

10/13/2020

## Kit Components

Product code	Description
<b>E1960</b>	<b>Dual-Luciferase® Reporter Assay System</b>

Components:

E640	Stop & Glo® Substrate
E641	Stop & Glo® Buffer
E151A	Luciferase Assay Substrate
E194	Passive Lysis Buffer, 5X
E195	Luciferase Assay Buffer II



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

Printing date 10/13/2020

Reviewed on 10/12/2020

**1 Identification****Product identifier****Trade name:** Stop & Glo® Substrate**Article number:** E640**Application of the substance / the mixture** For Laboratory Use**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

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

**Information department:**SDS author: [ChemicalRegulatory@promega.com](mailto:ChemicalRegulatory@promega.com)

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.



GHS08 Health hazard

Carc. 1A H350 May cause cancer.

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

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**Hazard pictograms**

GHS02 GHS08

**Signal word** *Danger***Hazard-determining components of labeling:***sulphuric acid***Hazard statements***Highly flammable liquid and vapor.**May cause cancer.***Precautionary statements***Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**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.**IF exposed or concerned: Get medical advice/attention.**In case of fire: Use for extinction: CO2, powder or water spray.**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 = 0**Fire = 3**Reactivity = 0***HMIS-ratings (scale 0 - 4)***Health = \*0**Fire = 3**Reactivity = 0***OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** *Flammable***Primary route(s) of entry:** *Inhalation***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.*

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## 3 Composition/information on ingredients

### Chemical characterization: Mixtures

#### Description:

The product is made up of a mixture of 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%
56-81-5	glycerol	10-15%
7664-93-9	sulphuric acid	<1%

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

## 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**

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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**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** 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:**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

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

**64-17-5 ethanol**PEL Long-term value: 1900 mg/m<sup>3</sup>, 1000 ppmREL Long-term value: 1900 mg/m<sup>3</sup>, 1000 ppmTLV Short-term value: 1880 mg/m<sup>3</sup>, 1000 ppm**56-81-5 glycerol**PEL Long-term value: 15\* 5\*\* mg/m<sup>3</sup>

mist; \*total dust \*\*respirable fraction

TLV TLV withdrawn-insufficient data human occup. exp.

**Additional information:** The lists that were valid during the creation were used as basis.**Exposure controls****Personal protective equipment:****General protective and hygienic measures:** Wash hands before breaks and at the end of work.**Breathing equipment:** Not required.**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.

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**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:**

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

**Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.
<b>Flash point:</b>	< 23 °C (< 73.4 °F)

**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.  
Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

**Explosion limits:**

<b>Lower:</b>	3.5 Vol %
<b>Upper:</b>	15 Vol %
<b>Vapor pressure at 20 °C (68 °F):</b>	59 hPa (44.3 mm Hg)

**Density at 20 °C (68 °F):** 0.853 g/cm<sup>3</sup> (7.11829 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:** Not determined.**Kinematic:** Not determined.**Organic solvents:** 99.8 %**VOC content:** 84.80 %**Solids content:** 0.1 %**Other information** No further relevant information available.

## 10 Stability and reactivity

**Reactivity** No further relevant information available.

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**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:**

Carbon monoxide and carbon dioxide

Sulfur oxides (SOx)

## 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
7664-93-9	sulphuric acid	I

**NTP (National Toxicology Program)**

7664-93-9	sulphuric acid	K
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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.

**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.

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Other adverse effects No further relevant information available.

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## 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

### 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

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**Packing group****DOT, ADR, IMDG, IATA** II**Environmental hazards:****Marine pollutant:** No**Special precautions for user**

Warning: Flammable liquids

**Hazard identification number (Kemler code):** 33**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: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

**IMDG****Limited quantities (LQ)**

1L

**Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

**UN "Model Regulation":**

UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II

## 15 Regulatory information

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

Sara

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

7664-93-9 sulphuric acid

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

7664-93-9 sulphuric acid

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

64-17-5 ethanol

56-81-5 glycerol

7664-93-9 sulphuric acid

**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.

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**Chemicals known to cause developmental toxicity:**

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

7664-93-9 sulphuric acid

A2

**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:**

sulphuric acid

**Hazard statements**

Highly flammable liquid and vapor.

