name: Washing Buffer 1

(Contd. of page 3)

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

## 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see Section 7.· **Control parameters**· **Components with limit values that require monitoring at the workplace:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

### 64-17-5 ethyl alcohol

|     |   |
|-----|---|
| PEL | Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm  |
| REL | Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm  |
| TLV | Short-term value: 1880 mg/m <sup>3</sup> , 1000 ppm |

· **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 and skin.

· **Breathing equipment:** Not required.· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

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.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

US

(Contd. on page 5)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 07/24/2020

Trade name: Washing Buffer 1

(Contd. of page 5)

- **Conditions to avoid**  
No further relevant information available.  
Avoid contact with acids. Contact liberates a toxic gas.
- **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:**

ATE (Acute Toxicity Estimate)

|      |      |           |
|------|------|-----------|
| Oral | LD50 | 166 mg/kg |
|------|------|-----------|

50-01-1 Guanidine Hydrochloride

|      |      |                 |
|------|------|-----------------|
| Oral | LD50 | 500 mg/kg (ATE) |
|------|------|-----------------|

9002-93-1 TRITON® X-100

|      |      |                   |
|------|------|-------------------|
| Oral | LD50 | 1,800 mg/kg (rat) |
|------|------|-------------------|

|        |      |                      |
|--------|------|----------------------|
| Dermal | LD50 | 8,000 mg/kg (rabbit) |
|--------|------|----------------------|

- **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.

- **on the eye:** Irritating effect.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

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

Harmful

Irritant

- **Carcinogenic categories**

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

|         |               |   |
|---------|---------------|---|
| 64-17-5 | ethyl alcohol | 1 |
|---------|---------------|---|

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

9002-93-1 TRITON® X-100

|      |             |                                |
|------|-------------|--------------------------------|
| Oral | LC50 / 96 h | 8.9 mg/L (Pimephales promelas) |
|------|-------------|--------------------------------|

- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

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

(Contd. on page 7)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 07/24/2020

Trade name: Washing Buffer 1



(Contd. of page 6)

- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **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:**  
Can not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Discard must be made according to official regulations.

## 14 Transport information

|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>  | UN3082  |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul> | Environmentally hazardous substance, liquid, n.o.s. (TRITON® X-100)<br>3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRITON® X-100)<br>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRITON® X-100), MARINE POLLUTANT<br>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRITON® X-100) |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>   | <div style="display: flex; align-items: center; gap: 10px;">   </div>   |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>   | 9 Miscellaneous dangerous substances and articles<br>9  |
| <ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>  | III   |
| <ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>  | Yes (DOT)<br>Symbol (fish and tree)   |
| <ul style="list-style-type: none"> <li>· <b>Special marking (ADR):</b></li> <li>· <b>Special marking (IATA):</b></li> </ul>  | Symbol (fish and tree)<br>Symbol (fish and tree)  |
| <ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>EMS Number:</b></li> </ul>  | Warning: Miscellaneous dangerous substances and articles<br>F-A,S-F   |

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Reviewed on 07/24/2020

Trade name: Washing Buffer 1

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|  |  |
|--|--|
| · <b>Stowage Category</b>  | A  |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.  |
| · <b>Transport/Additional information:</b>                                       |  |
| · <b>DOT</b>   |  |
| · <b>Remarks:</b>  | Special marking with the symbol (fish and tree).   |
| · <b>ADR</b>   |  |
| · <b>Excepted quantities (EQ)</b>  | Code: E1<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 1000 ml |
| · <b>IMDG</b>  |  |
| · <b>Limited quantities (LQ)</b>   | 5L   |
| · <b>Excepted quantities (EQ)</b>  | Code: E1<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 1000 ml |
| · <b>UN "Model Regulation":</b>  | UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRITON® X-100), 9, 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 is listed.

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

None of the ingredients is listed.

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

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

64-17-5 ethyl alcohol

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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Reviewed on 07/24/2020

Trade name: **Washing Buffer 1**

(Contd. of page 8)

|   |    |
|---|----|
| · <b>TLV (Threshold Limit Value established by ACGIH)</b> |    |
| 64-17-5 ethyl alcohol                                     | A3 |

|   |
|---|
| · <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b> |
| None of the ingredients is listed.  |

· **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:**

Guanidine Hydrochloride

TRITON® X-100

· **Hazard statements**

Combustible liquid.

