

Product code	Description
<b>E1910</b>	<b>Dual-Luciferase® Reporter Assay System</b>

## Components:

E640	Stop & Glo® Substrate
E641	Stop & Glo® Buffer
E151	Luciferase Assay Substrate
E194	Passive Lysis Buffer, 5X
E195	Luciferase Assay Buffer II



**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 22.09.2023

Version number 9.0

Revision: 22.09.2023

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name:** Stop & Glo® Substrate**Article number:** E640**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the preparation:** Laboratory chemicals**1.3 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

SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Further information obtainable from:**

Promega UK

2 Benham Road

Southampton Science Park

Chilworth Southampton

Hampshire SO16 7QJ

Tel: (44) 23 8076 0225

Fax: 0800 181 037

Freephone: 0800 378994

E-mail Address: [ukcustserve@promega.com](mailto:ukcustserve@promega.com)**1.4 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). Within UK +(44)-870-8200418.

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

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

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

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**Hazard pictograms**

GHS02

**Signal word** Danger**Hazard statements**

H225 Highly flammable liquid and vapour.

**Precautionary statements**

P241 Use explosion-proof [electrical/ventilating/lighting] equipment.

P243 Take action to prevent static discharges.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P370+P378 In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.

P403+P235 Store in a well-ventilated place. Keep cool.


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

## SECTION 3: Composition/information on ingredients

**3.2 Chemical characterisation: Mixtures****Description:**

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances.

**Components:**

CAS: 64-17-5 EINECS: 200-578-6 Reg.nr.: 01-2119457610-43-0490	ethanol	 Flam. Liq. 2, H225	75-100%
CAS: 56-81-5 EINECS: 200-289-5	glycerol	substance with a Community workplace exposure limit	10-15%

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

## SECTION 4: First aid measures

**4.1 Description of first aid measures****General information:** Immediately remove any clothing soiled by the product.**After inhalation:** If the patient feels unwell or is concerned, obtain medical advice.**After skin contact:** Generally the product does not irritate the skin.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If the patient feels unwell or is concerned, obtain medical advice.**4.2 Most important symptoms and effects, both acute and delayed**

Headache

Dizziness

Nausea

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

No further relevant information available.

**SECTION 5: Firefighting measures****5.1 Extinguishing media***Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.***5.2 Special hazards arising from the substance or mixture**

None known

No further relevant information available.

**5.3 Advice for firefighters** In the case of fire, wear respiratory protective equipment and chemical protective suit.**SECTION 6: Accidental release measures****6.1 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.

**6.2 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.

**6.3 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.

**6.4 Reference to other sections**

See Section 7 for information on safe handling

See Section 13 for disposal information.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling** Use only in well ventilated areas.**Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

**7.2 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.

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

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### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

**Additional information about design of technical facilities:** No further data; see section 7.

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

##### 64-17-5 ethanol

WEL Long-term value: 1920 mg/m<sup>3</sup>, 1000 ppm

##### 56-81-5 glycerol

WEL Long-term value: 10 mg/m<sup>3</sup>

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

#### 8.2 Exposure controls

##### Personal protective equipment

##### General protective and hygienic measures

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

**Respiratory protection:** Not required.

##### Protection of hands:

Use gloves, classified under Standard EN374, which are chemically resistant to this material in the event of contact. When prolonged or repeated contact may occur, EN 374 recommends gloves with a break time of more than 240 minutes. When only a short contact is expected, gloves with a head length of more than 60 minutes are considered sufficient.

Despite the simple approach in Section 8.2.2.2 (b) (i) of UK REACH, the thickness of the gloves alone is not a good indicator of the level of protection provided by gloves against a chemical substance as the level of protection provided depends also very much on the specific composition of the material from which the glove is made.

##### Material of gloves:

Gloves impermeable to the specific chemical substance.

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

The selection of suitable gloves depends not only on the material, but also on additional quality marks and varies from manufacturer to manufacturer. Because the product is a preparation for some substances, the resistance of the glove material cannot be calculated in advance so it must be checked before application.

##### Eye protection:

Safety glasses

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

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

##### General Information

##### Appearance:

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Alcohol-like
<b>Odour threshold:</b>	Not determined.

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**Change in condition****Melting point/freezing point:** undetermined**Initial boiling point and boiling range:** 78 °C**Flash point:** 13 °C**Flammability (solid, gaseous)** Highly flammable.**Auto-ignition temperature:** 400 °C**Decomposition temperature:** Not determined.**Ignition temperature:** Product is not selfigniting.

