

**Kit Components**

Product code	Description
--------------	-------------

<b>VA1061</b>	<b>Rapid Digestion Kit Trypsin Lys-C</b>
---------------	------------------------------------------

Components:

V507A	Trypsin Lys-C Mix, Mass Spec Grade Lyoph
V181A	Resuspension Buffer
VA106	Rapid Digest Buffer



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

Printing date 02/23/2023

Reviewed on 02/23/2023

**1 Identification****Product identifier****Trade name:** Trypsin Lys-C Mix, Mass Spec Grade**Article number:** V507A**Application of the substance / the mixture** For Laboratory Use**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Promega Corporation

2800 Woods Hollow Road

Madison, WI 53711

U.S.A.

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

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

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

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

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

GHS08 Health hazard

Sensitization - Respiratory 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS05 Corrosion

Skin Corrosion 1A

H314 Causes severe skin burns and eye damage.

Eye Damage 1

H318 Causes serious eye damage.

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

GHS05 GHS08

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

acetic acid

Recombinant Trypsin

(Contd. on page 2)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

**Trade name: Trypsin Lys-C Mix, Mass Spec Grade**

(Contd. of page 1)

**Hazard statements***Causes severe skin burns and eye damage.**May cause allergy or asthma symptoms or breathing difficulties if inhaled.***Precautionary statements***Do not breathe dusts or mists.**Wash thoroughly after handling.**Wear protective gloves/protective clothing/eye protection/face protection.**[In case of inadequate ventilation] wear respiratory protection.**If swallowed: Rinse mouth. Do NOT induce vomiting.**If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Immediately call a poison center/doctor.**If experiencing respiratory symptoms: Call a poison center/doctor.**Wash contaminated clothing before reuse.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***Classification system:****NFPA ratings (scale 0 - 4)**

Health = 2

Fire = 2

Reactivity = 0

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

Health = 2

Fire = 2

Reactivity = 0

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

Corrosive

Irritant

Sensitizer

Combustible

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

Dermal

Inhalation

**Target Organ(s):**

Dermal hazard (Cutaneous hazard)

May cause Kidney damage (Nephrotoxin)

Risk of damage to eyes

Affects Teeth

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

### \* 3 Composition/information on ingredients

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

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

(Contd. on page 3)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

**Trade name: Trypsin Lys-C Mix, Mass Spec Grade**

(Contd. of page 2)

**Dangerous components:**

64-19-7	acetic acid	25-50%
9002-07-7	Recombinant Trypsin	1-5%

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

## \* 4 First-aid measures

**Description of first aid measures**
**General information:**

Immediately remove any clothing soiled by the product.

Seek medical treatment.

**After inhalation:**

Supply fresh air and to be sure call for a doctor.

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

**After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

**After eye contact:** Call a doctor immediately.

**After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.

**Information for doctor:**

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

**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**

None known

No further relevant information available.

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

## \* 6 Accidental release measures

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

Remove persons from danger area.

Wear protective equipment. Keep unprotected persons away.

Avoid formation of dust.

Wear protective clothing.

**Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

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

Use neutralizing agent.

Dispose contaminated material as waste according to Section 13.

Pick up mechanically.

Ensure adequate ventilation.

**Reference to other sections**

See Section 7 for information on safe handling.

(Contd. on page 4)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

**Trade name: Trypsin Lys-C Mix, Mass Spec Grade**

(Contd. of page 3)

See Section 13 for disposal information.

## 7 Handling and storage

### Handling:

#### Precautions for safe handling

Thorough dedusting.

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Work only in fume cabinet.

**Information about protection against explosions and fires:** Keep respiratory protective device available.

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

#### Storage:

**Requirements to be met by storerooms and receptacles:** Do not store below -20°C. Protected from light.

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

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

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

## 8 Exposure controls/personal protection

### Control parameters

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

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

At this time, the remaining constituent has no known exposure limits.

#### 64-19-7 acetic acid

PEL Long-term value: 25 mg/m<sup>3</sup>, 10 ppm

REL Short-term value: 37 mg/m<sup>3</sup>, 15 ppm

Long-term value: 25 mg/m<sup>3</sup>, 10 ppm

TLV Short-term value: 15 ppm

Long-term value: 10 ppm

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

### Exposure controls

#### Personal protective equipment:

#### General protective and hygienic measures:

Ensure that washing facilities are available at the work place.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Do not eat or drink while working.

