

Product code	Description
6576096	Magbeads FastDNA Kit for FFPE

Components:

6576090	Magnetic beads
6576091	RNase A
6572091	Proteinase K
6576092	Protease Dissolve Buffer
6576093	Buffer DPS
6576094	Buffer ATL
6576095	Buffer BST1
6576097	Buffer BW1
6574098	Elution Buffer

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

1 Identification

- **Product identifier**
- **Trade name:** Magnetic beads
- **Article number:** 6576090
- **Application of the substance / the mixture** For Research or Further Manufacturing Use.
- **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 05/08/2022

Reviewed on 05/08/2022

Trade name: Magnetic beads

(Contd. of page 1)

· Dangerous components:		
26628-22-8	Sodium Azide	0.1-1%

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.
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:		
26628-22-8	Sodium Azide	0.026 mg/m ³
· PAC-2:		
26628-22-8	Sodium Azide	0.29 mg/m ³
· PAC-3:		
26628-22-8	Sodium Azide	5.3 mg/m ³

US

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Magnetic beads

(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:**

26628-22-8 Sodium Azide

REL	Ceiling limit value: 0.3** mg/m ³ , 0.1* ppm *as HN ₃ ; **as NaN ₃ ; Skin
TLV	Ceiling limit value: 0.29** mg/m ³ , 0.11* ppm *as HN ₃ vapor **as NaN ₃ , A4

- **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: According to product specification
Color: According to product specification

(Contd. on page 4)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Magnetic beads

(Contd. of page 3)

· 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:	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 Water:	Not Determined Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity: Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content: Water:	95.0 %
VOC content:	0.00 % 0.0 g/l / 0.00 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.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

US

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Magnetic beads

(Contd. of page 4)

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

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

ATE (Acute Toxicity Estimate)		
Oral	LD50	1,250 mg/kg

26628-22-8 Sodium Azide		
Oral	LD50	5 mg/kg (ATE)

- **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)**

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:**

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

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Magnetic beads

(Contd. of page 5)

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

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **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):

7732-18-5	Water	ACTIVE
7647-14-5	Sodium Chloride	ACTIVE
26628-22-8	Sodium Azide	ACTIVE

· Hazardous Air Pollutants

None of the ingredients is listed.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Magnetic beads

(Contd. of page 6)

· **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)**

None of the ingredients is listed.

· **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.

· **Contact:**

· **Date of preparation / last revision** 05/08/2022 / -

Safety Data Sheet acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

1 Identification

- **Product identifier**
- **Trade name:** RNase A
- **Article number:** 6576091
- **Application of the substance / the mixture** For Research or Further Manufacturing Use.
- **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 05/08/2022

Reviewed on 05/08/2022

Trade name: RNase A

(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.
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:**

None of the ingredients is listed.

- **PAC-2:**

None of the ingredients is listed.

- **PAC-3:**

None of the ingredients is listed.

US

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: RNase A

(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:**
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:	According to product specification
Color:	According to product specification
- **Odor:** Indeterminate
- **Odor threshold:** Not determined.
- **pH-value:** Not determined.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: RNase A

(Contd. of page 3)

· 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: Upper:	Not Applicable Not Applicable
· Vapor pressure:	Not Applicable
· Density: · Relative density · Vapor density · Evaporation rate	Not Applicable Not determined. Not determined. Not determined.
· Solubility in / Miscibility with · Water:	Not Determined Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity: Dynamic: Kinematic:	Not determined. Not determined.
· Solvent content: VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal
Solids content:	5.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

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

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: RNase A

(Contd. of page 4)

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:** 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)**

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:**

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.

- **Uncleaned packagings:**

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

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

US

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: RNase A

(Contd. of page 5)

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

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture	
No further relevant information available.	
· 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):	
9001-99-4	Ribonuclease 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.	

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: RNase A

(Contd. of page 6)

· TLV (Threshold Limit Value)

None of the ingredients is listed.

