Kit Components

Product code	Description
V8321	**P450-Glo™ CYP2B6 Assay**

Components:

V833	Luciferin-2B6, 3mM
V752	D-Cysteine Solution, 2M
V865	Reconstitution Buffer
V859A	Luciferin Detection Reagent

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 09/19/2023

*
1 Identification

Product identifier
Trade name: Luciferin-2B6, 3mM
Article number: V833
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

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

GHS07

Acute Toxicity - Dermal 4 H312 Harmful in contact with skin.

Flammable Liquids 4 H227 Combustible liquid.

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

GHS07

Signal word Warning

Hazard-determining components of labeling:
dimethyl sulfoxide
Hazard statements
Combustible liquid.
Harmful in contact with skin.
Precautionary statements
Keep away from flames and hot surfaces. – No smoking.
Wear protective gloves/protective clothing/eye protection/face protection.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Luciferin-2B6, 3mM

(Contd. of page 1)

If on skin: Wash with plenty of water.
Call a poison center/doctor if you feel unwell.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use CO2, powder or water spray to extinguish.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification system:
NFPA ratings (scale 0 - 4)
Health = 2
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 2
Fire = 0
Reactivity = 0
OSHA Hazard Overview (Criteria according to 29CFR1910.1200): *Combustible*
Primary route(s) of entry: *Dermal*
Target Organ(s):
Dermal hazard (Cutaneous hazard)
Risk of damage to eyes
Other hazards
Results of PBT and vPvB assessment
PBT: *Not applicable.*
vPvB: *Not applicable.*

*
3 Composition/information on ingredients

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

Dangerous components:		
67-68-5	*dimethyl sulfoxide*	*75-100%*

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

*
4 First-aid measures

Description of first aid measures
General information:
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
After inhalation: *If the patient feels unwell or is concerned, obtain medical advice.*
After skin contact: *Immediately wash with water and soap and rinse thoroughly.*
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 12/29/2023 Reviewed on 09/19/2023

Trade name: Luciferin-2B6, 3mM

(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: *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.
Wear protective clothing.
Environmental precautions:
Prevent seepage into sewage system, workpits and cellars.
Dilute with plenty of water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
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 *No special precautions are necessary if used correctly.*
Information about protection against explosions and fires:
Keep ignition sources away - Do not smoke.
The product is not flammable.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: *Do not store below -20°C. Protected from light.*
Information about storage in one common storage facility: *Not required.*
Further information about storage conditions: *Keep receptacle tightly sealed.*
Specific end use(s) *No further relevant information available.*

*
8 Exposure controls/personal protection

Control parameters

Components with limit values that require monitoring at the workplace:	
67-68-5 dimethyl sulfoxide	
WEEL	*Long-term value: 250 ppm*

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Luciferin-2B6, 3mM

(Contd. of page 3)

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

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.
Avoid contact with the eyes and skin.
Clean skin thoroughly immediately after handling the product.
Breathing equipment: *Not required.*
Protection of hands: *Not required.*
Material of gloves
Gloves impermeable to the specific chemical substance.
Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Eye protection:
Safety glasses
Use equipment for eye protection tested and approved under government NIOSH standards.

*
9 Physical and chemical properties

Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	*Fluid*
Color:	*Colorless*
Odor:	*Not determined*
Odor threshold:	*Not determined.*
Change in condition	
Melting point/Melting range:	*18.45 °C (65.2 °F)*
Boiling point/Boiling range:	*189 °C (372.2 °F)*
Flash point:	*87 °C (188.6 °F)*
Flammability (solid, gaseous):	*Not applicable.*
Auto igniting:	*270 °C (518 °F)*
Decomposition temperature:	*Not determined.*
Ignition temperature:	*Product is not selfigniting.*
Danger of explosion:	*Product does not present an explosion hazard.*
Explosion limits:	
Lower:	*1.8 Vol %*
Upper:	*Zers Vol %*
Vapor pressure at 20 °C (68 °F):	*2.5 hPa (1.9 mm Hg)*
Density at 20 °C (68 °F):	*1.1 g/cm³ (9.1795 lbs/gal)*
Relative density	*Not determined.*
Vapor density	*Not determined.*

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 09/19/2023

Trade name: Luciferin-2B6, 3mM

(Contd. of page 4)

Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic at 20 °C (68 °F):	198 mPas
Kinematic:	Not determined.
Solvent separation test	
Organic solvents:	98.9 %
VOC content:	98.91 %
Other information	No further relevant information available.

