

Product code	Description
V7990	Succinate-Glo™ JmjC Demethylase/Hydroxylase Assay

Components:

V847	Succinate-Glo™ Buffer
V894	Succinate-Glo™ Solution
V896	Acetoacetyl-CoA, 100X
V895	ATP Detection Buffer
V897	Succinate 10mM
V898A	ATP Detection Substrate, Lyophilized 2ml

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

1 Identification

Product identifier

Trade name: Succinate-Glo™ Buffer

Article number: V847

Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.

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

Information department: SDS author: Regulatory.Affairs@promega.com

Emergency telephone number:

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

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

2 Hazard(s) identification

Classification of the substance or mixture

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

Label elements

GHS label elements Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

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 07/03/2019

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Trade name: Succinate-Glo™ Buffer

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3 Composition/information on ingredients

Chemical characterization: Mixtures

Description:

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances may be withheld as a Promega Corp. trade secret.

Dangerous components:

1132-61-2	4-morpholinopropanesulphonic acid	<2%
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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

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

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: Succinate-Glo™ Buffer

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7 Handling and storage

Handling:

Precautions for safe handling No special measures required.

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

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: 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:	Not determined
Odor threshold:	Not determined.

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.
Decomposition temperature:	Not determined.

Auto igniting: Product is not selfigniting.

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

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Trade name: Succinate-Glo™ Buffer

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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.**Water:** 95.1 %**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 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.

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US

Safety Data Sheet

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Trade name: Succinate-Glo™ Buffer

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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.

Behavior in environmental systems:

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 Void

UN proper shipping name None

DOT, ADR, ADN, IMDG, IATA Void

Transport hazard class(es) None

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Trade name: Succinate-Glo™ Buffer

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DOT, ADR, ADN, IMDG, IATAClass *Void*Packing group *None*DOT, ADR, IMDG, IATA *Void*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": *Void*

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:**

1132-61-2	4-morpholinopropanesulphonic acid	ACTIVE	<2%
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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.***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 *Void*Signal word *Void*Hazard statements *Void*Water hazard class: *Generally not hazardous for water.*

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Trade name: Succinate-Glo™ Buffer

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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
Environmental Health and Safety Department
2800 Woods Hollow Road
Madison, WI
Ph: (608)274-4330

Date of preparation / last revision 07/03/2019 / -

Abbreviations and acronyms:

ADR: Accord européen sur le transport 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 07/03/2019

Reviewed on 07/03/2019

* **1 Identification**

Product identifier

Trade name: Succinate-Glo™ Solution

Article number: V894

Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.

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

Information department: SDS author: Regulatory.Affairs@promega.com

Emergency telephone number:

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

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

* **2 Hazard(s) identification**

Classification of the substance or mixture

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

Label elements

GHS label elements Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

Classification system:

NFPA ratings (scale 0 - 4)

Health = 0

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 1

Fire = 0

Reactivity = 0

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

Target Organ(s): May cause Kidney damage (Nephrotoxin)

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

US

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Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: Succinate-Glo™ Solution

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3 Composition/information on ingredients

Chemical characterization: Mixtures
Description:

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances may be withheld as a Promega Corp. trade secret.

Dangerous components:

56-81-5	glycerol	25-50%
9002-93-1	Polyethylene glycol tert-octylphenyl ether	<2%

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: 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.

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Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: Succinate-Glo™ Solution

See Section 13 for disposal information.

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7 Handling and storage

Handling:

Precautions for safe handling No special measures required.

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

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: 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 following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

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

56-81-5 glycerol

PEL	Long-term value: 15* 5** mg/m ³ mist; *total dust **respirable fraction
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TLV	TLV withdrawn-insufficient data human occup. exp.
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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.

(Contd. on page 4)

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Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: Succinate-Glo™ Solution

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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.

Ignition temperature: 400 °C (752 °F)
Decomposition temperature: Not determined.

Auto igniting: Product is not selfigniting.

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

Explosion limits:
Lower: 0.9 Vol %
Upper: 0.0 Vol %
Vapor pressure at 20 °C (68 °F): 0.1 hPa (0.1 mm Hg)

Density: Not determined.
Relative density Not determined.
Vapor density Not determined.
Evaporation rate Not determined.
Solubility in / Miscibility with
Water: Not miscible or difficult to mix.
Partition coefficient (n-octanol/water): Not determined.

Viscosity:
Dynamic: Not determined.
Kinematic: Not determined.

Organic solvents: 51.2 %
Water: 45.3 %
VOC content: 0.00 %

Solids content: 8.8 %
Other information No further relevant information available.

10 Stability and reactivity

Reactivity No further relevant information available.

Chemical stability

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

Possibility of hazardous reactions 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.

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Safety Data Sheet

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Reviewed on 07/03/2019

Trade name: Succinate-Glo™ Solution

(Contd. of page 4)

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.

* 12 Ecological information

Toxicity

Aquatic toxicity:

Not available

No further relevant information available.

Persistence and degradability

Not available

No further relevant information available.

Behavior in environmental systems:

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.

14 Transport information

UN-Number

Not hazardous for transportation

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Safety Data Sheet

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Reviewed on 07/03/2019

Trade name: Succinate-Glo™ Solution

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

56-81-5	glycerol	ACTIVE	25-50%
9002-93-1	Polyethylene glycol tert-octylphenyl ether	ACTIVE	<2%

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.

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.

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Reviewed on 07/03/2019

Trade name: Succinate-Glo™ Solution

(Contd. of page 6)

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

None of the ingredients are listed.

GHS label elements Void

Signal word Void

Hazard statements Void

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

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

Date of preparation / last revision 07/03/2019 / -

Abbreviations and acronyms:

ADR: Accord européen sur le transport 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 07/03/2019

Reviewed on 07/03/2019

1 Identification

Product identifier

Trade name: Acetoacetyl-CoA, 100X

Article number: V896

Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.

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

Information department: SDS author: Regulatory.Affairs@promega.com

Emergency telephone number:

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

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

2 Hazard(s) identification

Classification of the substance or mixture

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

Label elements

GHS label elements Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

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 07/03/2019

Reviewed on 07/03/2019

Trade name: Acetoacetyl-CoA, 100X

(Contd. of page 1)

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description:

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances may be withheld as a Promega Corp. trade secret.

Dangerous components: Void

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: No special measures required.

Methods and material for containment and cleaning up:

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

Reference to other sections

See Section 7 for information on safe handling.

See Section 13 for disposal information.

US

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: Acetoacetyl-CoA, 100X

(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:	Not determined
Odor threshold:	Not determined.

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.
Decomposition temperature:	Not determined.

Auto igniting: Product is not selfigniting.

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

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: Acetoacetyl-CoA, 100X

(Contd. of page 3)

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:** Not miscible or difficult to mix.**Partition coefficient (n-octanol/water):** Not determined.**Viscosity:****Dynamic:** Not determined.**Kinematic:** Not determined.**Water:** 99.8 %**VOC content:** 0.00 %**Solids content:** 1.7 %**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:

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

None of the ingredients are listed.

NTP (National Toxicology Program)

None of the ingredients are listed.

(Contd. on page 5)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: Acetoacetyl-CoA, 100X

(Contd. of page 4)

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.

Behavior in environmental systems:

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.

* 14 Transport information

UN-Number Not hazardous for transportation

DOT, ADR, ADN, IMDG, IATA Void

UN proper shipping name None

DOT, ADR, ADN, IMDG, IATA Void

Transport hazard class(es) None

DOT, ADR, ADN, IMDG, IATA

Class Void

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: Acetoacetyl-CoA, 100X

(Contd. of page 5)

Packing group	None
DOT, ADR, IMDG, IATA	Void
Environmental hazards:	Not applicable.
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Void

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.

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.

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 Void

Signal word Void

Hazard statements Void

Water hazard class: Generally not hazardous for water.