**Explosive properties:** Product does not present an explosion hazard.  
Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

**Explosion limits:****Lower:** 3.5 Vol %**Upper:** 15 Vol %**Vapour pressure at 20 °C:** 59 hPa**Vapour pressure at 50 °C:** 280 hPa**Density at 20 °C:** 0.853 g/cm<sup>3</sup>**Relative density** Not determined.**Vapour density** Not determined.**Evaporation rate** Not determined.**Solubility in / Miscibility with****Water:** Fully miscible**Partition coefficient: n-octanol/water:** Not determined.**Viscosity:****dynamic:** Not determined.**kinematic:** Not determined.**Solvent separation test****Organic solvents:** 99.9 %**Solids content:** 0.1 %**9.2 Other information** No further relevant information available.\* **SECTION 10: Stability and reactivity****10.1 Reactivity** No further relevant information available.**10.2 Chemical stability****Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.**10.3 Possibility of hazardous reactions** No dangerous reactions known**10.4 Conditions to avoid** No further relevant information available.**10.5 Incompatible materials:** Oxidizing agents**10.6 Hazardous decomposition products:**

Carbon monoxide and carbon dioxide

Sulphur oxides (SO<sub>x</sub>)

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**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity** Based on available data, the classification criteria are not met.

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

**Primary irritant effect:**

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Serious eye damage/irritation** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

**Additional toxicological information:**

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT-single exposure** Based on available data, the classification criteria are not met.

**STOT-repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information**

**12.1 Toxicity**

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

**12.2 Persistence and degradability:**

Not available

No further relevant information available.

**12.3 Bioaccumulative potential**

Not known

No further relevant information available.

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

**Ecotoxicological effects:**

**Remark:** Not available

**12.5 Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

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

**SECTION 13: Disposal considerations**

**13.1 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 packaging:**

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

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

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### SECTION 14: Transport information

**14.1 UN-Number**  
ADR, IMDG, IATA

UN1170

**14.2 UN proper shipping name**  
ADR  
IMDG  
IATA

1170 ETHANOL (ETHYL ALCOHOL) mixture  
ETHANOL (ETHYL ALCOHOL) mixture  
ETHANOL mixture

**14.3 Transport hazard class(es)**  
ADR



**Class** 3 (F1) Flammable liquids.  
**Label** 3

IMDG, IATA



**Class** 3 Flammable liquids.  
**Label** 3

**14.4 Packing group**  
ADR, IMDG, IATA

II

**14.5 Environmental hazards:**  
**Marine pollutant:**

No

**14.6 Special precautions for user**  
**Hazard identification number (Kemler code):**  
**EMS Number:**  
**Stowage Category**

Warning: Flammable liquids.  
33  
F-E,S-D  
A

**14.7 Transport in bulk according to Annex II of**  
**Marpol and the IBC Code**

Not applicable.

**Transport/Additional information:**

ADR

**Limited quantities (LQ)**  
**Excepted quantities (EQ)**

1L  
Code: E2  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml

**Transport category**  
**Tunnel restriction code**

2  
D/E

IMDG

**Limited quantities (LQ)**  
**Excepted quantities (EQ)**

1L  
Code: E2  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml

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UN "Model Regulation":

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

### SECTION 15: Regulatory information

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

**Directive 2012/18/EU**

**Named dangerous substances - ANNEX I** None of the ingredients is listed.

**Seveso category P5c** FLAMMABLE LIQUIDS

**Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

**Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

**Classification according to VbF: B**

Class	Share in %
NK	99.9

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

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

### SECTION 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.

#### Relevant phrases

H225 Highly flammable liquid and vapour.

#### Department issuing SDS:

Promega Corporation

Chemical Regulatory Affairs

2800 Woods Hollow Road

Madison, WI 53711

U.S.A.

#### 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 Organisation

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

**IMDG:** International Maritime Code for Dangerous Goods

**IATA:** International Air Transport Association

**GHS:** Globally Harmonised System of Classification and Labelling of Chemicals

**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)

**VbF:** Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)

**LC50:** Lethal concentration, 50 percent

**LD50:** Lethal dose, 50 percent

**PBT:** Persistent, Bioaccumulative and Toxic

**vPvB:** very Persistent and very Bioaccumulative

**Flam. Liq. 2:** Flammable liquids – Category 2

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name:** Stop & Glo® Buffer**Article number:** E641**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the preparation:** Laboratory chemicals**1.3 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

SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Further information obtainable from:**

Promega UK

2 Benham Road

Southampton Science Park

Chilworth Southampton

Hampshire SO16 7QJ

Tel: (44) 23 8076 0225

Fax: 0800 181 037

Freephone: 0800 378994

E-mail Address: [ukcustserve@promega.com](mailto:ukcustserve@promega.com)**1.4 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). Within UK +(44)-870-8200418.