May cause cancer.

**Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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.

If exposed or concerned: Get medical advice/attention.

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

Store in a well-ventilated place. Keep cool.

Store locked up.

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

**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

**Date of preparation / last revision** 10/13/2020 / 1.0**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)

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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 &amp; Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

Carc. 1A: Carcinogenicity – Category 1A

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

US

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

Printing date 10/13/2020

Reviewed on 10/12/2020

**1 Identification****Product identifier****Trade name:** Stop & Glo® Buffer**Article number:** E641**Application of the substance / the mixture** For Laboratory Use**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

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

**Information department:**SDS author: [ChemicalRegulatory@promega.com](mailto:ChemicalRegulatory@promega.com)

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

Carc. 2 H351 Suspected of causing cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

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

GHS08

**Signal word** Warning**Hazard statements**

Suspected of causing cancer.

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Trade name: Stop &amp; Glo® Buffer

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Suspected of damaging fertility or the unborn child.

**Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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

IF exposed or concerned: 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 = 0

Fire = 0

Reactivity = 0

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

Health = 0

Fire = 0

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** Suspected Carcinogen**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 non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

**Dangerous components:**

62-56-6	thiourea	<1%
67-56-1	methanol	<1%

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

## 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.

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Trade name: Stop &amp; Glo® Buffer

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## 5 Fire-fighting measures

### Extinguishing media

#### Suitable extinguishing agents:

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

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

None known

No further relevant information available.

**Advice for firefighters** No special advice

## 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).

Dispose contaminated material as waste according to Section 13.

### Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 13 for disposal information.

## 7 Handling and storage

### Handling:

**Precautions for safe handling** Keep receptacles tightly sealed.

**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.

#### 67-56-1 methanol

PEL Long-term value: 260 mg/m<sup>3</sup>, 200 ppm

REL Short-term value: 325 mg/m<sup>3</sup>, 250 ppm

Long-term value: 260 mg/m<sup>3</sup>, 200 ppm

Skin

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Trade name: **Stop & Glo® Buffer**

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TLV	Short-term value: 328 mg/m <sup>3</sup> , 250 ppm Long-term value: 262 mg/m <sup>3</sup> , 200 ppm Skin; BEI
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**Ingredients with biological limit values:****67-56-1 methanol**

BEI	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
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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:**

Ensure that washing facilities are available at the work place.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not eat or drink while working.

**Breathing equipment:** Not required.**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:**

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

<b>pH-value at 20 °C (68 °F):</b>	5
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**Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	100 °C (212 °F)
<b>Flash point:</b>	Not applicable.

<b>Flammability (solid, gaseous):</b>	Not applicable.
<b>Decomposition temperature:</b>	Not determined.

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<b>Auto igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapor pressure:</b>	Not determined.
<b>Density at 20 °C (68 °F):</b>	1.036 g/cm <sup>3</sup> (8.64542 lbs/gal)
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Organic solvents:</b>	0.4 %
<b>Water:</b>	92.6 %
<b>VOC content:</b>	0.40 %
<b>Solids content:</b>	7.0 %
<b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

**Reactivity** No further relevant information available.

**Chemical stability**

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

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

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

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

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

## 11 Toxicological information

**Information on toxicological effects**

**Acute toxicity:**

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

**Primary irritant effect:**

**on the skin:** No data available.

**on the eye:** No data available.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:**

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

**Carcinogenic categories**

IARC (International Agency for Research on Cancer)		
62-56-6	thiourea	3
7647-01-0	hydrogen chloride	3

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**NTP (National Toxicology Program)**

62-56-6 thiourea

R

**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.**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

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

Not applicable

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

Trade name: Stop &amp; Glo® Buffer

(Contd. of page 6)

<b>Packing group</b>	None
<b>DOT, ADR, IMDG, IATA</b>	Not applicable

<b>Environmental hazards:</b>	
<b>Marine pollutant:</b>	No

<b>Special precautions for user</b>	Not applicable.
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<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
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<b>UN "Model Regulation":</b>	Not applicable
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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):**