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

· **Precautionary statements**

Keep away from flames and hot surfaces. – No smoking.

Wash thoroughly after handling.

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

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

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

Rinse mouth.

If on skin: Wash with plenty of water.

Specific treatment (see on this label).

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

Continue rinsing.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

Store in a well-ventilated place. Keep cool.

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

· **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:** Quality Control Dept.

· **Date of preparation / last revision** 08/07/2020 / -

· **Abbreviations and acronyms:**

Flam. Liq. 4: Flammable liquids – Category 4

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

## Safety Data Sheet acc. to OSHA HCS

Printing date 08/07/2020

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### 1 Identification

- **Product identifier**
- **Trade name:** Washing Buffer 2
- **Article number:** 70222101
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

### 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS07

Eye Irrit. 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**



GHS02 GHS07

- **Signal word** Danger
- **Hazard statements**  
Highly flammable liquid and vapor.  
Causes serious eye irritation.
- **Precautionary statements**  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Keep container tightly closed.  
Ground/bond container and receiving equipment.  
Use explosion-proof electrical/ventilating/lighting/equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Wash thoroughly after handling.

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**Trade name: Washing Buffer 2**

(Contd. of page 1)

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

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

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

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

*In case of fire: Use for extinction: CO2, powder or water spray.*

*Store in a well-ventilated place. Keep cool.*

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

|            |   |                |
|------------|---|----------------|
| HEALTH     | 2 | Health = 2     |
| FIRE       | 3 | Fire = 3       |
| REACTIVITY | 0 | Reactivity = 0 |

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture: consisting of the following components.

· **Dangerous components:**

|                   |               |        |
|-------------------|---------------|--------|
| CAS: 64-17-5      | ethyl alcohol | 50-90% |
| EINECS: 200-578-6 |               |        |
| RTECS: KQ 6300000 |               |        |

### 4 First-aid measures

· **Description of first aid measures**

· **General information:**

*Consult your Doctor. Show the safety data sheet to the Doctor. Away from the dangerous area.*

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Immediately rinse with water.

· **After eye contact:**

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

· **After swallowing:** If symptoms persist consult doctor.

· **Information for doctor**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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

*No further relevant information available.*

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Trade name: Washing Buffer 2

(Contd. of page 2)

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **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).  
Pick up mechanically, 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 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

- **PAC-1:**

|           |                    |                      |
|-----------|--------------------|----------------------|
| 64-17-5   | ethyl alcohol      | 1,800 ppm            |
| 1185-53-1 | Tris Hydrochloride | 12 mg/m <sup>3</sup> |

- **PAC-2:**

|           |                    |                       |
|-----------|--------------------|-----------------------|
| 64-17-5   | ethyl alcohol      | 3300* ppm             |
| 1185-53-1 | Tris Hydrochloride | 130 mg/m <sup>3</sup> |

- **PAC-3:**

|           |                    |                       |
|-----------|--------------------|-----------------------|
| 64-17-5   | ethyl alcohol      | 15000* ppm            |
| 1185-53-1 | Tris Hydrochloride | 790 mg/m <sup>3</sup> |

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Avoid direct contact with skin. Use protective clothing including gloves, lab coat, face/eye protection.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15 - 30°C
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.

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

## 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see Section 7.· **Control parameters**· **Components with limit values that require monitoring at the workplace:**

### 64-17-5 ethyl alcohol

|     |   |
|-----|---|
| PEL | Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm  |
| REL | Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm  |
| TLV | Short-term value: 1880 mg/m <sup>3</sup> , 1000 ppm |

· **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.

· **Breathing equipment:** Not required.· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

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.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

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Trade name: Washing Buffer 2

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## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

|                 |                 |
|-----------------|-----------------|
| Form:           | Solution        |
| Color:          | Colorless       |
| Odor:           | Indeterminate   |
| Odor threshold: | Not determined. |

· **pH-value:** Not determined.

· **Change in condition**

Boiling point/Boiling range: Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Not determined.