· 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.**· Contact:****· Date of preparation / last revision** 05/08/2022 / -

US

Safety Data Sheet acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

1 Identification

- **Product identifier**
- **Trade name:** Proteinase K
- **Article number:** 6572091
- **Application of the substance / the mixture** For Research or Further Manufacturing Use.
- **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.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

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**



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
Proteinase K
- **Hazard statements**
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Proteinase K**

(Contd. of page 1)

Wear protective gloves / eye protection / face protection.
 [In case of inadequate ventilation] wear respiratory protection.
 If on skin: Wash with plenty of water.
 Specific treatment (see on this label).
 If inhaled: If breathing is difficult, 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.
 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.
 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)**



- **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: 39450-01-6	Proteinase K	10%
EINECS: 254-457-8		

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. 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.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Proteinase K

(Contd. of page 2)

- **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.
- **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:**

None of the ingredients is listed.

· **PAC-2:**

None of the ingredients is listed.

· **PAC-3:**

None of the ingredients is listed.

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:**

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Proteinase K**

(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 product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes 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.
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

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

Form:	According to product specification
Color:	According to product specification

(Contd. on page 5)

-US

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Proteinase K**

(Contd. of page 4)

· 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:	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 Water:	Not Determined 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
Solids content:	10.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

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

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Proteinase K**

(Contd. of page 5)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through inhalation.
- **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:** 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.
- **Recommended cleansing agent:** Water, if necessary with cleaning agents.

US

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: *Proteinase K*

(Contd. of page 6)

14 Transport information

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

15 Regulatory information

<i>· Safety, health and environmental regulations/legislation specific for the substance or mixture</i>	
<i>No further relevant information available.</i>	
<i>· Sara</i>	
<i>· Section 355 (extremely hazardous substances):</i>	
<i>None of the ingredients is listed.</i>	
<i>· Section 313 (Specific toxic chemical listings):</i>	
<i>None of the ingredients is listed.</i>	
<i>· TSCA (Toxic Substances Control Act):</i>	
<i>None of the ingredients is listed.</i>	
<i>· Hazardous Air Pollutants</i>	
<i>None of the ingredients is listed.</i>	
<i>· Proposition 65</i>	
<i>· Chemicals known to cause cancer:</i>	
<i>None of the ingredients is listed.</i>	
<i>· Chemicals known to cause reproductive toxicity for females:</i>	
<i>None of the ingredients is listed.</i>	
<i>· Chemicals known to cause reproductive toxicity for males:</i>	
<i>None of the ingredients is listed.</i>	
<i>· Chemicals known to cause developmental toxicity:</i>	
<i>None of the ingredients is listed.</i>	
<i>· Carcinogenic categories</i>	
<i>· EPA (Environmental Protection Agency)</i>	
<i>None of the ingredients is listed.</i>	

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Proteinase K**

(Contd. of page 7)

· **TLV (Threshold Limit Value)**

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**

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

· **Precautionary statements**

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

Wash thoroughly after handling.

Wear protective gloves / eye protection / face protection.

[In case of inadequate ventilation] wear respiratory protection.

If on skin: Wash with plenty of water.

Specific treatment (see on this label).

If inhaled: If breathing is difficult, 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.

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.

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.*

· **Contact:**

· **Date of preparation / last revision** *05/08/2022 / -*

· **Abbreviations and acronyms:**

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

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

Resp. Sens. 1: Respiratory sensitisation – Category 1

Safety Data Sheet acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

1 Identification

- **Product identifier**
- **Trade name:** Protease Dissolve Buffer
- **Article number:** 6576092
- **Molecular Formula** N/A
- **Application of the substance / the mixture** For Research or Further Manufacturing Use.
- **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 substance 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)**

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

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

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: *Protease Dissolve Buffer*

(Contd. of page 1)

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
Non-Hazardous Aqueous Buffer

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.
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:**

Substance is not listed.

- **PAC-2:**

Substance is not listed.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Protease Dissolve Buffer

(Contd. of page 2)

· **PAC-3:**

Substance is not listed.

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:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**
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.
- **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:** According to product specification
- Color:** According to product specification
- **Odor:** Indeterminate
- **Odor threshold:** Not determined.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Protease Dissolve Buffer

(Contd. of page 3)

· 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:	Not determined.
· Danger of explosion:	See section 10
· Explosion limits: Lower: Upper:	Not Applicable Not Applicable
· Vapor pressure:	Not Applicable
· Density: · Relative density · Vapor density · Evaporation rate	Not Applicable Not determined. Not determined. Not determined.
· Solubility in / Miscibility with · Water:	Not Determined Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity: Dynamic: Kinematic: VOC content:	Not determined. Not determined. 0.00 % 0.0 g/l / 0.00 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.
- **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.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Protease Dissolve Buffer

(Contd. of page 4)

- **on the eye:** Irritant and potentially harmful
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
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.
The substance is not subject to classification.