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

This product contains a CRM (carcinogen, reproductive hazard or mutagen) at a level below 1% and greater than 0.1%. Although CRMs at this level are below notification under the GB CLP, our labels reflect the pictogram and hazard statement to communicate this hazard to our customers. Please use caution when working with this material.

The product is not classified, according to the GB CLP regulation.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008** Not applicable**Hazard pictograms** Not applicable**Signal word** Not applicable**Hazard statements** Not applicable

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**Additional information:**

Safety data sheet available on request.

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

\* **SECTION 3: Composition/information on ingredients**

**3.2 Chemical characterisation: Mixtures****Description:**

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances.

**Components:** Not applicable**Additional information:** For the wording of the listed hazard phrases refer to section 15

\* **SECTION 4: First aid measures**

**4.1 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.**4.2 Most important symptoms and effects, both acute and delayed**

Dizziness

None

No further relevant information available.

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

No further relevant information available.

\* **SECTION 5: Firefighting measures**

**5.1 Extinguishing media****Suitable extinguishing agents:**CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**5.2 Special hazards arising from the substance or mixture**

None known

No further relevant information available.

**5.3 Advice for firefighters** No special advice.

\* **SECTION 6: Accidental release measures**

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

Remove persons from danger area.

Wear protective clothing.

**6.2 Environmental precautions:**

Dilute with plenty of water.

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

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

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

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**6.4 Reference to other sections**

No dangerous substances are released.  
See Section 7 for information on safe handling  
See Section 13 for disposal information.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling** No special precautions are necessary if used correctly.  
**Information about fire - and explosion protection:** The product is not flammable

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

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

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

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

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

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters**

**Additional information about design of technical facilities:** No further data; see section 7.

**Ingredients 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 valid during the making were used as basis.

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

Ensure that washing facilities are available at the work place.

Wash hands before breaks and at the end of work.

**Respiratory protection:** Not required.

**Protection of hands:**

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

Use gloves, classified under Standard EN374, which are chemically resistant to this material in the event of contact. When prolonged or repeated contact may occur, EN 374 recommends gloves with a break time of more than 240 minutes. When only a short contact is expected, gloves with a head length of more than 60 minutes are considered sufficient.

Despite the simple approach in Section 8.2.2.2 (b) (i) of UK REACH, the thickness of the gloves alone is not a good indicator of the level of protection provided by gloves against a chemical substance as the level of protection provided depends also very much on the specific composition of the material from which the glove is made.

**Material of gloves:**

Gloves impermeable to the specific chemical substance.

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

The selection of suitable gloves depends not only on the material, but also on additional quality marks and varies from manufacturer to manufacturer. Because the product is a preparation for some substances, the resistance of the glove material cannot be calculated in advance so it must be checked before application.

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

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

##### General Information

##### Appearance:

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Not determined
<b>Odour threshold:</b>	Not determined.

<b>pH-value at 20 °C:</b>	5
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##### Change in condition

<b>Melting point/freezing point:</b>	undetermined
<b>Initial boiling point and boiling range:</b>	100 °C
<b>Flash point:</b>	Not applicable

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

<b>Ignition temperature:</b>	Product is not selfigniting.
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<b>Explosive properties:</b>	Product does not present an explosion hazard.
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<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapour pressure:</b>	Not determined.

<b>Density at 20 °C:</b>	1.036 g/cm <sup>3</sup>
<b>Relative density</b>	Not determined.
<b>Vapour 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.

##### Solvent separation test

<b>Organic solvents:</b>	0.4 %
<b>Water:</b>	92.6 %

<b>Solids content:</b>	7.0 %
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<b>9.2 Other information</b>	No further relevant information available.
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### SECTION 10: Stability and reactivity

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

#### 10.2 Chemical stability

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

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

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**10.4 Conditions to avoid** No further relevant information available.**10.5 Incompatible materials:** No further relevant information available.**10.6 Hazardous decomposition products:** No dangerous decomposition products known

## SECTION 11: Toxicological information

**11.1 Information on toxicological effects****Acute toxicity** Based on available data, the classification criteria are not met.**LD/LC50 values relevant for classification:**

7447-40-7 potassium chloride

Oral	LD50	2,600 mg/kg (Rat)
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**Primary irritant effect:****Skin corrosion/irritation** Based on available data, the classification criteria are not met.**Serious eye damage/irritation** Based on available data, the classification criteria are not met.**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**Additional toxicological information:****CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****Germ cell mutagenicity** Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity** Based on available data, the classification criteria are not met.**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure** Based on available data, the classification criteria are not met.**Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

**12.1 Toxicity****Aquatic toxicity:** Not harmful to the aquatic environment**12.2 Persistence and degradability:**

Not available

No further relevant information available.