· **Explosion limits:**

|        |           |
|--------|-----------|
| Lower: | 3.5 Vol % |
| Upper: | 15 Vol %  |

· **Vapor pressure:** Not Applicable

|                  |                 |
|------------------|-----------------|
| Density:         | Not Applicable  |
| Relative density | Not determined. |
| Vapor density    | Not determined. |
| Evaporation rate | Not determined. |

· **Solubility in / Miscibility with Water:** Not Determined Soluble.

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

· **Viscosity:**

|            |                 |
|------------|-----------------|
| Dynamic:   | Not determined. |
| Kinematic: | Not determined. |

· **Solvent content:**

|                   |                         |
|-------------------|-------------------------|
| Organic solvents: | 80.0 %                  |
| VOC content:      | 80.00 %                 |
|                   | 800.0 g/l / 6.68 lb/gal |

· **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.

Avoid contact with acids. Contact liberates a toxic gas.

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Trade name: Washing Buffer 2

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- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

- **Carcinogenic categories**

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

64-17-5 ethyl alcohol

I

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **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:**  
Can not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Discard must be made according to official regulations.

(Contd. on page 7)

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Trade name: Washing Buffer 2

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

## 14 Transport information

|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>  | <p style="margin: 0;">UN1170</p>  |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>   | <p style="margin: 0;">Ethanol solutions<br/>1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)<br/>ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)<br/>ETHANOL SOLUTION</p>         |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT</b></li> </ul>  | <div style="text-align: center;">  </div> <p style="margin: 0;">3 Flammable liquids</p>  |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>   | <p style="margin: 0;">3<br/>3</p>   |
| <ul style="list-style-type: none"> <li>· <b>ADR, IMDG, IATA</b></li> </ul>   | <div style="text-align: center;">  </div> <p style="margin: 0;">3 Flammable liquids</p> |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>   | <p style="margin: 0;">3<br/>3</p>   |
| <ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>  | <p style="margin: 0;">III</p>   |
| <ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> </ul>  | <p style="margin: 0;">Not applicable.</p>   |
| <ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>Hazard identification number (Kemler code):</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Stowage Category</b></li> </ul> | <p style="margin: 0;">Warning: Flammable liquids<br/>30<br/>F-E,S-D<br/>A</p>   |
| <ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>   | <p style="margin: 0;">Not applicable.</p>   |
| <ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> <li>· <b>DOT</b></li> <li>· <b>Quantity limitations</b></li> </ul>  | <p style="margin: 0;">On passenger aircraft/rail: 60 L<br/>On cargo aircraft only: 220 L</p>  |
| <ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>  | <p style="margin: 0;">Code: E1<br/>Maximum net quantity per inner packaging: 30 ml<br/>Maximum net quantity per outer packaging: 1000 ml</p>                              |

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Trade name: Washing Buffer 2

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|                                   |   |
|-----------------------------------|---|
| · <b>IMDG</b>                     |   |
| · <b>Limited quantities (LQ)</b>  | 5L  |
| · <b>Excepted quantities (EQ)</b> | Code: E1  |
|                                   | Maximum net quantity per inner packaging: 30 ml           |
|                                   | Maximum net quantity per outer packaging: 1000 ml         |
| · <b>UN "Model Regulation":</b>   | UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, III |

## 15 Regulatory information

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

|  |
|--|
| · <b>Section 355 (extremely hazardous substances):</b> |
|--|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|  |
|--|
| · <b>Section 313 (Specific toxic chemical listings):</b> |
|--|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|   |
|---|
| · <b>TSCA (Toxic Substances Control Act):</b> |
|---|

|                                       |
|---------------------------------------|
| All components have the value ACTIVE. |
|---------------------------------------|

|                                   |
|-----------------------------------|
| · <b>Hazardous Air Pollutants</b> |
|-----------------------------------|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|                         |
|-------------------------|
| · <b>Proposition 65</b> |
|-------------------------|

|   |
|---|
| · <b>Chemicals known to cause cancer:</b> |
|---|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|  |
|--|
| · <b>Chemicals known to cause reproductive toxicity for females:</b> |
|--|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|  |
|--|
| · <b>Chemicals known to cause reproductive toxicity for males:</b> |
|--|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|   |
|---|
| · <b>Chemicals known to cause developmental toxicity:</b> |
|---|