- **Carcinogenic categories**

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

Substance is not listed.

- **NTP (National Toxicology Program)**

Substance is not listed.

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

Substance is not 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.
- **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"> · UN-Number · DOT, ADR, IMDG, IATA | Not regulated |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT, ADR, IMDG, IATA | Not regulated |

(Contd. on page 6)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: *Protease Dissolve Buffer*

(Contd. of page 5)

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

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **Sara**

· Section 355 (extremely hazardous substances):
--

Substance is not listed.

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

Substance is not listed.

· TSCA (Toxic Substances Control Act):

Substance is not listed.

· Hazardous Air Pollutants

Substance is not listed.

· Proposition 65

· Chemicals known to cause cancer:

Substance is not listed.

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

Substance is not listed.

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

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is not listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)
--

Substance is not listed.

· TLV (Threshold Limit Value)

Substance is not listed.

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

Substance is not listed.

· GHS label elements Void

· Hazard pictograms Void

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Protease Dissolve Buffer

(Contd. of page 6)

- **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.*
- **Contact:**
- **Date of preparation / last revision** *05/08/2022 / -*

US

Safety Data Sheet acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

1 Identification

- **Product identifier**
- **Trade name:** Buffer DPS
- **Article number:** 6576093
- **Application of the substance / the mixture** For Research or Further Manufacturing Use.
- **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

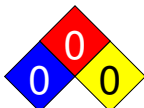
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

- **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:**
n-Hexadecane
- **Hazard statements**
May be fatal if swallowed and enters airways.
- **Precautionary statements**
If swallowed: Immediately call a poison center/doctor.
Do NOT induce vomiting.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Buffer DPS**

(Contd. of page 1)

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

HEALTH	0	Health = 0
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: 544-76-3	n-Hexadecane	50-90%
EINECS: 208-878-9		
RTECS: ML9200000		

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.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Buffer DPS

(Contd. of page 2)

- **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.
- **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:**

544-76-3	n-Hexadecane	35 mg/m ³
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· **PAC-2:**

544-76-3	n-Hexadecane	380 mg/m ³
----------	--------------	-----------------------

· **PAC-3:**

544-76-3	n-Hexadecane	2,800 mg/m ³
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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.

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.
Wash hands before breaks and at the end of work.
- **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.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Buffer DPS

(Contd. of page 3)

- **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:** According to product specification
 - **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:** 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.
- **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.

10 Stability and reactivity

- **Reactivity** No further relevant information available.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Buffer DPS

(Contd. of page 4)

- **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:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:

- **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:**
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.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Buffer DPS**

(Contd. of page 5)

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

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.	
· 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):	
544-76-3	n-Hexadecane 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.	

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Buffer DPS

(Contd. of page 6)

· **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)**

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:**

n-Hexadecane

· **Hazard statements**

May be fatal if swallowed and enters airways.

· **Precautionary statements**

If swallowed: Immediately call a poison center/doctor.

Do NOT induce vomiting.

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.

· **Contact:**

· **Date of preparation / last revision** 05/08/2022 / -

· **Abbreviations and acronyms:**

Asp. Tox. 1: Aspiration hazard – Category 1

Safety Data Sheet acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

1 Identification

- **Product identifier**
- **Trade name:** Buffer ATL
- **Article number:** 6576094
- **Application of the substance / the mixture** For Research or Further Manufacturing Use.
- **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**



Acute Tox. 4 H302 Harmful if swallowed.

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**



- **Signal word** Warning
- **Hazard-determining components of labeling:**
Sodium Dodecyl Sulfate, Molecular Biology Reagent
- **Hazard statements**
Harmful if swallowed.
Causes serious eye irritation.
- **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.
If eye irritation persists: Get medical advice/attention.
Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Buffer ATL**

(Contd. of page 1)

· **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: 151-21-3	Sodium Dodecyl Sulfate, Molecular Biology Reagent	≥3-<10%
EINECS: 205-788-1		
RTECS: WT1050000		

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. 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.