62-56-6	thiourea
---------	----------

67-56-1	methanol
---------	----------

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

62-56-6	thiourea
---------	----------

67-56-1	methanol
---------	----------

**Hazardous Air Pollutants**

67-56-1	methanol
---------	----------

7647-01-0	hydrogen chloride
-----------	-------------------

**Proposition 65**

**Chemicals known to cause cancer:**

62-56-6	thiourea
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**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:**

67-56-1	methanol
---------	----------

**Cancerogenity categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

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

7647-01-0	hydrogen chloride	A4
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**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

(Contd. on page 8)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

**Trade name: Stop & Glo® Buffer**

(Contd. of page 7)

**Hazard statements***Suspected of causing cancer.**Suspected of damaging fertility or the unborn child.***Precautionary statements***Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**Wear protective gloves/protective clothing/eye protection/face protection.**IF exposed or concerned: Get medical advice/attention.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***Additional classification according to Decree on Hazardous Materials:** *Can cause cancer.***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***Date of preparation / last revision** *10/13/2020 / 1.0***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 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**BEI: Biological Exposure Limit**Carc. 2: Carcinogenicity – Category 2**Repr. 2: Reproductive toxicity – Category 2***\* Data compared to the previous version altered.**

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

Printing date 10/13/2020

Reviewed on 10/12/2020

**1 Identification****Product identifier****Trade name:** Luciferase Assay Substrate**Article number:** E151A**Application of the substance / the mixture** For Laboratory Use**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

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

**Information department:**SDS author: [ChemicalRegulatory@promega.com](mailto:ChemicalRegulatory@promega.com)

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 = 1

Fire = 0

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** Not applicable**Target Organ(s):** Not applicable or unknown

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

**Trade name:** Luciferase Assay Substrate

(Contd. of page 1)

**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 non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

**Dangerous components:** Not applicable**Additional information:** For the wording of the listed risk phrases refer to section 15.

## 4 First-aid measures

**Description of first aid measures****General information:** No special measures required.**After inhalation:** If the patient feels unwell or is concerned, obtain medical advice.**After skin contact:** Generally the product does not irritate the skin.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If the patient feels unwell or is concerned, obtain medical advice.**Information for doctor:****Most important symptoms and effects, both acute and delayed**

None

No further relevant information available.

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

No further relevant information available.

## 5 Fire-fighting measures

**Extinguishing media****Suitable extinguishing agents:**CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture**

None known

No further relevant information available.

**Advice for firefighters** No special advice**Protective equipment:** No special measures required.

## 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Not required.**Environmental precautions:** Do not allow to enter sewers/ surface or ground water.**Methods and material for containment and cleaning up:** Pick up mechanically.**Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling.

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

Trade name: Luciferase Assay Substrate

(Contd. of page 2)

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.

**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:

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

**pH-value at 20 °C (68 °F):** 0

#### Change in condition

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.
<b>Flash point:</b>	Not applicable.

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

(Contd. on page 4)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

Trade name: Luciferase Assay Substrate

(Contd. of page 3)

<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapor pressure:</b>	Not applicable.
<b>Density:</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Soluble.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
<b>Water:</b>	0.0 %
<b>VOC content:</b>	0.00 %
<b>Solids content:</b>	100.0 %
<b>Other information</b>	No further relevant information available.

\*

## 10 Stability and reactivity

**Reactivity** No further relevant information available.

**Chemical stability**

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

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

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

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

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

\*

## 11 Toxicological information

### Information on toxicological effects

#### Acute toxicity:

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

#### Primary irritant effect:

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

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

**Sensitization:** 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 10/13/2020

Reviewed on 10/12/2020

Trade name: Luciferase Assay Substrate

(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 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

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

Not applicable

(Contd. on page 6)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

Trade name: Luciferase Assay Substrate

(Contd. of page 5)

<b>Packing group</b>	None
<b>DOT, ADR, IMDG, IATA</b>	Not applicable

<b>Environmental hazards:</b>	
<b>Marine pollutant:</b>	No

<b>Special precautions for user</b>	Not applicable.
-------------------------------------	-----------------