|                       |
|-----------------------|
| 64-17-5 ethyl alcohol |
|-----------------------|

|                                  |
|----------------------------------|
| · <b>Carcinogenic categories</b> |
|----------------------------------|

|  |
|--|
| · <b>EPA (Environmental Protection Agency)</b> |
|--|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|   |
|---|
| · <b>TLV (Threshold Limit Value established by ACGIH)</b> |
|---|

|                       |    |
|-----------------------|----|
| 64-17-5 ethyl alcohol | A3 |
|-----------------------|----|

|   |
|---|
| · <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b> |
|---|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

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

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

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**Trade name: Washing Buffer 2**

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- **Hazard statements**

*Highly flammable liquid and vapor.*

*Causes serious eye irritation.*

- **Precautionary statements**

*Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*

*Keep container tightly closed.*

*Ground/bond container and receiving equipment.*

*Use explosion-proof electrical/ventilating/lighting/equipment.*

*Use only non-sparking tools.*

*Take precautionary measures against static discharge.*

*Wash thoroughly after handling.*

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

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

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

*Continue rinsing.*

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

*In case of fire: Use for extinction: CO2, powder or water spray.*

*Store in a well-ventilated place. Keep cool.*

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

- **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:** Quality Control Dept.

- **Date of preparation / last revision** 08/07/2020 / -

- **Abbreviations and acronyms:**

*Flam. Liq. 2: Flammable liquids – Category 2*

*Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A*

## Safety Data Sheet acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 07/24/2020

### 1 Identification

- **Product identifier**
- **Trade name:** Elution Buffer 1
- **Article number:** 7022210J
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

### 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The product is not classified, according to the Globally Harmonized System (GHS).

- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



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



- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture: consisting of the following components.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

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Trade name: *Elution Buffer 1*

(Contd. of page 1)

· **Dangerous components:** *Void*

## 4 First-aid measures

- **Description of first aid measures**
- **General information:** *No special measures required.*
- **After inhalation:** *Supply fresh air; consult doctor in case of complaints.*
- **After skin contact:** *Generally the product does not irritate the skin.*
- **After eye contact:** *Flush eyes with running water as a precaution.*
- **After swallowing:** *If symptoms persist consult doctor.*
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed** *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:** *Use fire fighting measures that suit the environment.*
- **Special hazards arising from the substance or mixture** *No further relevant information available.*
- **Advice for firefighters**
- **Protective equipment:** *No special measures required.*

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
*Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.*  
*For personal protection see section 8.*
- **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**  
*See Section 7 for information on safe handling.*  
*See Section 8 for information on personal protection equipment.*  
*See Section 13 for disposal information.*
- **Protective Action Criteria for Chemicals**

|                 |                    |                       |
|-----------------|--------------------|-----------------------|
| · <b>PAC-1:</b> |                    |                       |
| 1185-53-1       | Tris Hydrochloride | 12 mg/m <sup>3</sup>  |
| · <b>PAC-2:</b> |                    |                       |
| 1185-53-1       | Tris Hydrochloride | 130 mg/m <sup>3</sup> |
| · <b>PAC-3:</b> |                    |                       |
| 1185-53-1       | Tris Hydrochloride | 790 mg/m <sup>3</sup> |

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** *No special measures required.*

(Contd. on page 3)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 07/24/2020

**Trade name: Elution Buffer 1**

(Contd. of page 2)

- **Information about protection against explosions and fires:** No special requirements.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15 - 30°C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:**
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see Section 7.
- **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:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
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.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Goggles recommended during refilling.