**12.3 Bioaccumulative potential**

Not known

No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.**Ecotoxicological effects:****Remark:** Not available**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

**13.1 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.

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**Uncleaned packaging:****Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agents:** Water, if necessary together with cleansing agents.**SECTION 14: Transport information**

**14.1 UN-Number** Not hazardous for transportation  
**ADR, ADN, IMDG, IATA** Not applicable

**14.2 UN proper shipping name** None  
**ADR, ADN, IMDG, IATA** Not applicable

**14.3 Transport hazard class(es)** None  
**ADR, IMDG, IATA**

**Class** Not applicable

**ADN**  
**ADN/R Class:** Not applicable  
Not regulated

**14.4 Packing group** None  
**ADR, IMDG, IATA** Not applicable

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

**14.6 Special precautions for user** Not applicable.

**14.7 Transport in bulk according to Annex II of  
Marpol and the IBC Code** Not applicable.

**UN "Model Regulation":** Not applicable

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed.

Classification according to VbF: Not applicable

Class	Share in %
Wasser	92.6
I	1.2

**Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**SECTION 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 Affairs

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**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 22.09.2023

Version number 7.0

Revision: 22.09.2023

**Trade name: Stop & Glo® Buffer**

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2800 Woods Hollow Road

Madison, WI 53711

U.S.A.

**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 Organisation*

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

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*

*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)*

*VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

GB

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 22.09.2023

Version number 6.0

Revision: 22.09.2023

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name:** Luciferase Assay Substrate**Article number:** E151**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the preparation:** Laboratory chemicals**1.3 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

SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Further information obtainable from:**

Promega UK

2 Benham Road

Southampton Science Park

Chilworth Southampton

Hampshire SO16 7QJ

Tel: (44) 23 8076 0225

Fax: 0800 181 037

Freephone: 0800 378994

E-mail Address: [ukcustserve@promega.com](mailto:ukcustserve@promega.com)**1.4 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). Within UK +(44)-870-8200418.

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

The product is not classified, according to the GB CLP regulation.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008** Not applicable**Hazard pictograms** Not applicable**Signal word** Not applicable**Hazard statements** Not applicable**2.3 Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.

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**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 22.09.2023

Version number 6.0

Revision: 22.09.2023

**Trade name: Luciferase Assay Substrate**

**vPvB:** Not applicable.

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### **SECTION 3: Composition/information on ingredients**

#### **3.2 Chemical characterisation: Mixtures**

**Description:**

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances.

**Components:** Not applicable

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

### **SECTION 4: First aid measures**

#### **4.1 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.

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

Dizziness

None

No further relevant information available.

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

No further relevant information available.

### **SECTION 5: Firefighting measures**

#### **5.1 Extinguishing media**

**Suitable extinguishing agents:**

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

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

None known

No further relevant information available.

**5.3 Advice for firefighters** No special advice.

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

### **SECTION 6: Accidental release measures**

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

#### **6.2 Environmental precautions:**

Dilute with plenty of water.

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

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

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

#### **6.4 Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling

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Revision: 22.09.2023

Trade name: *Luciferase Assay Substrate*

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See Section 13 for disposal information.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling** No special measures required.  
**Information about fire - and explosion protection:** The product is not flammable

**7.2 Conditions for safe storage, including any incompatibilities**  
**Storage**  
**Requirements to be met by storerooms and receptacles:** No special requirements.  
**Information about storage in one common storage facility:** Not required.  
**Further information about storage conditions:** None.  
**7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**  
**Additional information about design of technical facilities:** No further data; see section 7.  
**Ingredients 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 valid during the making were used as basis.

**8.2 Exposure controls**  
**Personal protective equipment**  
**General protective and hygienic measures**  
The usual precautionary measures are to be adhered to when handling chemicals.  
**Respiratory protection:** Not required.  
**Protection of hands:**  
Select the glove material considering penetration time, rate of diffusion and degradation time.  
**Material of gloves:**  
Gloves impermeable to the specific chemical substance.  
Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.

The selection of suitable gloves depends not only on the material, but also on additional quality marks and varies from manufacturer to manufacturer. Because the product is a preparation for some substances, the resistance of the glove material cannot be calculated in advance so it must be checked before application.  
**Eye protection:** Not required.