Clean skin thoroughly immediately after handling the product.

#### Breathing equipment:

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

#### Protection of hands:

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

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

**Trade name: Trypsin Lys-C Mix, Mass Spec Grade**

(Contd. of page 4)

**Material of gloves**

Chemical: Acetic acid, CAS number 64-19-7

Glove Material: Butyl rubber

Glove Thickness: > or = 0.3 mm

Breakthrough Time: Approx. 480 min.

Gloves impermeable to the specific chemical substance.

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

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

**Eye protection:**

Tightly sealed goggles

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

## \* 9 Physical and chemical properties

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

<b>Form:</b>	Solid
<b>Color:</b>	Colorless
<b>Odor:</b>	Not determined
<b>Odor threshold:</b>	Not determined.

**pH-value:** Not applicable.

**Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	118 °C (244.4 °F)
<b>Flash point:</b>	39 °C (102.2 °F)

**Flammability (solid, gaseous):** Not determined.

**Ignition temperature:** 485 °C (905 °F)

**Decomposition temperature:** Not determined.

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

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

**Explosion limits:**

<b>Lower:</b>	4 Vol %
<b>Upper:</b>	17 Vol %
<b>Vapor pressure at 20 °C (68 °F):</b>	16 hPa (12 mm Hg)

**Density at 20 °C (68 °F):** 1 g/cm<sup>3</sup> (8.345 lbs/gal)

**Relative density** Not determined.

**Vapor density** Not applicable.

**Evaporation rate** Not applicable.

**Solubility in / Miscibility with**

**Water:** Soluble.

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

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

**Trade name: Trypsin Lys-C Mix, Mass Spec Grade**

(Contd. of page 5)

**Viscosity:****Dynamic:** Not applicable.**Kinematic:** Not applicable.**Solvent separation test****Organic solvents:** 44.1 %**VOC content:** 44.15 %**Solids content:** 100.0 %**Other information** No further relevant information available.

## 10 Stability and reactivity

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

## 11 Toxicological information

**Information on toxicological effects****Acute toxicity:****LD/LC50 values that are relevant for classification:****64-19-7 acetic acid**

Oral LD50 3,310 mg/kg (Rat)

Dermal LD50 1,060 uL/kg (Rabbit)

**Primary irritant effect:****on the skin:** Caustic effect on skin and mucous membranes.**on the eye:** Strong caustic effect.**Sensitization:** Sensitization possible through inhalation.**Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations: OECD test guideline 471, Ames test.

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

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

None of the ingredients are listed.

**NTP (National Toxicology Program)**

None of the ingredients are listed.

(Contd. on page 7)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

**Trade name: Trypsin Lys-C Mix, Mass Spec Grade**

(Contd. of page 6)

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

None of the ingredients are listed.

## 12 Ecological information

**Toxicity**

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

**Persistence and degradability**

Not available

No further relevant information available.

**Bioaccumulative potential**

Not known

No further relevant information available.

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

**Ecotoxicological effects:**

**Remark:** Not available

**Additional ecological information:**

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

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

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

## 13 Disposal considerations

**Waste treatment methods**

**Recommendation:**

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

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

**Uncleaned packagings:**

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

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

## 14 Transport information

**UN-Number**

**DOT, ADR, IMDG, IATA**

UN1759

**UN proper shipping name**

**DOT**

**ADR**

**IMDG, IATA**

None

Corrosive solids, n.o.s. (Acetic acid, glacial)

1759 CORROSIVE SOLID, N.O.S. (ACETIC ACID, GLACIAL)

CORROSIVE SOLID, N.O.S. (ACETIC ACID, GLACIAL)

**Transport hazard class(es)**

None

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

**Trade name: Trypsin Lys-C Mix, Mass Spec Grade**

(Contd. of page 7)

**DOT**

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

**ADR**

**Class** 8 (C10) Corrosive substances  
**Label** 8

**IMDG, IATA**

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

**Packing group** None  
**DOT, ADR, IMDG, IATA** III

**Environmental hazards:**  
**Marine pollutant:** No

**Special precautions for user** Warning: Corrosive substances  
**Hazard identification number (Kemler code):** 80  
**EMS Number:** F-A,S-B  
**Segregation groups** (SGG1) Acids  
**Stowage Category** A

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

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

**Excepted quantities (EQ)** Code: E1  
 Maximum net quantity per inner packaging: 30 g  
 Maximum net quantity per outer packaging: 1000 g

**IMDG**

**Limited quantities (LQ)** 5 kg  
**Excepted quantities (EQ)** Code: E1  
 Maximum net quantity per inner packaging: 30 g  
 Maximum net quantity per outer packaging: 1000 g

(Contd. on page 9)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

**Trade name:** Trypsin Lys-C Mix, Mass Spec Grade

(Contd. of page 8)

**UN "Model Regulation":** UN 1759 CORROSIVE SOLID, N.O.S. (ACETIC ACID, GLACIAL), 8, III

## 15 Regulatory information

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

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

None of the ingredients are listed.

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

None of the ingredients are listed.

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

64-19-7	acetic acid
9002-07-7	Recombinant Trypsin

**Hazardous Air Pollutants**

None of the ingredients are listed.

**Proposition 65**

**Chemicals known to cause cancer:**

None of the ingredients are listed.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

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

64-19-7	acetic acid
---------	-------------

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

64-19-7	acetic acid
---------	-------------

**Carcinogenicity categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**TLV (Threshold Limit Value)**

None of the ingredients are listed.

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

None of the ingredients are listed.

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

**Signal word** Danger

**Hazard-determining components of labeling:**

acetic acid  
Recombinant Trypsin

**Hazard statements**

Causes severe skin burns and eye damage.

(Contd. on page 10)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

**Trade name: Trypsin Lys-C Mix, Mass Spec Grade**

(Contd. of page 9)

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

**Precautionary statements**

Do not breathe dusts or mists.

Wash thoroughly after handling.

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

[In case of inadequate ventilation] wear respiratory protection.

If swallowed: Rinse mouth. Do NOT induce vomiting.

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

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

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

Continue rinsing.

Immediately call a poison center/doctor.

If experiencing respiratory symptoms: Call a poison center/doctor.

Wash contaminated clothing before reuse.

Store locked up.

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

**Chemical safety assessment**

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

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

## 16 Other information

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

**Department issuing SDS:**

Promega Corporation

Chemical Regulatory Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

chemicalregulatory@promega.com

**Contact:**

**Date of preparation / last revision** 02/23/2023

**Abbreviations and acronyms:**

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Skin Corrosion 1A: Skin corrosion/irritation – Category 1A

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

Sensitization - Respiratory 1: Respiratory sensitisation – Category 1

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

Printing date 02/23/2023

Reviewed on 02/23/2023

**1 Identification****Product identifier****Trade name:** Resuspension Buffer**Article number:** VI81A**Application of the substance / the mixture** For Laboratory Use**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Promega Corporation

2800 Woods Hollow Road

Madison, WI 53711

U.S.A.

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

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

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

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

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

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

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

Health = 0

Fire = 0

Reactivity = 0

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

Health = 0

Fire = 0

Reactivity = 0

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

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

Trade name: Resuspension Buffer

(Contd. of page 1)

### 3 Composition/information on ingredients

**Chemical characterization: Mixtures**

**Description:**

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

**Dangerous components:** Not applicable

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

### 4 First-aid measures

**Description of first aid measures**

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

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

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

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

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

**Information for doctor:**

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

None

No further relevant information available.

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

No further relevant information available.

### 5 Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing agents:**

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

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

None known

No further relevant information available.

**Advice for firefighters** No special advice

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

### 6 Accidental release measures

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

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

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

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

**Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 13 for disposal information.

US

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

Trade name: Resuspension 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:** The product is not flammable.

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

### Storage:

**Requirements to be met by storerooms and receptacles:** Do not store below -20°C. Protected from light.

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

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

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

## 8 Exposure controls/personal protection

### Control parameters

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

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

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

### Exposure controls

**Personal protective equipment:**

**General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:** Not required.

**Protection of hands:**

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

**Material of gloves**

Gloves impermeable to the specific chemical substance.

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

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

**Eye protection:** Not required.

## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

#### Appearance:

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

**pH-value at 20 °C (68 °F):** 3

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

Trade name: Resuspension Buffer

(Contd. of page 3)

**Change in condition**

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

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

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

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

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

**Density at 20 °C (68 °F):** 1.00015 g/cm<sup>3</sup> (8.34625 lbs/gal)

**Relative density:** Not determined.

**Vapor density:** Not determined.

**Evaporation rate:** Not determined.

**Solubility in / Miscibility with**

**Water:** Fully miscible.

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

**Viscosity:**

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

**Kinematic:** Not determined.

**Solvent separation test**

**Organic solvents:** 0.3 %

**Water:** 99.7 %

**VOC content:** 0.30 %

**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.

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

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

## 11 Toxicological information

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

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

**Primary irritant effect:**

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

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

(Contd. on page 5)

US



# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

**Trade name: Resuspension Buffer**

(Contd. of page 4)

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

## \* 12 Ecological information

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

## \* 13 Disposal considerations

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

US

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

Trade name: Resuspension Buffer

(Contd. of page 5)

## 14 Transport information

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

## 15 Regulatory information

<b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b> Sara	
<b>Section 355 (extremely hazardous substances):</b> None of the ingredients are listed.	
<b>Section 313 (Specific toxic chemical listings):</b> None of the ingredients are listed.	
<b>TSCA (Toxic Substances Control Act) Inventory:</b> All ingredients are listed.	
<b>Hazardous Air Pollutants</b> None of the ingredients are listed.	
<b>Proposition 65</b>	
<b>Chemicals known to cause cancer:</b> None of the ingredients are listed.	
<b>Chemicals known to cause reproductive toxicity for females:</b> None of the ingredients are listed.	
<b>Chemicals known to cause reproductive toxicity for males:</b> None of the ingredients are listed.	
<b>Chemicals known to cause developmental toxicity:</b> None of the ingredients are listed.	
<b>New Jersey Right-to-Know List:</b>	
64-19-7	acetic acid
<b>Pennsylvania Right-to-Know List:</b>	
64-19-7	acetic acid

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

**Trade name: Resuspension Buffer**

(Contd. of page 6)

### Carcinogenicity categories

#### EPA (Environmental Protection Agency)

None of the ingredients are listed.

#### TLV (Threshold Limit Value)

None of the ingredients are listed.

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

None of the ingredients are listed.

**GHS label elements** Not applicable

**Signal word** Not applicable

**Hazard statements** Not applicable

**Chemical safety assessment**

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

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

## 16 Other information

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

### Department issuing SDS:

Promega Corporation

Chemical Regulatory Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

chemicalregulatory@promega.com

### Contact:

**Date of preparation / last revision** 02/23/2023

### Abbreviations and acronyms:

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

ICAO: International Civil Aviation Organization

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

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

Printing date 02/23/2023

Reviewed on 02/23/2023

**1 Identification****Product identifier****Trade name:** Rapid Digest Buffer**Article number:** VAI06**Application of the substance / the mixture** For Laboratory Use**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Promega Corporation

2800 Woods Hollow Road

Madison, WI 53711

U.S.A.

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

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

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

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

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

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

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

Health = 0

Fire = 1

Reactivity = 0

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

Health = 0

Fire = 1

Reactivity = 0

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

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

Trade name: **Rapid Digest Buffer**

(Contd. of page 1)

### 3 Composition/information on ingredients

**Chemical characterization: Mixtures**

**Description:**

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

**Dangerous components:** Not applicable

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

### 4 First-aid measures

**Description of first aid measures**

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

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

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

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

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

**Information for doctor:**

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

None

No further relevant information available.

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

No further relevant information available.

### 5 Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing agents:**

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

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

None known

No further relevant information available.

**Advice for firefighters** No special advice

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

### 6 Accidental release measures

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

**Environmental precautions:**

Dilute with plenty of water.

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 13 for disposal information.

US  
(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

Trade name: *Rapid Digest 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 measures required.***Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:** *Do not store below -20°C. Protected from light.***Information about storage in one common storage facility:** *Not required.***Further information about storage conditions:** *None.***Specific end use(s)** *No further relevant information available.*

## \* 8 Exposure controls/personal protection

**Control parameters****Components with limit values that require monitoring at the workplace:***The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.***Additional information:** *The lists that were valid during the creation were used as basis.***Exposure controls****Personal protective equipment:****General protective and hygienic measures:***The usual precautionary measures for handling chemicals should be followed.***Breathing equipment:** *Not required.***Protection of hands:***Select the glove material considering penetration time, rate of diffusion and degradation time.***Material of gloves***Gloves impermeable to the specific chemical substance.**Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.**The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.***Eye protection:** *Not required.*

## \* 9 Physical and chemical properties

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

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

**Change in condition**

<b>Melting point/Melting range:</b>	<i>0 °C (32 °F)</i>
-------------------------------------	---------------------

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

Trade name: Rapid Digest Buffer

(Contd. of page 3)

<b>Boiling point/Boiling range:</b>	100 °C (212 °F)
<b>Flash point:</b>	782 °C (1,439.6 °F)
<b>Flammability (solid, gaseous):</b>	Not applicable.
<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapor pressure:</b>	Not determined.
<b>Density at 20 °C (68 °F):</b>	1.00159 g/cm <sup>3</sup> (8.35827 lbs/gal)
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic at 20 °C (68 °F):</b>	0.0952 mPas
<b>Kinematic:</b>	Not determined.
<b>Solvent separation test</b>	
<b>Water:</b>	97.4 %
<b>VOC content:</b>	0.00 %
<b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

**Reactivity** No further relevant information available.

**Chemical stability**

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

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

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

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

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

## 11 Toxicological information

**Information on toxicological effects**

**Acute toxicity:**

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

**Primary irritant effect:**

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

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

**Sensitization:**

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

**In case of inhalation:** not sensitising

(Contd. on page 5)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

**Trade name: Rapid Digest Buffer**

(Contd. of page 4)

**Additional toxicological information:**

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

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

None of the ingredients are listed.

**NTP (National Toxicology Program)**

None of the ingredients are listed.

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

None of the ingredients are listed.

## 12 Ecological information

**Toxicity**

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

**Persistence and degradability**

Not available

No further relevant information available.

**Bioaccumulative potential**

Not known

No further relevant information available.

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

**Ecotoxicological effects:**

**Remark:** Not available

**Additional ecological information:**

**General notes:** Not known to be hazardous to water.

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

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

## 13 Disposal considerations

**Waste treatment methods****Recommendation:**

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

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

**Uncleaned packagings:**

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

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

## 14 Transport information

**UN-Number**

Not hazardous for transportation

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

Not applicable

**UN proper shipping name**

None

(Contd. on page 6)

US



# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

Trade name: **Rapid Digest Buffer**

(Contd. of page 5)

<b>DOT, ADR, ADN, IMDG, IATA</b>	Not applicable
<b>Transport hazard class(es)</b>	None
<b>DOT, ADR, ADN, IMDG, IATA Class</b>	Not applicable
<b>Packing group</b>	None
<b>DOT, ADR, IMDG, IATA</b>	Not applicable
<b>Environmental hazards:</b>	Not applicable.
<b>Special precautions for user</b>	Not applicable.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
<b>UN "Model Regulation":</b>	Not applicable

## 15 Regulatory information

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

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

None of the ingredients are listed.

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

None of the ingredients are listed.

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

**Hazardous Air Pollutants**

None of the ingredients are listed.

**Proposition 65**

**Chemicals known to cause cancer:**

None of the ingredients are listed.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

**Carcinogenicity categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**TLV (Threshold Limit Value)**

None of the ingredients are listed.

(Contd. on page 7)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/23/2023

Reviewed on 02/23/2023

**Trade name: Rapid Digest Buffer**

(Contd. of page 6)

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

None of the ingredients are listed.

**GHS label elements** Not applicable

**Signal word** Not applicable

**Hazard statements** Not applicable

**National regulations:** No information available

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

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

## 16 Other information

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

**Department issuing SDS:**

Promega Corporation

Chemical Regulatory Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

chemicalregulatory@promega.com

**Contact:**

**Date of preparation / last revision** 02/23/2023

**Abbreviations and acronyms:**

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit