

| Product code | Description |
|---------------|-----------------------------------|
| AS1490 | Maxwell® RSC Plant DNA Kit |

Components:

| | |
|-------|-------------------------|
| MC109 | Ethanol Solution |
| AA399 | Nanopure Water, (N/A) |
| MC504 | Wash Buffer |
| MC302 | Maxwell® C Resin |
| MC101 | Binding Buffer |
| K106 | Isopropanol Solution |
| P119C | Nuclease-Free Water |
| A828D | Elution Buffer |
| A509C | Tail Lysis Buffer (TLA) |
| A797C | RNase A Solution |

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/19/2021

1 Identification

Product identifier

Trade name: Ethanol Solution

Article number: MC109

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

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



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.

Label elements

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

Hazard pictograms



GHS02

Signal word Warning

Hazard statements

Flammable liquid and vapor.

Precautionary statements

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

Keep container tightly closed.

Ground/bond container and receiving equipment.

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

Use only non-sparking tools.

Take precautionary measures against static discharge.

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

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

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Trade name: Ethanol Solution

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

Store in a well-ventilated place. Keep cool.

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

Classification system:

NFPA ratings (scale 0 - 4)

Health = 0

Fire = 3

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 0

Fire = 3

Reactivity = 0

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

Target Organ(s):

May cause Liver damage (Hepatotoxin)

May affect Nervous system (Neurotoxin)

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

* 3 Composition/information on ingredients

Chemical characterization: Mixtures

Description:

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

Dangerous components:

| | | |
|---------|---------|---------|
| 64-17-5 | ethanol | 75-100% |
|---------|---------|---------|

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.

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

Headache

Dizziness

Nausea

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.

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Trade name: Ethanol Solution

(Contd. of page 2)

Special hazards arising from the substance or mixture

None known

No further relevant information available.

Advice for firefighters No special advice

* 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Remove persons from danger area.

Wear protective equipment. Keep unprotected persons away.

Keep away from ignition sources

Wear protective clothing.

Environmental precautions:

Dilute with plenty of water.

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

Methods and material for containment and cleaning up:

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

Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 13 for disposal information.

* 7 Handling and storage

Handling:

Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Use only in well ventilated areas.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

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:

64-17-5 ethanol

PEL Long-term value: 1900 mg/m³, 1000 ppm

REL Long-term value: 1900 mg/m³, 1000 ppm

TLV Short-term value: 1880 mg/m³, 1000 ppm

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

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Trade name: Ethanol Solution

(Contd. of page 3)

Exposure controls**Personal protective equipment:****General protective and hygienic measures:**

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

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

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

It is recommended that the selected protective gloves be tested and approved under NIOSH or EU Directive 89/686/EEC and the standard EN 374 derived from it.

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.

Eye protection: 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:**

| | |
|------------------------|-----------------|
| Form: | Fluid |
| Color: | Colorless |
| Odor: | Alcohol-like |
| Odor threshold: | Not determined. |

Change in condition

| | |
|-------------------------------------|------------------------------|
| Melting point/Melting range: | Undetermined. |
| Boiling point/Boiling range: | 78 °C (172.4 °F) |
| Flash point: | 24.6 °C (76.3 °F) (EPA 1010) |

Flammability (solid, gaseous): Not applicable.**Ignition temperature:** 425 °C (797 °F)**Decomposition temperature:** Not determined.**Auto igniting:** Product is not selfigniting.**Danger of explosion:** Product does not present an explosion hazard.
Product is not explosive. However, formation of explosive air/vapor mixtures are possible.**Explosion limits:**

| | |
|---|---------------------|
| Lower: | 3.5 Vol % |
| Upper: | 15 Vol % |
| Vapor pressure at 20 °C (68 °F): | 59 hPa (44.3 mm Hg) |

Density at 20 °C (68 °F): 0.828 g/cm³ (6.90966 lbs/gal)**Relative density** Not determined.**Vapor density** Not determined.**Evaporation rate** Not determined.**Solubility in / Miscibility with****Water:** Fully miscible.

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Trade name: Ethanol Solution

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

Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

Solvent separation test

Organic solvents: 80.0 %

Water: 20.0 %

VOC content: 80.00 %

Solids content: 0.0 %

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: Oxidizing agents

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 data available.

on the eye: No data available.

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.

Carcinogenic categories

IARC (International Agency for Research on Cancer)

| | |
|-----------------|---|
| 64-17-5 ethanol | I |
|-----------------|---|

NTP (National Toxicology Program)

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

US
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Trade name: Ethanol Solution

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12 Ecological information

Toxicity**Aquatic toxicity:**

Not available

No further relevant information available.

Persistence and degradability

Not available

No further relevant information available.

Bioaccumulative potential

Not known

No further relevant information available.

Mobility in soil No further relevant information available.**Ecotoxicological effects:****Remark:** Not available**Additional ecological information:****General notes:** No data available.**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**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**

UN1170

UN proper shipping name**DOT**

Ethanol solutions

ADR

1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

IMDG

ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

IATA

ETHANOL SOLUTION

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US

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Trade name: Ethanol Solution

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Transport hazard class(es)**DOT**

Class 3 Flammable liquids
Label 3

ADR

Class 3 (F1) Flammable liquids
Label 3

IMDG, IATA

Class 3 Flammable liquids
Label 3

Packing group

DOT, ADR, IMDG, IATA III

Environmental hazards:

Marine pollutant: No

Special precautions for user Warning: Flammable liquids

Hazard identification number (Kemler code): 30

EMS Number: F-E,S-D

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 ml
 Maximum net quantity per outer packaging: 1000 ml

IMDG

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

(Contd. on page 8)

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Trade name: Ethanol Solution

(Contd. of page 7)

| | |
|-------------------------------|---|
| UN "Model Regulation": | UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, III |
|-------------------------------|---|

15 Regulatory information

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

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory:

All ingredients are listed.

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:

64-17-5 ethanol

New Jersey Right-to-Know List:

64-17-5 ethanol

Pennsylvania Right-to-Know List:

64-17-5 ethanol

Carcinogenicity categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

64-17-5 ethanol

A3

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

None of the ingredients are listed.

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

Signal word Warning

Hazard statements

Flammable liquid and vapor.

Precautionary statements

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

Keep container tightly closed.

Ground/bond container and receiving equipment.

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

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acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/19/2021

Trade name: Ethanol Solution

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Use only non-sparking tools.

Take precautionary measures against static discharge.

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

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

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

Store in a well-ventilated place. Keep cool.

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

Chemical safety assessment

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

Contact:

Date of preparation / last revision 05/19/2021 / 13.0

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

ACGIH: American Conference of Governmental Industrial Hygienists

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

Flam. Liq. 3: Flammable liquids – Category 3

*** Data compared to the previous version altered.**

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

1 Identification**Product identifier****Trade name:** Nanopure Water, (N/A)**Article number:** AA399**CAS Number:**

7732-18-5

EC number:

231-791-2

Application of the substance / the mixture For Laboratory Use**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Promega Corporation

2800 Woods Hollow Road

Madison, WI 53711

U.S.A.

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

Emergency telephone number:

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

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

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

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

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

Health = 0

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 0

Fire = 0

Reactivity = 0

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

(Contd. on page 2)

Safety Data Sheet

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Printing date 05/19/2021

Reviewed on 05/17/2021

Trade name: Nanopure Water, (N/A)

vPvB: Not applicable.

(Contd. of page 1)

* 3 Composition/information on ingredients

Chemical characterization: Substances

CAS No. Description

7732-18-5 water

EC number: 231-791-2

* 4 First-aid measures

Description of first aid measures

General information: No special measures required.

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

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

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

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

Information for doctor:

Most important symptoms and effects, both acute and delayed

None

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

* 5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

CO₂, 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

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Safety Data Sheet

acc. to OSHA HCS

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Reviewed on 05/17/2021

Trade name: Nanopure Water, (N/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: The product is not flammable.

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

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

Further information about storage conditions: None.

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

8 Exposure controls/personal protection

Control parameters

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

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

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands: Not required.

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.

Eye protection: Not required.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

| | |
|------------------------|-----------------|
| Form: | Fluid |
| Color: | Colorless |
| Odor: | Odorless |
| Odor threshold: | Not determined. |

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: | Not determined. |
|-----------------------|-----------------|

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

Explosion limits:

| | |
|---------------|-----------------|
| Lower: | Not determined. |
| Upper: | Not determined. |

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Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

Trade name: Nanopure Water, (N/A)

(Contd. of page 3)

| | |
|---|--|
| Vapor pressure: | Not determined. |
| Density at 20 °C (68 °F): | 1 g/cm ³ (8.345 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. |
| Water: | 100.0 % |
| VOC content: | 0.00 % |
| 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.

Sensitization: No sensitizing effects known.

Additional toxicological information: 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.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

Trade name: Nanopure Water, (N/A)

(Contd. of page 4)

12 Ecological information

Toxicity**Aquatic toxicity:**

Not available

No further relevant information available.

Persistence and degradability

Not available

No further relevant information available.

Bioaccumulative potential

Not known

No further relevant information available.

Mobility in soil No further relevant information available.**Ecotoxicological effects:****Remark:** Not available**Additional ecological information:****General notes:**

Not available.

Not known to be hazardous to water.

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.

13 Disposal considerations

Waste treatment methods**Recommendation:**

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

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

Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

UN-Number

DOT, ADR, ADN, IMDG, IATA

Not hazardous for transportation

Not applicable

UN proper shipping name

DOT, ADR, ADN, IMDG, IATA

None

Not applicable

Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA

Class

None

Not applicable

Packing group

DOT, ADR, IMDG, IATA

None

Not applicable

(Contd. on page 6)

US

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Trade name: Nanopure Water, (N/A)

(Contd. of page 5)

Environmental hazards:**Marine pollutant:** No**Special precautions for user** Not applicable.**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.**UN "Model Regulation":** Not applicable

15 Regulatory information

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

Section 355 (extremely hazardous substances):

Substance is not listed.

Section 313 (Specific toxic chemical listings):

Substance is not listed.

TSCA (Toxic Substances Control Act) Inventory:

Substance is 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.

New Jersey Right-to-Know List:

Substance is not listed.

Pennsylvania Right-to-Know List:

Substance is not listed.

Carcinogenicity categories**EPA (Environmental Protection Agency)**

Substance is not listed.

TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

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

Substance is not listed.

GHS label elements Not applicable**Signal word** Not applicable**Hazard statements** Not applicable

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Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

Trade name: Nanopure Water, (N/A)

(Contd. of page 6)

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

Contact:

Date of preparation / last revision 05/19/2021 / 2.0

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)

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

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

*** Data compared to the previous version altered.**

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

1 Identification**Product identifier****Trade name:** Wash Buffer**Article number:** MC504**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

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 05/19/2021

Reviewed on 05/17/2021

Trade name: Wash 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:

| | |
|---------------------|-------|
| Polyethylene Glycol | 5-10% |
|---------------------|-------|

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:

CO₂, 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

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 05/19/2021

Reviewed on 05/17/2021

Trade name: Wash 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: No special requirements.

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:

Polyethylene Glycol

| | |
|------|--|
| WEEL | Long-term value: 10 mg/m ³ (H); MW>200 |
|------|--|

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: Not required.

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.

Eye protection: Not required.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

| | |
|------------------------|-----------------|
| Form: | Fluid |
| Color: | Colorless |
| Odor: | Not determined |
| Odor threshold: | Not determined. |

| | |
|-----------------------------------|-----|
| pH-value at 20 °C (68 °F): | 6.2 |
|-----------------------------------|-----|

Change in condition

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

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

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

Trade name: Wash Buffer

(Contd. of page 3)

| | |
|---|---|
| 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: | Not determined. |
| 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: | Not determined. |
| Kinematic: | Not determined. |
| Solvent separation test | |
| Water: | 86.4 % |
| VOC content: | 0.00 % |
| Solids content: | 7.7 % |
| 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.

Sensitization: No sensitizing effects known.

Additional toxicological information:

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

(Contd. on page 5)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

Trade name: Wash Buffer

(Contd. of page 4)

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 available

No further relevant information available.

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

DOT, ADR, ADN, IMDG, IATA

Not applicable

(Contd. on page 6)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

Trade name: Wash Buffer

(Contd. of page 5)

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

15 Regulatory information

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

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory:

All ingredients are listed.

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:

26628-22-8 sodium azide

Pennsylvania Right-to-Know List:

26628-22-8 sodium azide

Carcinogenicity categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

Trade name: Wash Buffer

(Contd. of page 6)

TLV (Threshold Limit Value established by ACGIH)

26628-22-8 sodium azide

A4: Not classifiable as human carcinogen

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:** 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

Contact:**Date of preparation / last revision** 05/19/2021 / 3.0**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)

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

ACGIH: American Conference of Governmental Industrial Hygienists

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

*** Data compared to the previous version altered.**

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/19/2021

1 Identification**Product identifier****Trade name:** Maxwell® C Resin**Article number:** MC302**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

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 05/19/2021

Reviewed on 05/19/2021

Trade name: Maxwell® C Resin

(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:

CO₂, 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 05/19/2021

Reviewed on 05/19/2021

Trade name: Maxwell® C Resin

(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: No special requirements.

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: Not required.

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.

Eye protection: Not required.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

| | |
|------------------------|-----------------|
| Form: | Fluid |
| Color: | Colorless |
| Odor: | Odorless |
| Odor threshold: | Not determined. |

pH-value at 20 °C (68 °F): 7

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.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/19/2021

Trade name: Maxwell® C Resin

(Contd. of page 3)

| | |
|---|---|
| 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): | 1.01507 g/cm ³ (8.47076 lbs/gal) |
| Relative density | Not determined. |
| Vapor density | Not determined. |
| Evaporation rate | Not determined. |
| Solubility in / Miscibility with | |
| Water: | Fully miscible. |
| Partition coefficient (n-octanol/water): | Not determined. |
| Viscosity: | |
| Dynamic at 20 °C (68 °F): | 0.0952 mPas |
| Kinematic: | Not determined. |
| Solvent separation test | |
| Water: | 99.0 % |
| VOC content: | 0.00 % |
| Solids content: | 0.5 % |
| 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.

Sensitization: No sensitizing effects known.

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.

(Contd. on page 5)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/19/2021

Trade name: Maxwell® C Resin

(Contd. of page 4)

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 available

No further relevant information available.

Persistence and degradability

Not available

No further relevant information available.

Bioaccumulative potential

Not known

No further relevant information available.

Mobility in soil No further relevant information available.

Ecotoxicological effects:

Remark: Not available

Additional ecological information:

General notes:

Not available.

Not known to be hazardous to water.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.

* 13 Disposal considerations

Waste treatment methods

Recommendation:

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

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

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

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

* 14 Transport information

UN-Number

Not hazardous for transportation

DOT, ADR, ADN, IMDG, IATA

Not applicable

UN proper shipping name

None

DOT, ADR, ADN, IMDG, IATA

Not applicable

Transport hazard class(es)

None

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/19/2021

Trade name: Maxwell® C Resin

(Contd. of page 5)

DOT, ADR, ADN, IMDG, IATA

| | |
|---|-----------------|
| Class | Not applicable |
| Packing group | None |
| DOT, ADR, IMDG, IATA | Not applicable |
| Environmental hazards: | |
| Marine pollutant: | No |
| Special precautions for user | Not applicable. |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable. |
| UN "Model Regulation": | Not applicable |

15 Regulatory information

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

Sara

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory:

All ingredients are listed.

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:

9004-34-6 Cellulose

26628-22-8 sodium azide

Pennsylvania Right-to-Know List:

9004-34-6 Cellulose

26628-22-8 sodium azide

Carcinogenicity categories**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

(Contd. on page 7)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/19/2021

Trade name: Maxwell® C Resin

(Contd. of page 6)

TLV (Threshold Limit Value established by ACGIH)

26628-22-8 sodium azide

A4: Not classifiable as human carcinogen

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

Contact:
Date of preparation / last revision 05/19/2021 / 3.0

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

ACGIH: American Conference of Governmental Industrial Hygienists

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

*** Data compared to the previous version altered.**

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

* **1 Identification**

Product identifier

Trade name: Binding Buffer

Article number: MC101

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

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 05/19/2021

Reviewed on 05/17/2021

Trade name: **Binding 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:

| | |
|---------------------|--------|
| Polyethylene Glycol | 20-25% |
|---------------------|--------|

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:

CO₂, 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

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 05/19/2021

Reviewed on 05/17/2021

Trade name: **Binding 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: No special requirements.

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:

Polyethylene Glycol

| | |
|------|--|
| WEEL | Long-term value: 10 mg/m ³ (H); MW>200 |
|------|--|

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: Not required.

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.

Eye protection: Not required.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

| | |
|------------------------|-----------------|
| Form: | Fluid |
| Color: | Colorless |
| Odor: | Odorless |
| Odor threshold: | Not determined. |

| | |
|-----------------------------------|-----|
| pH-value at 20 °C (68 °F): | 6.4 |
|-----------------------------------|-----|

Change in condition

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

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

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Safety Data Sheet

acc. to OSHA HCS

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Reviewed on 05/17/2021

Trade name: **Binding Buffer**

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| | |
|---|---|
| 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 at 20 °C (68 °F): | >0 hPa |
| Density: | Not determined. |
| 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: | Not determined. |
| Kinematic: | Not determined. |
| Solvent separation test | |
| Water: | 56.6 % |
| VOC content: | 0.00 % |
| Solids content: | 43.3 % |
| 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.

Sensitization: No sensitizing effects known.

Additional toxicological information:

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

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Trade name: **Binding Buffer**

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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 available

No further relevant information available.

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

DOT, ADR, ADN, IMDG, IATA

Not applicable

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Trade name: **Binding Buffer**

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

15 Regulatory information

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

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory:

All ingredients are listed.

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:

26628-22-8 | sodium azide

Pennsylvania Right-to-Know List:

26628-22-8 | sodium azide

Carcinogenicity categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

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Trade name: Binding Buffer

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TLV (Threshold Limit Value established by ACGIH)

26628-22-8 sodium azide

A4: Not classifiable as human carcinogen

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:** 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

Contact:
Date of preparation / last revision 05/19/2021 / 3.0

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

ACGIH: American Conference of Governmental Industrial Hygienists

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

*** Data compared to the previous version altered.**

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

1 Identification

Product identifier

Trade name: Isopropanol Solution

Article number: K106

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

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



GHS02 Flame

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



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

Label elements

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

Hazard pictograms



GHS02 GHS07

Signal word Danger

Hazard-determining components of labeling:

2-Propanol

Hazard statements

Highly flammable liquid and vapor.

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Trade name: Isopropanol Solution

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Causes serious eye irritation.

May cause drowsiness or dizziness.

Precautionary statements

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

Ground/bond container and receiving equipment.

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

Use only non-sparking tools.

Take precautionary measures against static discharge.

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

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

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

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

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

Continue rinsing.

Call a poison center/doctor if you feel unwell.

If eye irritation persists: Get medical advice/attention.

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

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

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

Classification system:

NFPA ratings (scale 0 - 4)

Health = 2

Fire = 3

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 2

Fire = 3

Reactivity = 0

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

Irritant

Flammable

Primary route(s) of entry:

Dermal

Inhalation

Target Organ(s):

May affect Nervous system (Neurotoxin)

May cause Kidney damage (Nephrotoxin)

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.

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Trade name: Isopropanol Solution

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Dangerous components:

67-63-0 2-Propanol

50-75%

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

4 First-aid measures

Description of first aid measures

General information:

Take affected persons out into the fresh air.

Take affected persons out of danger area and lay down.

After inhalation:

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

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

Take affected persons into fresh air and keep quiet.

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

Information for doctor:

Most important symptoms and effects, both acute and delayed

Headache

Dizziness

Nausea

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.

Keep away from ignition sources

Wear protective clothing.

Environmental precautions:

Prevent seepage into sewage system, workpits and cellars.

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).

Ensure adequate ventilation.

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Trade name: Isopropanol Solution

(Contd. of page 3)

Reference to other sections

See Section 7 for information on safe handling.
See Section 13 for disposal information.

7 Handling and storage

Handling:

Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Use only in well ventilated areas.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: Store in a cool location.

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

Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

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:

67-63-0 2-Propanol

PEL Long-term value: 980 mg/m³, 400 ppm

REL Short-term value: 1225 mg/m³, 500 ppm

Long-term value: 980 mg/m³, 400 ppm

TLV Short-term value: 984 mg/m³, 400 ppm

Long-term value: 492 mg/m³, 200 ppm

BEI

Ingredients with biological limit values:

67-63-0 2-Propanol

BEI 40 mg/L

Medium: urine

Time: end of shift at end of workweek

Parameter: Acetone (background, nonspecific)

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

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

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Trade name: Isopropanol Solution

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Do not eat or drink while working.

Breathing equipment:

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

Protection of hands:

Protective gloves

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

It is recommended that the selected protective gloves be tested and approved under NIOSH or EU Directive 89/686/EEC and the standard EN 374 derived from it.

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.

Eye protection:

Safety glasses

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:

| | |
|------------------------|-----------------|
| Form: | Fluid |
| Color: | Colorless |
| Odor: | Alcohol-like |
| Odor threshold: | Not determined. |

Change in condition

| | |
|-------------------------------------|------------------|
| Melting point/Melting range: | Undetermined. |
| Boiling point/Boiling range: | 82 °C (179.6 °F) |
| Flash point: | 13 °C (55.4 °F) |

Flammability (solid, gaseous): Not applicable.

Ignition temperature: 425 °C (797 °F)
Decomposition temperature: Not determined.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.
 Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

Explosion limits:

| | |
|---|---------------------|
| Lower: | 2 Vol % |
| Upper: | 12 Vol % |
| Vapor pressure at 20 °C (68 °F): | 43 hPa (32.3 mm Hg) |

| | |
|---|--|
| Density at 20 °C (68 °F): | 0.8495 g/cm ³ (7.08908 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. |

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Reviewed on 05/17/2021

Trade name: Isopropanol Solution

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Viscosity:**Dynamic:** Not determined.**Kinematic:** Not determined.**Solvent separation test****Organic solvents:** 70.0 %**Water:** 30.0 %**VOC content:** 70.00 %**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:** Oxidizing agents**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:****67-63-0 2-Propanol**

| | | |
|------------|----------|-------------------|
| Oral | LD50 | 4570 mg/kg (Rat) |
| Dermal | LD50 | 13400 mg/kg (Rat) |
| Inhalative | LC50/4 h | 30 mg/l (Rat) |

Primary irritant effect:**on the skin:** No data available.**on the eye:** Irritating effect.**Sensitization:** No sensitizing effects known.**Additional toxicological information:**The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant**Carcinogenic categories****IARC (International Agency for Research on Cancer)**

| | | |
|---------|------------|---|
| 67-63-0 | 2-Propanol | 3 |
|---------|------------|---|

NTP (National Toxicology Program)

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

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Trade name: Isopropanol Solution

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12 Ecological information

Toxicity

Aquatic toxicity:

Not available

No further relevant information available.

Persistence and degradability

Not available

No further relevant information available.

Bioaccumulative potential

Not known

No further relevant information available.

Mobility in soil No further relevant information available.

Ecotoxicological effects:

Remark: Not available

Additional ecological information:

General notes: No data available.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

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

UN1993

UN proper shipping name

DOT

Flammable liquids, n.o.s. (Isopropanol)

ADR

1993 FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL (ISOPROPYL ALCOHOL))

IMDG

FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL (ISOPROPYL ALCOHOL))

IATA

FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL (ISOPROPYL ALCOHOL) solution)

(Contd. on page 8)

US

Safety Data Sheet

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Reviewed on 05/17/2021

Trade name: Isopropanol Solution

(Contd. of page 7)

Transport hazard class(es)**DOT**

Class 3 Flammable liquids
Label 3

ADR

Class 3 (F1) Flammable liquids
Label 3

IMDG, IATA

Class 3 Flammable liquids
Label 3

Packing group
DOT, ADR, IMDG, IATA III

Environmental hazards:
Marine pollutant: No

Special precautions for user Warning: Flammable liquids
Hazard identification number (Kemler code): 33
EMS Number: F-E, S-E
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 ml
 Maximum net quantity per outer packaging: 1000 ml

IMDG

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

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Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

Trade name: *Isopropanol Solution*

(Contd. of page 8)

UN "Model Regulation":

UN 1993 FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL (ISOPROPYL ALCOHOL)), 3, 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):

67-63-0 | 2-Propanol

TSCA (Toxic Substances Control Act) Inventory:

All ingredients are listed.

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:

67-63-0 | 2-Propanol

Pennsylvania Right-to-Know List:

67-63-0 | 2-Propanol

Carcinogenicity categories**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

67-63-0 | 2-Propanol

A4

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:**

2-Propanol

Hazard statements

Highly flammable liquid and vapor.

Causes serious eye irritation.

May cause drowsiness or dizziness.

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acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

Trade name: Isopropanol Solution

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Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 Ground/bond container and receiving equipment.
 Use explosion-proof electrical/ventilating/lighting/equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Wash thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves/protective clothing/eye protection/face protection.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
 Continue rinsing.
 Call a poison center/doctor if you feel unwell.
 If eye irritation persists: Get medical advice/attention.
 In case of fire: Use for extinction: CO2, powder or water spray.
 Store in a well-ventilated place. Keep container tightly closed.
 Store in a well-ventilated place. Keep cool.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment

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

Contact:

Date of preparation / last revision 05/19/2021 / 9.0

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
 ACGIH: American Conference of Governmental Industrial Hygienists
 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

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

Trade name: Isopropanol Solution

(Contd. of page 10)

*NIOSH: National Institute for Occupational Safety**OSHA: Occupational Safety & Health**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**BEI: Biological Exposure Limit**Flam. Liq. 2: Flammable liquids – Category 2**Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3**** Data compared to the previous version altered.**

US

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/19/2021

1 Identification

Product identifier

Trade name: Nuclease-Free Water

Article number: P119C

CAS Number:

7732-18-5

EC number:

231-791-2

Application of the substance / the mixture For Laboratory Use

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Promega Corporation

2800 Woods Hollow Road

Madison, WI 53711

U.S.A.

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

Emergency telephone number:

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

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

2 Hazard(s) identification

Classification of the substance or mixture

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

Label elements

GHS label elements Not applicable

Hazard pictograms Not applicable

Signal word Not applicable

Hazard statements Not applicable

Classification system:

NFPA ratings (scale 0 - 4)

Health = 0

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 0

Fire = 0

Reactivity = 0

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

Target Organ(s): Not applicable or unknown

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/19/2021

Trade name: Nuclease-Free Water

vPvB: Not applicable.

(Contd. of page 1)

* 3 Composition/information on ingredients

Chemical characterization: Substances

CAS No. Description

7732-18-5 water

EC number: 231-791-2

* 4 First-aid measures

Description of first aid measures

General information: No special measures required.

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

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

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

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

Information for doctor:

Most important symptoms and effects, both acute and delayed

None

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

* 5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

CO₂, 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 05/19/2021

Reviewed on 05/19/2021

Trade name: Nuclease-Free Water

(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: No special requirements.

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

Further information about storage conditions: None.

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

8 Exposure controls/personal protection

Control parameters

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

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

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands: Not required.

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.

Eye protection: Not required.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

| | |
|------------------------|-----------------|
| Form: | Fluid |
| Color: | Colorless |
| Odor: | Odorless |
| Odor threshold: | Not determined. |

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: | Not determined. |
|-----------------------|-----------------|

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

Explosion limits:

| | |
|---------------|-----------------|
| Lower: | Not determined. |
| Upper: | Not determined. |

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/19/2021

Trade name: Nuclease-Free Water

(Contd. of page 3)

| | |
|---|--|
| Vapor pressure: | Not determined. |
| Density at 20 °C (68 °F): | 1 g/cm ³ (8.345 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. |
| Water: | 100.0 % |
| VOC content: | 0.00 % |
| Solids content: | 0.0 % |
| 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.

Sensitization: No sensitizing effects known.

Additional toxicological information: 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.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/19/2021

Trade name: Nuclease-Free Water

(Contd. of page 4)

12 Ecological information

Toxicity**Aquatic toxicity:**

Not available

No further relevant information available.

Persistence and degradability

Not available

No further relevant information available.

Bioaccumulative potential

Not known

No further relevant information available.

Mobility in soil No further relevant information available.**Ecotoxicological effects:****Remark:** Not available**Additional ecological information:****General notes:**

Not available.

Not known to be hazardous to water.

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.

13 Disposal considerations

Waste treatment methods**Recommendation:**

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

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

Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

| | |
|----------------------------------|----------------------------------|
| UN-Number | Not hazardous for transportation |
| DOT, ADR, ADN, IMDG, IATA | Not applicable |

| | |
|--------------------------------|----------------|
| UN proper shipping name | None |
| DOT, ADR, IMDG, IATA | Not applicable |
| ADN | |

| | |
|-----------------------------------|----------------|
| Transport hazard class(es) | None |
| DOT, ADR, ADN, IMDG, IATA | |
| Class | Not applicable |

| | |
|-----------------------------|----------------|
| Packing group | None |
| DOT, ADR, IMDG, IATA | Not applicable |

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/19/2021

Trade name: Nuclease-Free Water

(Contd. of page 5)

Environmental hazards:**Marine pollutant:** No**Special precautions for user** Not applicable.**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.**UN "Model Regulation":** Not applicable

15 Regulatory information

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

Section 355 (extremely hazardous substances):

Substance is not listed.

Section 313 (Specific toxic chemical listings):

Substance is not listed.

TSCA (Toxic Substances Control Act) Inventory:

Substance is 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.

New Jersey Right-to-Know List:

Substance is not listed.

Pennsylvania Right-to-Know List:

Substance is not listed.

Carcinogenicity categories**EPA (Environmental Protection Agency)**

Substance is not listed.

TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

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

Substance is not listed.

GHS label elements Not applicable**Signal word** Not applicable**Hazard statements** Not applicable

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/19/2021

Trade name: Nuclease-Free Water

(Contd. of page 6)

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

Contact:

Date of preparation / last revision 05/19/2021 / 2.0

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

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

*** Data compared to the previous version altered.**

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

1 Identification

Product identifier

Trade name: Elution Buffer

Article number: A828D

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

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 05/19/2021

Reviewed on 05/17/2021

Trade name: *Elution 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*

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:

CO₂, 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

See Section 7 for information on safe handling.

See Section 13 for disposal information.

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.*

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

Trade name: *Elution Buffer*

(Contd. of page 2)

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

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: Not required.

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.

Eye protection: Not required.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

| | |
|------------------------|-----------------|
| Form: | Fluid |
| Color: | Colorless |
| Odor: | Odorless |
| Odor threshold: | Not determined. |

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): 0.99929 g/cm³ (8.33908 lbs/gal)

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

Trade name: *Elution Buffer*

(Contd. of page 3)

| | |
|---|------------------------|
| Relative density | <i>Not determined.</i> |
| Vapor density | <i>Not determined.</i> |
| Evaporation rate | <i>Not determined.</i> |
| Solubility in / Miscibility with | |
| Water: | <i>Fully miscible.</i> |
| Partition coefficient (n-octanol/water): | <i>Not determined.</i> |
| Viscosity: | |
| Dynamic at 20 °C (68 °F): | <i>0.0952 mPas</i> |
| Kinematic: | <i>Not determined.</i> |

| | |
|--------------------------------|---------------|
| Solvent separation test | |
| Water: | <i>99.7 %</i> |
| VOC content: | <i>0.00 %</i> |

| | |
|------------------------|--------------|
| Solids content: | <i>0.2 %</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.*

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: *No sensitizing effects known.*

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) |
|---|

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

| |
|--|
| NTP (National Toxicology Program) |
|--|

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

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

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

US

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

Trade name: *Elution Buffer*

(Contd. of page 4)

12 Ecological information

Toxicity**Aquatic toxicity:**

Not available

No further relevant information available.

Persistence and degradability

Not available

No further relevant information available.

Bioaccumulative potential

Not known

No further relevant information available.

Mobility in soil No further relevant information available.**Ecotoxicological effects:****Remark:** Not available**Additional ecological information:****General notes:**

Not available.

Not known to be hazardous to water.

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.

13 Disposal considerations

Waste treatment methods**Recommendation:**

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

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

Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

| | |
|-----------------------------|----------------------------------|
| UN-Number | Not hazardous for transportation |
| DOT, ADR, IMDG, IATA | Not applicable |

| | |
|----------------------------------|----------------|
| UN proper shipping name | None |
| DOT, ADR, ADN, IMDG, IATA | Not applicable |

| | |
|-----------------------------------|----------------|
| Transport hazard class(es) | None |
| DOT, ADR, ADN, IMDG, IATA | |
| Class | Not applicable |

| | |
|-----------------------------|----------------|
| Packing group | None |
| DOT, ADR, IMDG, IATA | Not applicable |

| | |
|-------------------------------|-----------------|
| Environmental hazards: | Not applicable. |
|-------------------------------|-----------------|

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

Trade name: *Elution Buffer*

(Contd. of page 5)

| | |
|-------------------------------------|------------------------|
| Special precautions for user | <i>Not applicable.</i> |
|-------------------------------------|------------------------|

| | |
|---|------------------------|
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | <i>Not applicable.</i> |
|---|------------------------|

| | |
|-------------------------------|-----------------------|
| UN "Model Regulation": | <i>Not applicable</i> |
|-------------------------------|-----------------------|

15 Regulatory information

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

Sara

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory:

All ingredients are listed.

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.

Cancerogenity categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

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.*

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/17/2021

Trade name: Elution Buffer

(Contd. of page 6)

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

Contact:

Date of preparation / last revision 05/19/2021 / 2.0

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)
 ACGIH: American Conference of Governmental Industrial Hygienists
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 ACGIH: American Conference of Governmental Industrial Hygienists
 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

*** Data compared to the previous version altered.**

US

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/18/2021

1 Identification**Product identifier****Trade name:** Tail Lysis Buffer (TLA)**Article number:** A509C**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

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

STOT SE 2 H371 May cause damage to organs.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

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

GHS07 GHS08

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

sodium dodecyl sulphate

Hazard statements

Causes serious eye irritation.

May cause damage to organs.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/18/2021

Trade name: Tail Lysis Buffer (TLA)

(Contd. of page 1)

Precautionary statements

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

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

Wear eye protection / face protection.

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

IF exposed or concerned: Call a poison center/doctor.

If eye irritation persists: Get medical advice/attention.

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 = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = *2

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.

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:

| | | |
|----------|-------------------------|------|
| 151-21-3 | sodium dodecyl sulphate | 1-5% |
|----------|-------------------------|------|

4 First-aid measures

Description of first aid measures

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.

US

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/18/2021

Trade name: Tail Lysis Buffer (TLA)

(Contd. of page 2)

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

CO₂, 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

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Remove persons from danger area.

Wear protective clothing.

Environmental precautions:

Dilute with plenty of water.

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

Methods and material for containment and cleaning up:

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

Reference to other sections

See Section 7 for information on safe handling.

See Section 13 for disposal information.

7 Handling and storage

Handling:

Precautions for safe handling No special precautions are necessary if used correctly.

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: No special requirements.

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: Wash hands before breaks and at the end of work.

Breathing equipment: Not required.

Protection of hands:

Protective gloves

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/18/2021

Trade name: Tail Lysis Buffer (TLA)

(Contd. of page 3)

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

It is recommended that the selected protective gloves be tested and approved under NIOSH or EU Directive 89/686/EEC and the standard EN 374 derived from it.

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.

Eye protection: 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:

| | |
|------------------------|-----------------|
| Form: | Fluid |
| Color: | Colorless |
| Odor: | Odorless |
| Odor threshold: | Not determined. |

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): | 0.99898 g/cm ³ (8.33649 lbs/gal) |
|----------------------------------|---|

| | |
|-------------------------|-----------------|
| Relative density | Not determined. |
|-------------------------|-----------------|

| | |
|----------------------|-----------------|
| Vapor density | Not determined. |
|----------------------|-----------------|

| | |
|-------------------------|-----------------|
| Evaporation rate | Not determined. |
|-------------------------|-----------------|

Solubility in / Miscibility with

| | |
|---|-----------------|
| Water: | Fully miscible. |
| Partition coefficient (n-octanol/water): | Not determined. |

Viscosity:

| | |
|----------------------------------|-----------------|
| Dynamic at 20 °C (68 °F): | 0.0952 mPas |
| Kinematic: | Not determined. |

Solvent separation test

| | |
|---------------------|--------|
| Water: | 96.8 % |
| VOC content: | 0.00 % |

| | |
|------------------------|-------|
| Solids content: | 0.2 % |
|------------------------|-------|

| | |
|--------------------------|--|
| Other information | No further relevant information available. |
|--------------------------|--|

US

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/18/2021

Trade name: Tail Lysis Buffer (TLA)

(Contd. of page 4)

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 data available.

on the eye: No data available.

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.

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 available

No further relevant information available.

Persistence and degradability

Not available

No further relevant information available.

Bioaccumulative potential

Not known

No further relevant information available.

Mobility in soil No further relevant information available.

Ecotoxicological effects:

Remark: Not available

Additional ecological information:

General notes: No data available.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/18/2021

Trade name: Tail Lysis Buffer (TLA)

Other adverse effects No further relevant information available.

(Contd. of page 5)

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

15 Regulatory information

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

Sara

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory:

All ingredients are listed.

Hazardous Air Pollutants

None of the ingredients are listed.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/18/2021

Trade name: Tail Lysis Buffer (TLA)

(Contd. of page 6)

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 established by ACGIH)

None of the ingredients are listed.

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

None of the ingredients are listed.

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).**Signal word** Warning**Hazard-determining components of labeling:**

sodium dodecyl sulphate

Hazard statements

Causes serious eye irritation.

May cause damage to organs.

Precautionary statements

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

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

Wear eye protection / face protection.

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

Continue rinsing.

If exposed or concerned: Call a poison center/doctor.

If eye irritation persists: Get medical advice/attention.

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.

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/18/2021

Trade name: Tail Lysis Buffer (TLA)

(Contd. of page 7)

Department issuing SDS:

Promega Corporation
 Chemical Regulatory Department
 2800 Woods Hollow Road
 Madison, WI
 Ph: (608)274-4330

Contact:

Date of preparation / last revision 05/19/2021 / 2.0

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

ACGIH: American Conference of Governmental Industrial Hygienists

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

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

STOT SE 2: Specific target organ toxicity (single exposure) – Category 2

*** Data compared to the previous version altered.**

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/18/2021

1 Identification

Product identifier

Trade name: RNase A Solution

Article number: A797C

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

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 05/19/2021

Reviewed on 05/18/2021

Trade name: RNase A Solution

(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

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:

CO₂, 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

See Section 7 for information on safe handling.

See Section 13 for disposal information.

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.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/18/2021

Trade name: RNase A Solution

(Contd. of page 2)

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

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: Not required.

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.

Eye protection: Not required.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

| | |
|------------------------|-----------------|
| Form: | Fluid |
| Color: | Colorless |
| Odor: | Odorless |
| Odor threshold: | Not determined. |

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 g/cm³ (8.345 lbs/gal)

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/18/2021

Trade name: RNase A Solution

(Contd. of page 3)

| | |
|---|-----------------|
| 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: | 0.0 % |
| Water: | 99.3 % |
| VOC content: | 0.00 % |

| | |
|------------------------|-------|
| Solids content: | 0.2 % |
|------------------------|-------|

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

US

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/18/2021

Trade name: RNase A Solution

(Contd. of page 4)

12 Ecological information

Toxicity**Aquatic toxicity:**

Not available

No further relevant information available.

Persistence and degradability

Not available

No further relevant information available.

Bioaccumulative potential

Not known

No further relevant information available.

Mobility in soil No further relevant information available.**Ecotoxicological effects:****Remark:** Not available**Additional ecological information:****General notes:**

Not available.

Not known to be hazardous to water.

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.

13 Disposal considerations

Waste treatment methods**Recommendation:**

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

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

Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

| | |
|-----------------------------|----------------------------------|
| UN-Number | Not hazardous for transportation |
| DOT, ADR, IMDG, IATA | Not applicable |

| | |
|----------------------------------|----------------|
| UN proper shipping name | None |
| DOT, ADR, ADN, IMDG, IATA | Not applicable |

| | |
|-----------------------------------|----------------|
| Transport hazard class(es) | None |
| DOT, ADR, ADN, IMDG, IATA | |
| Class | Not applicable |

| | |
|-----------------------------|----------------|
| Packing group | None |
| DOT, ADR, IMDG, IATA | Not applicable |

| | |
|-------------------------------|-----------------|
| Environmental hazards: | Not applicable. |
|-------------------------------|-----------------|

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/18/2021

Trade name: RNase A Solution

(Contd. of page 5)

| | |
|-------------------------------------|-----------------|
| Special precautions for user | Not applicable. |
|-------------------------------------|-----------------|

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

| | |
|-------------------------------|----------------|
| UN "Model Regulation": | Not applicable |
|-------------------------------|----------------|

15 Regulatory information

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

Sara

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory:

All ingredients are listed.

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 established by ACGIH)

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.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2021

Reviewed on 05/18/2021

Trade name: RNase A Solution

(Contd. of page 6)

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

Contact:

Date of preparation / last revision 05/19/2021 / 2.0

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
ACGIH: American Conference of Governmental Industrial Hygienists
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

*** Data compared to the previous version altered.**

US