*
10 Stability and reactivity

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

*
11 Toxicological information

Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification: No data available
Primary irritant effect:
on the skin: Causes skin irritation.
on the eye: No data available.
Sensitization:
In case of skin contact: not sensitising
In case of inhalation: not sensitising
Additional toxicological information: Harmful

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.

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Luciferin-2B6, 3mM

(Contd. of page 5)

*
12 Ecological information

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

*
13 Disposal considerations

Waste treatment methods
Recommendation:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

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

*
14 Transport information

UN-Number **DOT, ADR, ADN, IMDG, IATA**	Not hazardous for transportation Not applicable
UN proper shipping name **DOT, ADR, ADN, IMDG, IATA**	None Not applicable
Transport hazard class(es)	None
DOT, ADR, ADN, IMDG, IATA **Class**	Not applicable
Packing group **DOT, ADR, IMDG, IATA**	None Not applicable
Environmental hazards: **Marine pollutant:**	No
Special precautions for user	Not applicable.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 09/19/2023

Trade name: Luciferin-2B6, 3mM

(Contd. of page 6)

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Not applicable

*

15 Regulatory information

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

Section 355 (extremely hazardous substances):
None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):
None of the ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory:

67-68-5	dimethyl sulfoxide	ACTIVE

Hazardous Air Pollutants
None of the ingredients are listed.

Proposition 65

Chemicals known to cause cancer:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients are listed.

Chemicals known to cause developmental toxicity:
None of the ingredients are listed.

New Jersey Right-to-Know List:

67-68-5	dimethyl sulfoxide

Pennsylvania Right-to-Know List:
None of the ingredients are listed.

Cancerogenity categories

EPA (Environmental Protection Agency)
None of the ingredients are listed.

TLV (Threshold Limit Value)
None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients are listed.

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

Hazard-determining components of labeling:
dimethyl sulfoxide
Hazard statements
Combustible liquid.
Harmful in contact with skin.

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Luciferin-2B6, 3mM

(Contd. of page 7)

Precautionary statements
Keep away from flames and hot surfaces. – No smoking.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin: Wash with plenty of water.
Call a poison center/doctor if you feel unwell.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use CO2, powder or water spray to extinguish.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Chemical safety assessment

Water hazard class: Generally not hazardous for water.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

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

Department issuing SDS:
Promega Corporation
Chemical Regulatory Department
2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330
chemicalregulatory@promega.com
Contact:
Date of preparation / last revision 12/29/2023
Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: Internation Civil Aviation Organization
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flammable Liquids 4: Flammable liquids – Category 4
Acute Toxicity - Dermal 4: Acute toxicity – Category 4

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 09/19/2023

*
1 Identification

Product identifier
Trade name: D-Cysteine Solution, 2M
Article number: V752
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

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

GHS05 Corrosion

Skin Corrosion 1B	H314 Causes severe skin burns and eye damage.
Eye Damage 1	H318 Causes serious eye damage.

GHS07

Specific Target Organ Toxicity - Single Exposure 3 H335 May cause respiratory irritation.

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

GHS05 GHS07

Signal word Danger

Hazard-determining components of labeling:
TCEP.HCl
D-Cysteine Hydrochloride, anhydrous

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Trade name: D-Cysteine Solution, 2M

(Contd. of page 1)

Hazard statements
Causes severe skin burns and eye damage.
May cause respiratory irritation.
Precautionary statements
Do not breathe dusts or mists.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification system:
NFPA ratings (scale 0 - 4)
Health = 3
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 3
Fire = 0
Reactivity = 0
OSHA Hazard Overview (Criteria according to 29CFR1910.1200):
Toxic
Highly Toxic
Irritant
Primary route(s) of entry: Inhalation
Target Organ(s): Not applicable or unknown
Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

*
3 Composition/information on ingredients

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

Dangerous components:		
32443-99-5	D-Cysteine Hydrochloride, anhydrous	50-75%
51805-45-9	TCEP.HCl	20-25%

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

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 09/19/2023

Trade name: D-Cysteine Solution, 2M

(Contd. of page 2)

*
4 First-aid measures

Description of first aid measures
General information:
Immediately remove any clothing soiled by the product.
Take affected persons out into the fresh air.
After inhalation:
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
Seek medical treatment in case of complaints.
After skin contact: If skin irritation continues, consult a doctor.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: If the patient feels unwell or is concerned, obtain medical advice.
Information for doctor:
Most important symptoms and effects, both acute and delayed
None
No further relevant information available.
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

*
5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
None known
No further relevant information available.
Advice for firefighters In the case of fire, wear respiratory protective equipment and chemical protective suit.
Protective equipment: Mouth respiratory protective device.