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

<b>UN "Model Regulation":</b>	Not applicable
-------------------------------	----------------

### 15 Regulatory information

**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.

**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

**National regulations:** No information available

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

(Contd. on page 7)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

**Trade name: Luciferase Assay Substrate**

(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

**Date of preparation / last revision** 10/13/2020 / 1.0

**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 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.**

US

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

Printing date 10/13/2020

Reviewed on 10/12/2020

**1 Identification****Product identifier****Trade name:** Passive Lysis Buffer, 5X**Article number:** E194**Application of the substance / the mixture** For Laboratory Use**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

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

**Information department:**SDS author: [ChemicalRegulatory@promega.com](mailto:ChemicalRegulatory@promega.com)

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

Repr. 1A H360 May damage fertility or the unborn child.

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

GHS08

**Signal word** Danger**Hazard-determining components of labeling:***N,N*-Bis(3-D-gluconamidopropyl)cholamide

(Contd. on page 2)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

Trade name: Passive Lysis Buffer, 5X

(Contd. of page 1)

**Hazard statements**

May damage fertility or the unborn child.

**Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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

IF exposed or concerned: 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 = 1

Fire = 1

Reactivity = 0

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

Health = 1

Fire = 1

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** Reproductive Hazard**Target Organ(s):** 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 non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

**Dangerous components:**

56-81-5	glycerol	25-50%
75621-03-3	3-[(3-Choalamidopropyl)dimethylammonio]propanesulfonic acid	1-5%
86303-22-2	N,N-Bis(3-D-gluconamidopropyl)cholamide	<1%

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

## 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.

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

Trade name: Passive Lysis Buffer, 5X

(Contd. of page 2)

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

No further relevant information available.

**5 Fire-fighting measures****Extinguishing media****Suitable extinguishing agents:**CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture**

None known

No further relevant information available.

**Advice for firefighters** 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 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).

Dispose contaminated material as waste according to Section 13.

Ensure adequate ventilation.

**Reference to other sections**

See Section 7 for information on safe handling.

See Section 13 for disposal information.

**7 Handling and storage****Handling:****Precautions for safe handling**

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

**Information about protection against explosions and fires:** No special measures required.**Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:** 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.

(Contd. on page 4)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

Trade name: *Passive Lysis Buffer, 5X*

(Contd. of page 3)

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

**56-81-5 glycerol**

PEL Long-term value: 15\* 5\*\* mg/m<sup>3</sup>  
mist; \*total dust \*\*respirable fraction

TLV TLV withdrawn-insufficient data human occup. exp.

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

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

Ensure that washing facilities are available at the work place.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Pregnant women should strictly avoid inhalation or skin contact.

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:**

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

<b>pH-value at 20 °C (68 °F):</b>	8
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**Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	100 °C (212 °F)
<b>Flash point:</b>	> 100 °C (> 212 °F)

<b>Flammability (solid, gaseous):</b>	Not applicable.
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<b>Ignition temperature:</b>	400 °C (752 °F)
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<b>Decomposition temperature:</b>	Not determined.
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(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

Trade name: Passive Lysis Buffer, 5X

(Contd. of page 4)

<b>Auto igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	0.9 Vol %
<b>Upper:</b>	0.0 Vol %
<b>Vapor pressure at 20 °C (68 °F):</b>	0.1 hPa
<b>Density at 20 °C (68 °F):</b>	1.13 g/cm <sup>3</sup> (9.42985 lbs/gal)
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Organic solvents:</b>	50.0 %
<b>Water:</b>	43.9 %
<b>VOC content:</b>	0.00 %
<b>Solids content:</b>	6.8 %
<b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

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

## 11 Toxicological information

**Information on toxicological effects**  
**Acute toxicity:**  
**LD/LC50 values that are relevant for classification:** No data available  
**Primary irritant effect:**  
**on the skin:** No data available.  
**on the eye:** No data available.  
**Sensitization:** No sensitizing effects known.  
**Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
**Carcinogenic categories**  
**IARC (International Agency for Research on Cancer)**  
None of the ingredients are listed.

(Contd. on page 6)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

Trade name: Passive Lysis Buffer, 5X

(Contd. of page 5)

**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.**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

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

Not applicable

(Contd. on page 7)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

Trade name: Passive Lysis Buffer, 5X

(Contd. of page 6)

<b>Packing group</b>	None
<b>DOT, ADR, IMDG, IATA</b>	Not applicable

<b>Environmental hazards:</b>	
<b>Marine pollutant:</b>	No

<b>Special precautions for user</b>	Not applicable.
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<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
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<b>UN "Model Regulation":</b>	Not applicable
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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

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

**Signal word** Danger

**Hazard-determining components of labeling:**

N,N-Bis(3-D-gluconamidopropyl)cholamide

**Hazard statements**

May damage fertility or the unborn child.

(Contd. on page 8)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

**Trade name: Passive Lysis Buffer, 5X**

(Contd. of page 7)

**Precautionary statements***Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**Wear protective gloves/protective clothing/eye protection/face protection.**IF exposed or concerned: Get medical advice/attention.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***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***Date of preparation / last revision** *10/13/2020 / 1.0***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 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**Repr. 1A: Reproductive toxicity – Category 1A***\* Data compared to the previous version altered.**

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

Printing date 10/13/2020

Reviewed on 10/12/2020

**1 Identification****Product identifier****Trade name:** Luciferase Assay Buffer II**Article number:** E195**Application of the substance / the mixture** For Laboratory Use**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

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

**Information department:**SDS author: [ChemicalRegulatory@promega.com](mailto:ChemicalRegulatory@promega.com)

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

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

Trade name: Luciferase Assay Buffer II

(Contd. of page 1)

**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 non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

**Dangerous components:** Not applicable**Additional information:** For the wording of the listed risk phrases refer to section 15.

## 4 First-aid measures

**Description of first aid measures****General information:** No special measures required.**After inhalation:** If the patient feels unwell or is concerned, obtain medical advice.**After skin contact:** Generally the product does not irritate the skin.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If the patient feels unwell or is concerned, obtain medical advice.**Information for doctor:****Most important symptoms and effects, both acute and delayed**

None

No further relevant information available.

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

No further relevant information available.

## 5 Fire-fighting measures

**Extinguishing media****Suitable extinguishing agents:**CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture**

None known

No further relevant information available.

**Advice for firefighters** No special advice**Protective equipment:** No special measures required.

## 6 Accidental release measures

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

Dilute with plenty of water.

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

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

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

**Reference to other sections**

No dangerous substances are released.

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# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

Trade name: Luciferase Assay Buffer II

(Contd. of page 2)

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.

**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:

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

**pH-value at 20 °C (68 °F):** 8

#### Change in condition

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

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

Trade name: Luciferase Assay Buffer II

(Contd. of page 3)

<b>Flammability (solid, gaseous):</b>	Not applicable.
<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapor pressure:</b>	Not determined.
<b>Density at 20 °C (68 °F):</b>	1 g/cm <sup>3</sup> (8.345 lbs/gal)
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Water:</b>	97.8 %
<b>VOC content:</b>	0.00 %
<b>Solids content:</b>	3.0 %
<b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

**Reactivity** No further relevant information available.

**Chemical stability**

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

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

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

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

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

## 11 Toxicological information

**Information on toxicological effects**

**Acute toxicity:**

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

**Primary irritant effect:**

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

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

**Sensitization:** 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 10/13/2020

Reviewed on 10/12/2020

Trade name: Luciferase Assay Buffer II

(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)



# Safety Data Sheet

## acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

Trade name: Luciferase Assay Buffer II

(Contd. of page 5)

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

### 15 Regulatory information

**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.

**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

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/13/2020

Reviewed on 10/12/2020

**Trade name:** *Luciferase Assay Buffer II*

(Contd. of page 6)

**Hazard statements** *Not applicable*

**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

**Date of preparation / last revision** 10/13/2020 / 1.0

**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 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.**