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

US

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: Acetoacetyl-CoA, 100X

(Contd. of page 6)

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
 Environmental Health and Safety Department
 2800 Woods Hollow Road
 Madison, WI
 Ph: (608)274-4330

Date of preparation / last revision 07/03/2019 / -

Abbreviations and acronyms:

ADR: Accord européen sur le transport 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 07/03/2019

Reviewed on 07/03/2019

* **1 Identification**

Product identifier

Trade name: ATP Detection Buffer

Article number: V895

Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: SDS author: Regulatory.Affairs@promega.com

Emergency telephone number:

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

* **2 Hazard(s) identification**

Classification of the substance or mixture

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

Label elements

GHS label elements Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

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 07/03/2019

Reviewed on 07/03/2019

Trade name: ATP Detection Buffer

(Contd. of page 1)

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description:

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances may be withheld as a Promega Corp. trade secret.

Dangerous components: Void

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

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 07/03/2019

Reviewed on 07/03/2019

Trade name: ATP Detection 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:

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:	Not determined
Odor threshold:	Not determined.

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.
Decomposition temperature:	Not determined.

Auto igniting: Product is not selfigniting.

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

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: ATP Detection Buffer

(Contd. of page 3)

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.**Water:** 90.1 %**VOC content:** 0.00 %**Solids content:** 9.7 %**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:

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

7681-49-4 sodium fluoride

3

NTP (National Toxicology Program)

None of the ingredients are listed.

(Contd. on page 5)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: ATP Detection Buffer

(Contd. of page 4)

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.

Behavior in environmental systems:

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	Void
UN proper shipping name	None
DOT, ADR, ADN, IMDG, IATA	Void
Transport hazard class(es)	None
DOT, ADR, ADN, IMDG, IATA	
Class	Void
Packing group	None

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: ATP Detection Buffer

(Contd. of page 5)

DOT, ADR, IMDG, IATA	Void
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Void

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.

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.

Carcinogenicity categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

7681-49-4 sodium fluoride

A4

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

None of the ingredients are listed.

GHS label elements Void

Signal word Void

Hazard statements Void

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.

US

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: ATP Detection Buffer

(Contd. of page 6)

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
 Environmental Health and Safety Department
 2800 Woods Hollow Road
 Madison, WI
 Ph: (608)274-4330

Date of preparation / last revision 07/03/2019 / -

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 européen sur le transport 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 07/03/2019

Reviewed on 07/03/2019

1 Identification

Product identifier

Trade name: Succinate 10mM

Article number: V897

Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: SDS author: Regulatory.Affairs@promega.com

Emergency telephone number:

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

Classification of the substance or mixture

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

Label elements

GHS label elements Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

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 07/03/2019

Reviewed on 07/03/2019

Trade name: Succinate 10mM

(Contd. of page 1)

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description:

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances may be withheld as a Promega Corp. trade secret.

Dangerous components: Void

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: No special measures required.

Methods and material for containment and cleaning up:

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

Reference to other sections

See Section 7 for information on safe handling.

See Section 13 for disposal information.

US

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: Succinate 10mM

(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:	Not determined
Odor threshold:	Not determined.

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.
Decomposition temperature:	Not determined.

Auto igniting: Product is not selfigniting.

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

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: Succinate 10mM

(Contd. of page 3)

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: Not miscible or difficult to mix.
Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Dynamic: Not determined.
Kinematic: Not determined.
Water: 99.8 %
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.

(Contd. on page 5)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: Succinate 10mM

(Contd. of page 4)

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.

Behavior in environmental systems:

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.

14 Transport information

UN-Number Not hazardous for transportation

DOT, ADR, ADN, IMDG, IATA Void

UN proper shipping name None

DOT, ADR, ADN, IMDG, IATA Void

Transport hazard class(es) None

DOT, ADR, ADN, IMDG, IATA

Class Void

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: Succinate 10mM

(Contd. of page 5)

Packing group	None
DOT, ADR, IMDG, IATA	Void
Environmental hazards:	Not applicable.
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Void

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.

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.

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 Void

Signal word Void

Hazard statements Void

Water hazard class: Generally not hazardous for water.

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

US

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2019

Reviewed on 07/03/2019

Trade name: Succinate 10mM

(Contd. of page 6)

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
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Abbreviations and acronyms:

ADR: Accord européen sur le transport 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.**