**SECTION 9: Physical and chemical properties**

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

**General Information**

**Appearance:**

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Not determined

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**Safety data sheet**  
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Trade name: *Luciferase Assay Substrate*

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<b>Odour threshold:</b>	Not determined.
<b>pH-value at 20 °C:</b>	4.6
<b>Change in condition</b>	
<b>Melting point/freezing point:</b>	0 °C
<b>Initial boiling point and boiling range:</b>	100 °C
<b>Flash point:</b>	Not applicable
<b>Flammability (solid, gaseous)</b>	Not applicable.
<b>Decomposition temperature:</b>	Not determined.
<b>Ignition temperature:</b>	Product is not selfigniting.
<b>Explosive properties:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapour pressure:</b>	Not determined.
<b>Density at 20 °C:</b>	1 g/cm <sup>3</sup>
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible
<b>Partition coefficient: n-octanol/water:</b>	Not determined.
<b>Viscosity:</b>	
<b>dynamic at 20 °C:</b>	0.0952 mPas
<b>kinematic:</b>	Not determined.
<b>Solvent separation test</b>	
<b>Water:</b>	98.6 %
<b>Solids content:</b>	1.0 %
<b>9.2 Other information</b>	No further relevant information available.

## **SECTION 10: Stability and reactivity**

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

**10.2 Chemical stability**

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

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

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

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

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

## **SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity** Based on available data, the classification criteria are not met.

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

**Primary irritant effect:**

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Serious eye damage/irritation** Based on available data, the classification criteria are not met.

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Trade name: *Luciferase Assay Substrate*

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**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

**Additional toxicological information:****CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT-single exposure** Based on available data, the classification criteria are not met.

**STOT-repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

\* **SECTION 12: Ecological information**

**12.1 Toxicity**

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

**12.2 Persistence and degradability:**

Not available

No further relevant information available.

**12.3 Bioaccumulative potential**

Not known

No further relevant information available.

**12.4 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.

**12.5 Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

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

\* **SECTION 13: Disposal considerations**

**13.1 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 packaging:**

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

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

\* **SECTION 14: Transport information**

**14.1 UN-Number**

**ADR, ADN, IMDG, IATA**

Not hazardous for transportation

Not applicable

**14.2 UN proper shipping name**

**ADR, ADN, IMDG, IATA**

None

Not applicable

**14.3 Transport hazard class(es)**

None

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Trade name: *Luciferase Assay Substrate*

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**ADR, IMDG, IATA**

<b>Class</b>	<i>Not applicable</i>
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**ADN**

<b>ADN/R Class:</b>	<i>Not applicable</i> <i>Not regulated</i>
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<b>14.4 Packing group</b> <b>ADR, IMDG, IATA</b>	<i>None</i> <i>Not applicable</i>
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<b>14.5 Environmental hazards:</b> <b>Marine pollutant:</b>	<i>No</i>
--	-----------

<b>14.6 Special precautions for user</b>	<i>Not applicable.</i>
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<b>14.7 Transport in bulk according to Annex II of</b> <b>Marpol and the IBC Code</b>	<i>Not applicable.</i>
--	------------------------

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

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Directive 2012/18/EU**

**Named dangerous substances - ANNEX I** *None of the ingredients is listed.*

**Classification according to VbF:** *Not applicable*

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

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

**SECTION 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 Affairs*

*2800 Woods Hollow Road*

*Madison, WI 53711*

*U.S.A.*

**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 Organisation*

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

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*

*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)*

*VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 22.09.2023

Version number 10.0

Revision: 22.09.2023

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name:** Passive Lysis Buffer, 5X**Article number:** E194**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the preparation:** Laboratory chemicals**1.3 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

SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Further information obtainable from:**

Promega UK

2 Benham Road

Southampton Science Park

Chilworth Southampton

Hampshire SO16 7QJ

Tel: (44) 23 8076 0225

Fax: 0800 181 037

Freephone: 0800 378994

E-mail Address: [ukcustserve@promega.com](mailto:ukcustserve@promega.com)**1.4 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). Within UK +(44)-870-8200418.