US

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Buffer ATL**

(Contd. of page 2)

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.
- **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.
- **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:**

151-21-3	Sodium Dodecyl Sulfate, Molecular Biology Reagent	3.9 mg/m ³
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- **PAC-2:**

151-21-3	Sodium Dodecyl Sulfate, Molecular Biology Reagent	43 mg/m ³
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- **PAC-3:**

151-21-3	Sodium Dodecyl Sulfate, Molecular Biology Reagent	260 mg/m ³
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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.

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.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Buffer ATL**

(Contd. of page 3)

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

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: According to product specification

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:** See section 10

· **Explosion limits:**

Lower: Not Applicable

Upper: Not Applicable

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Buffer ATL

(Contd. of page 4)

· 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:	
VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal
Solids content:	5.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid**
No further relevant information available.
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)		
Inhalative	LC50/4 h	30 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:** Irritating effect.
- **Sensitization:** No sensitizing effects known.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Buffer ATL

(Contd. of page 5)

- **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	86-170 mg/L (Oncorhynchus mykiss)
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- **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)
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- **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 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

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.

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

US

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Buffer ATL

(Contd. of page 6)

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

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture	
No further relevant information available.	
· 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):	
151-21-3	Sodium Dodecyl Sulfate, Molecular Biology Reagent
	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.	

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Buffer ATL**

(Contd. of page 7)

· **TLV (Threshold Limit Value)**

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**



GHS07

· **Signal word** Warning

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

Sodium Dodecyl Sulfate, Molecular Biology Reagent

· **Hazard statements**

Harmful if swallowed.

Causes serious eye irritation.

· **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.

If eye irritation persists: 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.

· **Contact:**

· **Date of preparation / last revision** 05/08/2022 / -

· **Abbreviations and acronyms:**

Acute Tox. 4: Acute toxicity – Category 4

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

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

1 Identification

- **Product identifier**
- **Trade name:** Buffer BST1
- **Article number:** 6576095
- **Application of the substance / the mixture** For Research or Further Manufacturing Use.
- **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**



Acute Tox. 4 H302 Harmful if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
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**



- **Signal word** Warning
- **Hazard-determining components of labeling:**
Guanidine Hydrochloride
- **Hazard statements**
Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
- **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.
Rinse mouth.
If on skin: Wash with plenty of water.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Buffer BST1

(Contd. of page 1)

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.

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: 50-01-1 EINECS: 200-002-3	Guanidine Hydrochloride	10-50%
CAS: 9002-93-1 EC number: 618-344-0 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.*

· **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.*

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Buffer BST1**

(Contd. of page 2)

- **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.
- **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.
- **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:**

None of the ingredients is listed.

- **PAC-2:**

None of the ingredients is listed.

- **PAC-3:**

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.

US

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Buffer BST1**

(Contd. of page 3)

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 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:**

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

(Contd. on page 5)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Buffer BST1**

(Contd. of page 4)

· 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: Upper:	Not Applicable Not Applicable
· Vapor pressure:	Not Applicable
· Density: · Relative density · Vapor density · Evaporation rate	Not Applicable Not determined. Not determined. Not determined.
· Solubility in / Miscibility with · Water:	Not Determined Soluble.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity: Dynamic: Kinematic:	Not determined. Not determined.
· Solvent content: VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal
Solids content:	40.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

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

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Buffer BST1

(Contd. of page 5)

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

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

ATE (Acute Toxicity Estimate)		
Oral	LD50	1,250 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)**

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:**

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.

- **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.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Buffer BST1**

(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

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

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **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):

50-01-1	Guanidine Hydrochloride	ACTIVE
9002-93-1	TRITON® X-100	ACTIVE

· Hazardous Air Pollutants

None of the ingredients is listed.

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Buffer BST1**

(Contd. of page 7)

- **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)**

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**



GHS07

- **Signal word** Warning

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

Guanidine Hydrochloride

- **Hazard statements**

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

- **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.

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.

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

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

US

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Buffer BST1

(Contd. of page 8)

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.
- **Contact:**
- **Date of preparation / last revision** 05/08/2022 / -
- **Abbreviations and acronyms:**
 - 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

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

1 Identification

- **Product identifier**
- **Trade name:** Buffer BW1
- **Article number:** 6576097
- **Application of the substance / the mixture** For Research or Further Manufacturing Use.
- **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**



Acute Tox. 4 H302 Harmful if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
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**



- **Signal word** Warning
- **Hazard-determining components of labeling:**
Guanidine Hydrochloride
- **Hazard statements**
Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
- **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.
Rinse mouth.
If on skin: Wash with plenty of water.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Buffer BW1**

(Contd. of page 1)

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.