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
- **Form:** Solution
- **Color:** Colorless
- **Odor:** Indeterminate
- **Odor threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
- **Boiling point/Boiling range:** Undetermined.
- **Flash point:** Not applicable.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

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Trade name: Elution Buffer 1

(Contd. of page 3)

|   |  |
|---|--|
| · <b>Flammability (solid, gaseous):</b>           | Not applicable.                            |
| · <b>Decomposition temperature:</b>               | Not determined.                            |
| · <b>Auto igniting:</b>                           | Product is not selfigniting.               |
| · <b>Danger of explosion:</b>                     | See section 10                             |
| · <b>Explosion limits:</b>                        |  |
| <b>Lower:</b>                                     | Not Applicable                             |
| <b>Upper:</b>                                     | Not Applicable                             |
| · <b>Vapor pressure:</b>                          | Not Applicable                             |
| · <b>Density:</b>                                 | Not Applicable                             |
| · <b>Relative density</b>                         | Not determined.                            |
| · <b>Vapor density</b>                            | Not determined.                            |
| · <b>Evaporation rate</b>                         | Not determined.                            |
| · <b>Solubility in / Miscibility with</b>         | Not Determined                             |
| · <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.                            |
| · <b>Solvent content:</b>                         |  |
| <b>Water:</b>                                     | 99.0 %                                     |
| <b>VOC content:</b>                               | 0.00 %                                     |
|   | 0.0 g/l / 0.00 lb/gal                      |
| · <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.  
Avoid contact with acids. Contact liberates a toxic gas.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritant and potentially harmful
- **Sensitization:** No sensitizing effects known.

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# Safety Data Sheet

## acc. to OSHA HCS

Printing date 08/07/2020

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Trade name: **Elution Buffer 1**

(Contd. of page 4)

- **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**

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

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

### 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

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

- **Additional ecological information:**

- **General notes:** Not hazardous for 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:**

Can not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**

- **Recommendation:** Discard must be made according to official regulations.

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

### 14 Transport information

- **UN-Number**

- **DOT, ADR, IMDG, IATA** Not regulated

- **UN proper shipping name**

- **DOT, ADR, IMDG, IATA** Not regulated

- **Transport hazard class(es)**

- **DOT, ADR, IMDG, IATA** Not regulated

- **Class**

Not regulated

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# Safety Data Sheet

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Trade name: *Elution Buffer 1*

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- |  |                        |
|--|------------------------|
| <b>· Packing group</b>   |                        |
| <b>· DOT, ADR, IMDG, IATA</b>  | <i>Not regulated</i>   |
| <b>· Environmental hazards:</b>  | <i>Not applicable.</i> |
| <b>· Special precautions for user</b>  | <i>Not applicable.</i> |
| <b>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | <i>Not applicable.</i> |
| <b>· UN "Model Regulation":</b>  | <i>Not regulated</i>   |

## 15 Regulatory information

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

|  |  |
|--|--|
| <b>· Section 355 (extremely hazardous substances):</b> |  |
|--|--|

|   |  |
|---|--|
| <i>None of the ingredients is listed.</i> |  |
|---|--|

|  |  |
|--|--|
| <b>· Section 313 (Specific toxic chemical listings):</b> |  |
|--|--|

|   |  |
|---|--|
| <i>None of the ingredients is listed.</i> |  |
|---|--|

|   |  |
|---|--|
| <b>· TSCA (Toxic Substances Control Act):</b> |  |
|---|--|

|  |  |
|--|--|
| <i>All components have the value ACTIVE.</i> |  |
|--|--|

|                                   |  |
|-----------------------------------|--|
| <b>· Hazardous Air Pollutants</b> |  |
|-----------------------------------|--|

|   |  |
|---|--|
| <i>None of the ingredients is listed.</i> |  |
|---|--|

|                         |  |
|-------------------------|--|
| <b>· Proposition 65</b> |  |
|-------------------------|--|

|   |  |
|---|--|
| <b>· Chemicals known to cause cancer:</b> |  |
|---|--|

|   |  |
|---|--|
| <i>None of the ingredients is listed.</i> |  |
|---|--|

|  |  |
|--|--|
| <b>· Chemicals known to cause reproductive toxicity for females:</b> |  |
|--|--|

|   |  |
|---|--|
| <i>None of the ingredients is listed.</i> |  |
|---|--|

|  |  |
|--|--|
| <b>· Chemicals known to cause reproductive toxicity for males:</b> |  |
|--|--|

|   |  |
|---|--|
| <i>None of the ingredients is listed.</i> |  |
|---|--|

|   |  |
|---|--|
| <b>· Chemicals known to cause developmental toxicity:</b> |  |
|---|--|

|   |  |
|---|--|
| <i>None of the ingredients is listed.</i> |  |
|---|--|

|                                  |  |
|----------------------------------|--|
| <b>· Carcinogenic categories</b> |  |
|----------------------------------|--|

|  |  |
|--|--|
| <b>· EPA (Environmental Protection Agency)</b> |  |
|--|--|

|   |  |
|---|--|
| <i>None of the ingredients is listed.</i> |  |
|---|--|

|   |  |
|---|--|
| <b>· TLV (Threshold Limit Value established by ACGIH)</b> |  |
|---|--|

|   |  |
|---|--|
| <i>None of the ingredients is listed.</i> |  |
|---|--|

|   |  |
|---|--|
| <b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b> |  |
|---|--|

|   |  |
|---|--|
| <i>None of the ingredients is listed.</i> |  |
|---|--|

|                             |             |
|-----------------------------|-------------|
| <b>· GHS label elements</b> | <i>Void</i> |
|-----------------------------|-------------|

|                            |             |
|----------------------------|-------------|
| <b>· Hazard pictograms</b> | <i>Void</i> |
|----------------------------|-------------|

|                      |             |
|----------------------|-------------|
| <b>· Signal word</b> | <i>Void</i> |
|----------------------|-------------|

|                            |             |
|----------------------------|-------------|
| <b>· Hazard statements</b> | <i>Void</i> |
|----------------------------|-------------|

|                                      |   |
|--------------------------------------|---|
| <b>· Chemical safety assessment:</b> | <i>A Chemical Safety Assessment has not been carried out.</i> |
|--------------------------------------|---|

US

(Contd. on page 7)

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

Printing date 08/07/2020

Reviewed on 07/24/2020

**Trade name: Elution Buffer 1**

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**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:** Quality Control Dept.
- **Date of preparation / last revision** 08/07/2020 / -

US

## Safety Data Sheet acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 08/07/2020

### 1 Identification

- **Product identifier**
- **Trade name:** BL2B Buffer
- **Article number:** 7022120L
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

### 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

- **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
- **Hazard-determining components of labeling:**  
Sodium Dodecyl Sulfate, Molecular Biology Reagent
- **Hazard statements**  
Harmful if swallowed.  
Causes serious eye damage.
- **Precautionary statements**  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Wear eye protection / face protection.  
If swallowed: Call a poison center/doctor if you feel unwell.

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# Safety Data Sheet

acc. to OSHA HCS

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Reviewed on 08/07/2020

Trade name: **BL2B Buffer**

(Contd. of page 1)

Rinse mouth.

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.

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

· **Classification system:**· **NFPA ratings (scale 0 - 4)**· **HMIS-ratings (scale 0 - 4)**· **Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**· **Description:** Mixture: consisting of the following components.· **Dangerous components:**

|  |   |         |
|--|---|---------|
| CAS: 57-13-6<br>EINECS: 200-315-5<br>RTECS: YR6250000  | Urea  | 10-50%  |
| CAS: 151-21-3<br>EINECS: 205-788-1<br>RTECS: WT1050000 | Sodium Dodecyl Sulfate, Molecular Biology Reagent | ≥3-<10% |

### 4 First-aid measures

· **Description of first aid measures**· **After inhalation:** Supply fresh air; consult doctor in case of complaints.· **After skin contact:** Generally the product does not irritate the skin.· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.· **After swallowing:**

Never give anything by mouth to an unconscious person. Rinse mouth with water. If symptoms persist consult a Doctor.

· **Information for doctor**· **Most important symptoms and effects, both acute and delayed** No further relevant information available.· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

US

(Contd. on page 3)

# Safety Data Sheet

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Printing date 08/07/2020

Reviewed on 08/07/2020

Trade name: **BL2B Buffer**

(Contd. of page 2)

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** 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.  
Pick up mechanically, dispose contaminated material as waste according to Section 13.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

### · PAC-1:

|           |  |                       |
|-----------|--|-----------------------|
| 57-13-6   | Urea   | 30 mg/m <sup>3</sup>  |
| 151-21-3  | Sodium Dodecyl Sulfate, Molecular Biology Reagent        | 3.9 mg/m <sup>3</sup> |
| 6381-92-6 | Ethylenediamine Tetraacetic Acid Disodium Salt Dihydrate | 30 mg/m <sup>3</sup>  |
| 1185-53-1 | Tris Hydrochloride                                       | 12 mg/m <sup>3</sup>  |

### · PAC-2:

|           |  |                       |
|-----------|--|-----------------------|
| 57-13-6   | Urea   | 280 mg/m <sup>3</sup> |
| 151-21-3  | Sodium Dodecyl Sulfate, Molecular Biology Reagent        | 43 mg/m <sup>3</sup>  |
| 6381-92-6 | Ethylenediamine Tetraacetic Acid Disodium Salt Dihydrate | 330 mg/m <sup>3</sup> |
| 1185-53-1 | Tris Hydrochloride                                       | 130 mg/m <sup>3</sup> |

### · PAC-3:

|           |  |                         |
|-----------|--|-------------------------|
| 57-13-6   | Urea   | 1,700 mg/m <sup>3</sup> |
| 151-21-3  | Sodium Dodecyl Sulfate, Molecular Biology Reagent        | 260 mg/m <sup>3</sup>   |
| 6381-92-6 | Ethylenediamine Tetraacetic Acid Disodium Salt Dihydrate | 2,000 mg/m <sup>3</sup> |
| 1185-53-1 | Tris Hydrochloride                                       | 790 mg/m <sup>3</sup>   |

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Avoid direct contact with skin. Use protective clothing including gloves, lab coat, face/eye protection.
- **Information about protection against explosions and fires:** No special requirements.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15-30°C
- **Requirements to be met by storerooms and receptacles:** No special requirements.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

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Reviewed on 08/07/2020

Trade name: **BL2B Buffer**

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- **Further information about storage conditions:**
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see Section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the remaining constituent has no known exposure limits.

### 57-13-6 Urea

|      |                                       |
|------|---------------------------------------|
| WEEL | Long-term value: 10 mg/m <sup>3</sup> |
|------|---------------------------------------|

- **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.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**  
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.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

US

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2020

Reviewed on 08/07/2020

Trade name: BL2B Buffer

(Contd. of page 4)

## 9 Physical and chemical properties

|   |                                    |
|---|------------------------------------|
| · <b>Information on basic physical and chemical properties</b>        |                                    |
| · <b>General Information</b>  |                                    |
| · <b>Appearance:</b>  |                                    |
| · <b>Form:</b>  | Solution                           |
| · <b>Color:</b>   | According to product specification |
| · <b>Odor:</b> Indeterminate  |                                    |
| · <b>Odor threshold:</b> Not determined.                              |                                    |
| · <b>pH-value:</b> Not determined.                                    |                                    |
| · <b>Change in condition</b>  |                                    |
| · <b>Boiling point/Boiling range:</b>                                 | Undetermined.                      |
| · <b>Flash point:</b> Not applicable.                                 |                                    |
| · <b>Flammability (solid, gaseous):</b> Not applicable.               |                                    |
| · <b>Decomposition temperature:</b> Not determined.                   |                                    |
| · <b>Auto igniting:</b> Product is not selfigniting.                  |                                    |
| · <b>Danger of explosion:</b> See section 10                          |                                    |
| · <b>Explosion limits:</b>  |                                    |
| · <b>Lower:</b>   | Not Applicable                     |
| · <b>Upper:</b>   | Not Applicable                     |
| · <b>Vapor pressure:</b> Not Applicable                               |                                    |
| · <b>Density:</b> Not Applicable                                      |                                    |
| · <b>Relative density</b> Not determined.                             |                                    |
| · <b>Vapor density</b> Not determined.                                |                                    |
| · <b>Evaporation rate</b> Not determined.                             |                                    |
| · <b>Solubility in / Miscibility with</b> Not Determined              |                                    |
| · <b>Water:</b> Not determined.<br>Insoluble.                         |                                    |
| · <b>Partition coefficient (n-octanol/water):</b> Not determined.     |                                    |
| · <b>Viscosity:</b>   |                                    |
| · <b>Dynamic:</b>   | Not determined.                    |
| · <b>Kinematic:</b>   | Not determined.                    |
| · <b>Solvent content:</b>   |                                    |
| · <b>Water:</b>   | 71.0 %                             |
| · <b>VOC content:</b>   | 0.00 %                             |
|   | 0.0 g/l / 0.00 lb/gal              |
| · <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.

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- **Conditions to avoid**  
No further relevant information available.  
Avoid contact with acids. Contact liberates a toxic gas.
- **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:**

### ATE (Acute Toxicity Estimate)

|            |          |                      |
|------------|----------|----------------------|
| Dermal     | LD50     | 8,286 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 21.4 mg/L            |

### 151-21-3 Sodium Dodecyl Sulfate, Molecular Biology Reagent

|            |          |                    |
|------------|----------|--------------------|
| Oral       | LD50     | 1,200 mg/kg (rat)  |
| Dermal     | LD50     | 580 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 1.5 mg/L (ATE)     |

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Irritant

- **Carcinogenic categories**

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

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

### ATE (Acute Toxicity Estimate)

|      |             |                                     |
|------|-------------|-------------------------------------|
| Oral | LC50 / 96 h | 61.4-121 mg/L (Oncorhynchus mykiss) |
|------|-------------|-------------------------------------|

### 151-21-3 Sodium Dodecyl Sulfate, Molecular Biology Reagent

|      |             |                                    |
|------|-------------|------------------------------------|
| Oral | LC50 / 96 h | 4.3-8.5 mg/L (Oncorhynchus mykiss) |
|      |             | 29 mg/L (Pimephales promelas)      |

- **Persistence and degradability** No further relevant information available.

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- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 2 (Self-assessment): hazardous for water  
 Do not allow product to reach ground water, water course or sewage system.  
 Must not reach bodies of water or drainage ditch undiluted or unneutralized.  
 Danger to drinking water if even small quantities leak into the ground.*
- **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:**  
*Can not be disposed together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packagings:**
- **Recommendation:** Discard must be made according to official regulations.

### 14 Transport information

|  |                 |
|--|-----------------|
| · <b>UN-Number</b>   |                 |
| · <b>DOT, ADR, IMDG, IATA</b>  | Not regulated   |
| · <b>UN proper shipping name</b>   |                 |
| · <b>DOT, ADR, IMDG, IATA</b>  | Not regulated   |
| · <b>Transport hazard class(es)</b>  |                 |
| · <b>DOT, ADR, IMDG, IATA</b>  |                 |
| · <b>Class</b>   | Not regulated   |
| · <b>Packing group</b>   |                 |
| · <b>DOT, ADR, IMDG, IATA</b>  | Not regulated   |
| · <b>Environmental hazards:</b>  | Not applicable. |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | Not regulated   |

### 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 is listed.

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

None of the ingredients is listed.

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

|           |   |        |
|-----------|---|--------|
| 7732-18-5 | Water   | ACTIVE |
| 57-13-6   | Urea  | ACTIVE |
| 151-21-3  | Sodium Dodecyl Sulfate, Molecular Biology Reagent | ACTIVE |
| 1185-53-1 | Tris Hydrochloride                                | ACTIVE |

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

|         |      |    |
|---------|------|----|
| 57-13-6 | Urea | II |
|---------|------|----|

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

· **Hazard pictograms**



GHS05 GHS07

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

Sodium Dodecyl Sulfate, Molecular Biology Reagent

· **Hazard statements**

Harmful if swallowed.

Causes serious eye damage.

· **Precautionary statements**

Wash thoroughly after handling.

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

Wear eye protection / face protection.

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

Rinse mouth.

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

Continue rinsing.

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*Immediately call a poison center/doctor.**Dispose of contents/container in accordance with local/regional/national/international regulations.**· **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:** Quality Control Dept.
- **Date of preparation / last revision** 08/07/2020 / -
- **Abbreviations and acronyms:**  
*Acute Tox. 4: Acute toxicity – Category 4*  
*Eye Dam. 1: Serious eye damage/eye irritation – Category 1*

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