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

health hazard

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

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

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GB



# Safety data sheet

according to 1907/2006/EC, Article 31

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Revision: 22.09.2023

Trade name: *Passive Lysis Buffer, 5X*

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**Hazard pictograms**

GHS08

**Signal word** *Danger***Hazard-determining components of labelling:***N,N-Bis(3-D-gluconamidopropyl)cholamide***Hazard statements***H360 May damage fertility or the unborn child.***Precautionary statements***P201 Obtain special instructions before use.**P202 Do not handle until all safety precautions have been read and understood.**P280 Wear protective gloves/protective clothing/eye protection/face protection.**P308+P313 IF exposed or concerned: Get medical advice/attention.**P405 Store locked up.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.***2.3 Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.\* **SECTION 3: Composition/information on ingredients****3.2 Chemical characterisation: Mixtures****Description:***The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances.***Components:**

CAS: 56-81-5 EINECS: 200-289-5	glycerol substance with a Community workplace exposure limit	25-50%
CAS: 75621-03-3	3-[(3-Choalamidopropyl)dimethylammonio]propanesulfonic acid ⚠ Skin Irrit. 2, H315; STOT SE 3, H335	1-5%
CAS: 86303-22-2 EINECS: 200-662-2	<i>N,N-Bis(3-D-gluconamidopropyl)cholamide</i> ⚠ Repr. 1A, H360; ⚠ Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	≥0.3-<1%

**Additional information:** *For the wording of the listed hazard phrases refer to section 15*\* **SECTION 4: First aid measures****4.1 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.***4.2 Most important symptoms and effects, both acute and delayed**

Dizziness

None

No further relevant information available.

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Trade name: *Passive Lysis Buffer, 5X*

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

No further relevant information available.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents:**CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**5.2 Special hazards arising from the substance or mixture**

None known

No further relevant information available.

**5.3 Advice for firefighters** No special advice.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Remove persons from danger area.

Wear protective clothing.

**6.2 Environmental precautions:**

Dilute with plenty of water.

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

**6.3 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.

**6.4 Reference to other sections**

See Section 7 for information on safe handling

See Section 13 for disposal information.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Keep receptacles tightly sealed.

Open and handle receptacle with care.

**Information about fire - and explosion protection:** Keep respiratory protective device available.**7.2 Conditions for safe storage, including any incompatibilities****Storage****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** Keep receptacle tightly sealed.**7.3 Specific end use(s)** No further relevant information available.**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Additional information about design of technical facilities:** No further data; see section 7.**Ingredients with limit values that require monitoring at the workplace:**

56-81-5 glycerol

WEL Long-term value: 10 mg/m<sup>3</sup>

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

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

**8.2 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.

Store protective clothing separately.

Pregnant women should strictly avoid inhalation or skin contact.

Do not eat or drink while working.

**Respiratory protection:** Not required.

**Protection of hands:**

Use gloves, classified under Standard EN374, which are chemically resistant to this material in the event of contact. When prolonged or repeated contact may occur, EN 374 recommends gloves with a break time of more than 240 minutes. When only a short contact is expected, gloves with a break time of more than 60 minutes are considered sufficient.

Despite the simple approach in Section 8.2.2.2 (b) (i) of UK REACH, the thickness of the gloves alone is not a good indicator of the level of protection provided by gloves against a chemical substance as the level of protection provided depends also very much on the specific composition of the material from which the glove is made.

**Material of gloves:**

Chemical: sodium hydroxide, CAS number 1310-73-2

Glove Material: Nitrile

Glove thickness: 0.56 mm

Approx. Breakthrough Time: > 480 min.

Gloves impermeable to the specific chemical substance.

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

The selection of suitable gloves depends not only on the material, but also on additional quality marks and varies from manufacturer to manufacturer. Because the product is a preparation for some substances, the resistance of the glove material cannot be calculated in advance so it must be checked before application.

**Eye protection:**

Safety glasses

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

**SECTION 9: Physical and chemical properties**

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

<b>Form:</b>	Fluid
<b>Colour:</b>	According to product specification
<b>Odour:</b>	Not determined
<b>Odour threshold:</b>	Not determined.

<b>pH-value at 20 °C:</b>	8
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Trade name: *Passive Lysis Buffer, 5X*

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**Change in condition****Melting point/freezing point:** undetermined**Initial boiling point and boiling range:** 100 °C**Flash point:** 160 °C**Flammability (solid, gaseous)** Not applicable.**Auto-ignition temperature:** 400 °C**Decomposition temperature:** Not determined.**Ignition temperature:** Product is not selfigniting.**Explosive properties:** Product does not present an explosion hazard.**Explosion limits:****Lower:** 0.9 Vol %**Upper:** 0.0 Vol %**Vapour pressure at 20 °C:** <0.1 hPa**Vapour pressure at 50 °C:** ~0 hPa**Density at 20 °C:** 1.13 g/cm<sup>3</sup>**Relative density** Not determined.**Vapour density** Not determined.**Evaporation rate** Not determined.**Solubility in / Miscibility with****Water:** Fully miscible**Partition coefficient: n-octanol/water:** Not determined.**Viscosity:****dynamic:** Not determined.**kinematic:** Not determined.**Solvent separation test****Organic solvents:** 50.0 %**Water:** 43.9 %**Solids content:** 6.1 %**9.2 Other information** No further relevant information available.**SECTION 10: Stability and reactivity****10.1 Reactivity** No further relevant information available.**10.2 Chemical stability****Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.**10.3 Possibility of hazardous reactions** No dangerous reactions known**10.4 Conditions to avoid** No further relevant information available.**10.5 Incompatible materials:** No further relevant information available.**10.6 Hazardous decomposition products:** No dangerous decomposition products known**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity** Based on available data, the classification criteria are not met.

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GB

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Trade name: *Passive Lysis Buffer, 5X*

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**LD/LC50 values relevant for classification:****56-81-5 glycerol**

Oral LD50 1,200 mg/kg (Rat)

**Primary irritant effect:****Skin corrosion/irritation** Based on available data, the classification criteria are not met.**Serious eye damage/irritation** Based on available data, the classification criteria are not met.**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**Additional toxicological information:****CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****Germ cell mutagenicity** Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity**

May damage fertility or the unborn child.

**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure** Based on available data, the classification criteria are not met.**Aspiration hazard** Based on available data, the classification criteria are not met.**SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:** Not harmful to the aquatic environment**12.2 Persistence and degradability:**

Not available

No further relevant information available.

**12.3 Bioaccumulative potential**

Not known

No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.**Ecotoxicological effects:****Remark:** Not available**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.**SECTION 13: Disposal considerations****13.1 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 packaging:****Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agents:** Water, if necessary together with cleansing agents.**SECTION 14: Transport information****14.1 UN-Number**

Not hazardous for transportation

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

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<b>ADR, ADN, IMDG, IATA</b>	Not applicable
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<b>14.2 UN proper shipping name</b>	None
<b>ADR, ADN, IMDG, IATA</b>	Not applicable

<b>14.3 Transport hazard class(es)</b>	None
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<b>ADR, IMDG, IATA</b>	
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<b>Class</b>	Not applicable
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<b>ADN</b>	
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<b>ADN/R Class:</b>	Not applicable Not regulated
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<b>14.4 Packing group</b>	None
<b>ADR, IMDG, IATA</b>	Not applicable

<b>14.5 Environmental hazards:</b>	
<b>Marine pollutant:</b>	No

<b>14.6 Special precautions for user</b>	Not applicable.
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<b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
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<b>UN "Model Regulation":</b>	Not applicable
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**SECTION 15: Regulatory information**

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

**Directive 2012/18/EU**

**Named dangerous substances - ANNEX I** None of the ingredients is listed.

**Classification according to VbF:** Not applicable

Class	Share in %
Wasser	43.9
NK	50.0

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

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

**SECTION 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.

**Relevant phrases**

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H360 May damage fertility or the unborn child.

**Department issuing SDS:**

Promega Corporation

Chemical Regulatory Affairs

2800 Woods Hollow Road

Madison, WI 53711

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**Safety data sheet**  
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Version number 10.0

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

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U.S.A.

**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 Organisation*

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

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*

*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)*

*VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*Acute Tox. 4: Acute toxicity – Category 4*

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

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

*Repr. 1A: Reproductive toxicity – Category 1A*

*STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name:** Luciferase Assay Buffer II**Article number:** E195**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the preparation:** Laboratory chemicals**1.3 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

SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Further information obtainable from:**

Promega UK

2 Benham Road

Southampton Science Park

Chilworth Southampton

Hampshire SO16 7QJ

Tel: (44) 23 8076 0225

Fax: 0800 181 037

Freephone: 0800 378994

E-mail Address: [ukcustserve@promega.com](mailto:ukcustserve@promega.com)**1.4 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). Within UK +(44)-870-8200418.

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

The product is not classified, according to the GB CLP regulation.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008** Not applicable**Hazard pictograms** Not applicable**Signal word** Not applicable**Hazard statements** Not applicable**2.3 Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.

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**Trade name: Luciferase Assay Buffer II**

**vPvB:** Not applicable.

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**SECTION 3: Composition/information on ingredients**

**3.2 Chemical characterisation: Mixtures**

**Description:**

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances.

**Components:** Not applicable

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

**SECTION 4: First aid measures**

**4.1 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.

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

Dizziness

None

No further relevant information available.

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

No further relevant information available.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

**Suitable extinguishing agents:**

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

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

None known

No further relevant information available.

**5.3 Advice for firefighters** No special advice.

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

**SECTION 6: Accidental release measures**

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

**6.2 Environmental precautions:**

Dilute with plenty of water.

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

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

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

**6.4 Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling

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Trade name: **Luciferase Assay Buffer II**

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See Section 13 for disposal information.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling** No special measures required.  
**Information about fire - and explosion protection:** The product is not flammable

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

**Storage**

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

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

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

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

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Additional information about design of technical facilities:** No further data; see section 7.

**Ingredients 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 valid during the making were used as basis.

**8.2 Exposure controls**

**Personal protective equipment**

**General protective and hygienic measures**

The usual precautionary measures are to be adhered to when handling chemicals.

**Respiratory protection:** Not required.

**Protection of hands:**

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

**Material of gloves:**

Gloves impermeable to the specific chemical substance.

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

The selection of suitable gloves depends not only on the material, but also on additional quality marks and varies from manufacturer to manufacturer. Because the product is a preparation for some substances, the resistance of the glove material cannot be calculated in advance so it must be checked before application.

**Eye protection:** Not required.

**SECTION 9: Physical and chemical properties**

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

**General Information**

**Appearance:**

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Not determined

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<b>Odour threshold:</b>	Not determined.
<b>pH-value at 20 °C:</b>	8
<b>Change in condition</b>	
<b>Melting point/freezing point:</b>	0 °C
<b>Initial boiling point and boiling range:</b>	100 °C
<b>Flash point:</b>	Not applicable
<b>Flammability (solid, gaseous)</b>	Not applicable.
<b>Decomposition temperature:</b>	Not determined.
<b>Ignition temperature:</b>	Product is not selfigniting.
<b>Explosive properties:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapour pressure:</b>	Not determined.
<b>Density at 20 °C:</b>	1 g/cm <sup>3</sup>
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible
<b>Partition coefficient: n-octanol/water:</b>	Not determined.
<b>Viscosity:</b>	
<b>dynamic at 20 °C:</b>	0.0952 mPas
<b>kinematic:</b>	Not determined.
<b>Solvent separation test</b>	
<b>Water:</b>	97.8 %
<b>Solids content:</b>	3.0 %
<b>9.2 Other information</b>	No further relevant information available.

\*

### **SECTION 10: Stability and reactivity**

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

**10.2 Chemical stability**

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

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

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

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

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

### **SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity** Based on available data, the classification criteria are not met.

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

**Primary irritant effect:**

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Serious eye damage/irritation** Based on available data, the classification criteria are not met.

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Version number 6.0

Revision: 22.09.2023

Trade name: **Luciferase Assay Buffer II**

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**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

**Additional toxicological information:**

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT-single exposure** Based on available data, the classification criteria are not met.

**STOT-repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

\* **SECTION 12: Ecological information**

**12.1 Toxicity**

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

**12.2 Persistence and degradability:**

Not available

No further relevant information available.

**12.3 Bioaccumulative potential**

Not known

No further relevant information available.

**12.4 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.

**12.5 Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

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

\* **SECTION 13: Disposal considerations**

**13.1 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 packaging:**

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

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

\* **SECTION 14: Transport information**

**14.1 UN-Number**

Not hazardous for transportation

**ADR, ADN, IMDG, IATA**

Not applicable

**14.2 UN proper shipping name**

None

**ADR, ADN, IMDG, IATA**

Not applicable

**14.3 Transport hazard class(es)**

None

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**Safety data sheet**  
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Version number 6.0

Revision: 22.09.2023

Trade name: **Luciferase Assay Buffer II**

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**ADR, IMDG, IATA**

<b>Class</b>	Not applicable
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**ADN**

<b>ADN/R Class:</b>	Not applicable Not regulated
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<b>14.4 Packing group ADR, IMDG, IATA</b>	None Not applicable
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<b>14.5 Environmental hazards: Marine pollutant:</b>	No
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<b>14.6 Special precautions for user</b>	Not applicable.
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<b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
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<b>UN "Model Regulation":</b>	Not applicable
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**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Directive 2012/18/EU**

**Named dangerous substances - ANNEX I** None of the ingredients is listed.

**Classification according to VbF:** Not applicable

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

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

**SECTION 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 Affairs  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.

**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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**LC50:** Lethal concentration, 50 percent

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**PBT:** Persistent, Bioaccumulative and Toxic

**vPvB:** very Persistent and very Bioaccumulative