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	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: 50-01-1	Guanidine Hydrochloride	10-50%
EINECS: 200-002-3		

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. 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.

US

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Buffer BW1**

(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**
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.
- **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.
- **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:**

None of the ingredients is listed.

- **PAC-2:**

None of the ingredients is listed.

- **PAC-3:**

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.

8 Exposure controls/personal protection

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

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Buffer BW1**

(Contd. of page 3)

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes 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: | |
| Form: | According to product specification |
| 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. |

(Contd. on page 5)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Buffer BW1

(Contd. of page 4)

· 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.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal
Solids content:	40.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid**
No further relevant information available.
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	1,250 mg/kg

(Contd. on page 6)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Buffer BW1**

(Contd. of page 5)

50-01-1 Guanidine Hydrochloride

Oral LD50 500 mg/kg (ATE)

- **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)**

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:**
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.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Buffer BW1

(Contd. of page 6)

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

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture	
No further relevant information available.	
· 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):	
50-01-1	Guanidine 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)	
None of the ingredients is listed.	

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: **Buffer BW1**

(Contd. of page 7)

· **TLV (Threshold Limit Value)**

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**



GHS07

· **Signal word** Warning

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

Guanidine Hydrochloride

· **Hazard statements**

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

· **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.

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.

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.

· **Contact:**

· **Date of preparation / last revision** 05/08/2022 / -

· **Abbreviations and acronyms:**

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 05/08/2022

Reviewed on 05/08/2022

1 Identification

- **Product identifier**
- **Trade name:** Elution Buffer
- **Article number:** 6574098
- **Application of the substance / the mixture** For Research or Further Manufacturing Use.
- **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 05/08/2022

Reviewed on 05/08/2022

Trade name: *Elution Buffer*

(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.
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:**

77-86-1 TRIS

18 mg/m³· **PAC-2:**

77-86-1 TRIS

190 mg/m³· **PAC-3:**

77-86-1 TRIS

1,200 mg/m³

US

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: *Elution Buffer*

(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:**
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:	According to product specification
Color:	According to product specification
- **Odor:** Indeterminate
- **Odor threshold:** Not determined.
- **pH-value:** Not determined.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: *Elution Buffer*

(Contd. of page 3)

· Change in condition Boiling point/Boiling range:	<i>Undetermined.</i>
· Flash point:	<i>Not applicable.</i>
· Flammability (solid, gaseous):	<i>Not applicable.</i>
· Decomposition temperature:	<i>Not determined.</i>
· Auto igniting:	<i>Product is not selfigniting.</i>
· Danger of explosion:	<i>See section 10</i>
· Explosion limits: Lower: Upper:	<i>Not Applicable</i> <i>Not Applicable</i>
· Vapor pressure:	<i>Not Applicable</i>
· Density: · Relative density · Vapor density · Evaporation rate	<i>Not Applicable</i> <i>Not determined.</i> <i>Not determined.</i> <i>Not determined.</i>
· Solubility in / Miscibility with · Water:	<i>Not Determined</i> <i>Fully miscible.</i>
· Partition coefficient (n-octanol/water):	<i>Not determined.</i>
· Viscosity: Dynamic: Kinematic:	<i>Not determined.</i> <i>Not determined.</i>
· Solvent content: VOC content:	<i>0.00 %</i> <i>0.0 g/l / 0.00 lb/gal</i>
Solids content:	<i>1.0 %</i>
· Other information	<i>No further relevant information available.</i>

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

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Elution Buffer

(Contd. of page 4)

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:** 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)**

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:**

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.

- **Uncleaned packagings:**

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

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

US

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Elution Buffer

(Contd. of page 5)

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

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture	
No further relevant information available.	
· 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):	
77-86-1	TRIS 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.	

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/08/2022

Reviewed on 05/08/2022

Trade name: Elution Buffer

(Contd. of page 6)

· TLV (Threshold Limit Value)

None of the ingredients is listed.

· 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.**· Contact:****· Date of preparation / last revision** 05/08/2022 / -

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