*
6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Mount respiratory protective device.
Remove persons from danger area.
Wear protective equipment. Keep unprotected persons away.
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).
Use neutralizing agent.
Dispose contaminated material as waste according to Section 13.
Ensure adequate ventilation.
Reference to other sections
See Section 7 for information on safe handling.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Trade name: D-Cysteine Solution, 2M

(Contd. of page 3)

See Section 13 for disposal information.

*
7 Handling and storage

Handling:
Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Information about protection against explosions and fires:
Keep respiratory protective device available.
The product is not flammable.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: Do not store below -20°C. Protected from light.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Keep receptacle tightly sealed.
Specific end use(s) No further relevant information available.

*
8 Exposure controls/personal protection

Control parameters
Components with limit values that require monitoring at the workplace:
The 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:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
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.
NIOSH-approved respirator with a minimum APF of 10 in accordance with 29 CFR 1910.134
Protection of hands: Not required.
Material of gloves
Gloves impermeable to the specific chemical substance.
Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Eye protection:
Tightly sealed goggles

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 09/19/2023

Trade name: D-Cysteine Solution, 2M

(Contd. of page 4)

Use equipment for eye protection tested and approved under government NIOSH standards.
Body protection: *Protective work clothing*

*
9 Physical and chemical properties

Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	*Fluid*
Color:	*Colorless*
Odor:	*Not determined*
Odor threshold:	*Not determined.*
Change in condition	
Melting point/Melting range:	*Undetermined.*
Boiling point/Boiling range:	*100 °C (212 °F)*
Flash point:	*Not applicable.*
Flammability (solid, gaseous):	*Not applicable.*
Decomposition temperature:	*Not determined.*
Ignition temperature:	*Product is not selfigniting.*
Danger of explosion:	*Product does not present an explosion hazard.*
Explosion limits:	
Lower:	*Not determined.*
Upper:	*Not determined.*
Vapor pressure:	*Not determined.*
Density:	*Not determined.*
Relative density	*Not determined.*
Vapor density	*Not determined.*
Evaporation rate	*Not determined.*
Solubility in / Miscibility with	
Water:	*Fully miscible.*
Partition coefficient (n-octanol/water):	*Not determined.*
Viscosity:	
Dynamic:	*Not determined.*
Kinematic:	*Not determined.*
Solvent separation test	
Water:	*21.0 %*
VOC content:	*0.00 %*
Other information	*No further relevant information available.*

10 Stability and reactivity

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

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 09/19/2023

Trade name: D-Cysteine Solution, 2M

(Contd. of page 5)

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:		
51805-45-9 TCEP.HCl		
Oral	LD50	3,500 mg/kg (Rat)
Dermal	LD50	3,000 mg/kg (Rabbit)

Primary irritant effect:
on the skin: Causes skin irritation.
on the eye: Causes serious eye damage.
Sensitization:
In case of skin contact: not sensitising
In case of inhalation: not sensitising
Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
OECD test guideline 471, Ames test.
Irritant

Carcinogenic categories

IARC (International Agency for Research on Cancer)
None of the ingredients are listed.

NTP (National Toxicology Program)
None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients are listed.

*
12 Ecological information

Toxicity
Aquatic toxicity: Not harmful to the aquatic environment
Persistence and degradability
Not available
No further relevant information available.
Bioaccumulative potential
Not known
No further relevant information available.
Mobility in soil No further relevant information available.
Ecotoxicological effects:
Remark: Not available
Additional ecological information:
General notes: Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 09/19/2023

Trade name: D-Cysteine Solution, 2M

(Contd. of page 6)

Other adverse effects No further relevant information available.

*
13 Disposal considerations

Waste treatment methods
Recommendation:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

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

*
14 Transport information

UN-Number	
DOT, ADR, IMDG, IATA	UN1760
UN proper shipping name	
DOT	Corrosive liquid, n.o.s. (TCEP.HCl)
ADR	1760 CORROSIVE LIQUID, N.O.S. (TCEP.HCl)
IMDG, IATA	CORROSIVE LIQUID, N.O.S. (TCEP.HCl)
Transport hazard class(es)	
DOT	

Class	8 Corrosive substances
Label	8
ADR	

Class	8 (C9) Corrosive substances
Label	8
IMDG, IATA	

Class	8 Corrosive substances
Label	8
Packing group	
DOT, ADR, IMDG, IATA	II

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 09/19/2023

Trade name: D-Cysteine Solution, 2M

(Contd. of page 7)

Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Warning: Corrosive substances
Hazard identification number (Kemler code):	80
EMS Number:	F-A,S-B
Stowage Category	B
Stowage Code	SW2 Clear of living quarters.
Transport in bulk according to Annex II of MARPOL73/78 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 1760 CORROSIVE LIQUID, N.O.S. (TCEP.HCL), 8, II

*
15 Regulatory information

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

Section 355 (extremely hazardous substances):
None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):
None of the ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory:

Hazardous Air Pollutants
None of the ingredients are listed.

Proposition 65

Chemicals known to cause cancer:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients are listed.

Chemicals known to cause developmental toxicity:
None of the ingredients are listed.

New Jersey Right-to-Know List:
None of the ingredients are listed.

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Trade name: D-Cysteine Solution, 2M

(Contd. of page 8)

Pennsylvania Right-to-Know List:
None of the ingredients are listed.

Cancerogenity categories

EPA (Environmental Protection Agency)
None of the ingredients are listed.

TLV (Threshold Limit Value)
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:
TCEP.HCl
D-Cysteine Hydrochloride, anhydrous
Hazard statements
Causes severe skin burns and eye damage.
May cause respiratory irritation.
Precautionary statements
Do not breathe dusts or mists.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Chemical safety assessment

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

16 Other information

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

Department issuing SDS:
Promega Corporation
Chemical Regulatory Department
2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330
chemicalregulatory@promega.com
Contact:
Date of preparation / last revision 12/29/2023

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 *Reviewed on 09/19/2023*

Trade name: D-Cysteine Solution, 2M

(Contd. of page 9)

Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Corrosion 1B: Skin corrosion/irritation – Category 1B
Eye Damage 1: Serious eye damage/eye irritation – Category 1
Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 12/28/2023

*
1 Identification

Product identifier
Trade name: Reconstitution Buffer
Article number: V865
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

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

Specific Target Organ Toxicity - Single Exposure 1 H370 Causes damage to the central nervous system and the visual organs.

GHS07

Eye Irritation 2A H319 Causes serious eye irritation.

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

GHS07 GHS08

Signal word Danger

Hazard-determining components of labeling:
methanol

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 12/28/2023

Trade name: Reconstitution Buffer

(Contd. of page 1)

Hazard statements
Causes serious eye irritation.
Causes damage to the central nervous system and the visual organs.
Precautionary statements
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear eye protection / face protection.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed: Call a POISON CENTER or doctor/physician.
If eye irritation persists: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification system:
NFPA ratings (scale 0 - 4)
Health = 2
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
*Health = *2*
Fire = 0
Reactivity = 0
OSHA Hazard Overview (Criteria according to 29CFR1910.1200): *Irritant*
Primary route(s) of entry: *Dermal*
Target Organ(s): *Not applicable or unknown*
Other hazards
Results of PBT and vPvB assessment
PBT: *Not applicable.*
vPvB: *Not applicable.*

*
3 Composition/information on ingredients

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

Dangerous components:		
67-56-1	methanol	1-5%
127087-87-0	Nonylphenol Ethoxylate	1-5%

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

*
4 First-aid measures

Description of first aid measures
General information: *Take affected persons out into the fresh air.*
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. If symptoms persist, consult a doctor.
After swallowing: *If the patient feels unwell or is concerned, obtain medical advice.*

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 12/28/2023

Trade name: Reconstitution Buffer

(Contd. of page 2)

Information for doctor:
Most important symptoms and effects, both acute and delayed
None
No further relevant information available.
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

*
5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
None known
No further relevant information available.
Advice for firefighters No special advice.
Protective equipment: Mouth respiratory protective device.

*
6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Mount respiratory protective device.
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
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.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Information about protection against explosions and fires:
Keep respiratory protective device available.
The product is not flammable.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: Do not store below -20°C. Protected from light.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Keep receptacle tightly sealed.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 12/28/2023

Trade name: Reconstitution Buffer

(Contd. of page 3)

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/m³, 200 ppm
REL	Short-term value: 325 mg/m³, 250 ppm Long-term value: 260 mg/m³, 200 ppm Skin
TLV	Short-term value: 250 ppm Long-term value: 200 ppm Skin; BEI

Ingredients with biological limit values:	
67-56-1 methanol	
BEI	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)

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

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
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: Not required.
Material of gloves
Gloves impermeable to the specific chemical substance.
Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Eye protection:
Safety glasses

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 12/28/2023

Trade name: Reconstitution Buffer

(Contd. of page 4)

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

*
9 Physical and chemical properties

Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	Fluid
Color:	Colorless
Odor:	Not determined
Odor threshold:	Not determined.
pH-value at 20 °C (68 °F):	8.4
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Decomposition temperature:	Not determined.
Ignition temperature:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density at 20 °C (68 °F):	1.014 g/cm³ (8.46183 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.
Solvent separation test	
Organic solvents:	2.4 %
Water:	91.6 %
VOC content:	2.40 %
Solids content:	3.8 %
Other information	No further relevant information available.

*
10 Stability and reactivity

Reactivity No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 12/28/2023

Trade name: Reconstitution Buffer

(Contd. of page 5)

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:		
67-56-1 methanol		
Oral	LD50	5,628 mg/kg (Rat)

Primary irritant effect:
on the skin: Causes skin irritation.
on the eye: Irritating effect.
Sensitization:
In case of skin contact: not sensitising
In case of inhalation: not sensitising
Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
OECD test guideline 471, Ames test.
Irritant

Carcinogenic categories

IARC (International Agency for Research on Cancer)
None of the ingredients are listed.

NTP (National Toxicology Program)
None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients are listed.

*
12 Ecological information

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

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 12/28/2023

Trade name: Reconstitution Buffer

(Contd. of page 6)

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
Packing group	None
DOT, ADR, IMDG, IATA	Not applicable
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Not applicable

*
15 Regulatory information

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

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

67-56-1	methanol
127087-87-0	Nonylphenol Ethoxylate

TSCA (Toxic Substances Control Act) Inventory:

67-56-1	methanol	ACTIVE
127087-87-0	Nonylphenol Ethoxylate	ACTIVE

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 12/28/2023

Trade name: Reconstitution Buffer

(Contd. of page 7)

Hazardous Air Pollutants

67-56-1	methanol

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:

67-56-1	methanol

New Jersey Right-to-Know List:

67-56-1	methanol

Pennsylvania Right-to-Know List:

None of the ingredients are listed.

Cancerogenity categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

TLV (Threshold Limit Value)

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:
methanol
Hazard statements
Causes serious eye irritation.
Causes damage to the central nervous system and the visual organs.
Precautionary statements
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear eye protection / face protection.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed: Call a POISON CENTER or doctor/physician.
If eye irritation persists: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Chemical safety assessment

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

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

(Contd. of page 8)

*
16 Other information

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

Department issuing SDS:
Promega Corporation
Chemical Regulatory Department
2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330
chemicalregulatory@promega.com
Contact:
Date of preparation / last revision *12/29/2023*
Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
Specific Target Organ Toxicity - Single Exposure 1: Specific target organ toxicity (single exposure) – Category 1

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 12/28/2023

*
1 Identification

Product identifier
Trade name: Luciferin Detection Reagent
Article number: V859A
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

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

*
2 Hazard(s) identification

Classification of the substance or mixture
The product is not classified as hazardous according to the Globally Harmonized System (GHS).

Label elements
GHS label elements Not applicable
Hazard pictograms Not applicable
Signal word Not applicable
Hazard statements Not applicable
Classification system:
NFPA ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0
OSHA Hazard Overview (Criteria according to 29CFR1910.1200): Not applicable
Target Organ(s): Not applicable or unknown
Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 12/28/2023

Trade name: Luciferin Detection Reagent

(Contd. of page 1)

*
3 Composition/information on ingredients

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

Dangerous components:		
61970-00-1	Luciferase, recombinant	1-5%
56-81-5	glycerol	1-5%

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

*
4 First-aid measures

Description of first aid measures
General information: *No special measures required.*
After inhalation: *If the patient feels unwell or is concerned, obtain medical advice.*
After skin contact: *Generally the product does not irritate the skin.*
After eye contact: *Rinse opened eye for several minutes under running water.*
After swallowing: *If the patient feels unwell or is concerned, obtain medical advice.*
Information for doctor:
Most important symptoms and effects, both acute and delayed
None
No further relevant information available.
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

*
5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
None known
No further relevant information available.
Advice for firefighters *No special advice.*
Protective equipment: *No special measures required.*

*
6 Accidental release measures

Personal precautions, protective equipment and emergency procedures *Not required.*
Environmental precautions: *Do not allow to enter sewers/ surface or ground water.*
Methods and material for containment and cleaning up: *Pick up mechanically.*
Reference to other sections
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 13 for disposal information.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 12/28/2023

Trade name: Luciferin Detection Reagent

(Contd. of page 2)

*
7 Handling and storage

Handling:
Precautions for safe handling No special measures required.
Information about protection against explosions and fires: The product is not flammable.

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

*
8 Exposure controls/personal protection

Control parameters
Components with limit values that require monitoring at the workplace:
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

56-81-5 glycerol	
PEL	Long-term value: 15* 5** mg/m³ 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:
The usual precautionary measures for handling chemicals should be followed.
Breathing equipment: Not required.
Protection of hands: Not required.
Material of gloves
Gloves impermeable to the specific chemical substance.
Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Eye protection: Not required.

*
9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:

Form:	Solid
Color:	Whitish

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 12/28/2023

Trade name: Luciferin Detection Reagent

(Contd. of page 3)

Odor:	Odorless
Odor threshold:	Not determined.
pH-value at 20 °C (68 °F):	7.2
Change in condition	
Melting point/Melting range:	0 °C (32 °F)
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not determined.
Decomposition temperature:	Not determined.
Ignition temperature:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not applicable.
Density:	Not determined.
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
Water:	Soluble.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
Solvent separation test	
Organic solvents:	1.5 %
Water:	1.3 %
VOC content:	0.00 %
Solids content:	100.0 %
Other information	No further relevant information available.

*
10 Stability and reactivity

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

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 12/28/2023

Trade name: Luciferin Detection Reagent

(Contd. of page 4)

*
11 Toxicological information

Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification: No data available
Primary irritant effect:
on the skin: No irritant effect.
on the eye: No irritating effect.
Sensitization:
In case of skin contact: not sensitising
In case of inhalation: not sensitising
Additional toxicological information:
The product is not subject to classification according to internally approved calculation methods for preparations:

Carcinogenic categories

IARC (International Agency for Research on Cancer)
None of the ingredients are listed.

NTP (National Toxicology Program)
None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients are listed.

*
12 Ecological information

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

*
13 Disposal considerations

Waste treatment methods
Recommendation:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 12/28/2023

Trade name: Luciferin Detection Reagent

(Contd. of page 5)

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

*
14 Transport information

UN-Number **DOT, ADR, ADN, IMDG, IATA**	Not hazardous for transportation Not applicable
UN proper shipping name **DOT, ADR, ADN, IMDG, IATA**	None Not applicable
Transport hazard class(es)	None
DOT, ADR, ADN, IMDG, IATA **Class**	Not applicable
Packing group **DOT, ADR, IMDG, IATA**	None Not applicable
Environmental hazards: **Marine pollutant:**	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	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:

61970-00-1	Luciferase, recombinant	*
56-81-5	glycerol	ACTIVE

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.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 Reviewed on 12/28/2023

Trade name: Luciferin Detection Reagent

(Contd. of page 6)

Chemicals known to cause developmental toxicity:
None of the ingredients are listed.

New Jersey Right-to-Know List:
56-81-5 glycerol

Pennsylvania Right-to-Know List:
56-81-5 glycerol

Cancerogenity categories

EPA (Environmental Protection Agency)
None of the ingredients are listed.

TLV (Threshold Limit Value)
None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients are listed.

GHS label elements Not applicable
Signal word Not applicable
Hazard statements Not applicable
Chemical safety assessment

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

*
16 Other information

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

Department issuing SDS:
Promega Corporation
Chemical Regulatory Department
2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330
chemicalregulatory@promega.com
Contact:
Date of preparation / last revision 12/29/2023
Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: Internation Civil Aviation Organization
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2023 *Reviewed on 12/28/2023*

Trade name: Luciferin Detection Reagent

(Contd. of page 7)

OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit