## Kit Components

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>JA2201</td>
<td>IL-2 Bioassay</td>
</tr>
</tbody>
</table>

### Components:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>J297</td>
<td>IL-2 Bioassay Cells</td>
</tr>
<tr>
<td>J121A</td>
<td>Fetal Bovine Serum</td>
</tr>
<tr>
<td>G719A</td>
<td>Bio-Glo™ Luciferase Assay Buffer</td>
</tr>
<tr>
<td>G720A</td>
<td>Bio-Glo™ Luciferase Assay Substrate</td>
</tr>
<tr>
<td>G708A</td>
<td>RPMI 1640 Medium</td>
</tr>
</tbody>
</table>
1 Identification

Product identifier
Trade name: IL-2 Bioassay Cells

Article number: J297
Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: SDS author: Regulatory.Affairs@promega.com
Emergency telephone number:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

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

Label elements
GHS label elements Void
Hazard pictograms Void
Signal word Void
Hazard statements Void

Classification system:
NFPA ratings (scale 0 - 4)
Health = 0
Fire = 2
Reactivity = 0

HMIS-ratings (scale 0 - 4)
Health = 0
Fire = 2
Reactivity = 0

OSHA Hazard Overview (Criteria according to 29CFR1910.1200): Combustible
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)
Trade name: IL-2 Bioassay Cells

3 Composition/information on ingredients

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

Dangerous components:
67-68-5 dimethyl sulfoxide 5-10%

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

4 First-aid measures

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

5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents: 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
No special advice
Protective equipment: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Not required.
Environmental precautions:
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Reference to other sections
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 13 for disposal information.
7 Handling and storage

Handling:
Precautions for safe handling: No special measures required.
Information about protection against explosions and fires: No special measures required.

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

8 Exposure controls/personal protection

Control parameters

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

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

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
Breathing equipment: Not required.
Protection of hands: Not required.
Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Eye protection: Not required.

9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:
Form: Fluid
Color: Variable
Odor: Not determined
Odor threshold: Not determined.

pH-value at 20 °C (68 °F): 3-10

Change in condition
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 189 °C (372.2 °F)
Flash point: > 60 °C (>140 °F)

Flammability (solid, gaseous): Not applicable.
Decomposition temperature: Not determined.
Trade name: IL-2 Bioassay Cells

Auto igniting: Product is not self-igniting.

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.

Organic solvents: 7.0 %

Water: 70.5 %

VOC content: 7.00 %

Other information: No further relevant information available.

10 Stability and reactivity

Reactivity: No further relevant information available.

Chemical stability

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

 Possibility of hazardous reactions: No dangerous reactions known.

 Conditions to avoid: No further relevant information available.

 Incompatible materials: No further relevant information available.

 Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects

Acute toxicity:

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

 Primary irritant effect:

 on the skin: No irritant effect.
 on the eye: No irritating effect.

 Sensitization: No sensitizing effects known.

 Additional toxicological information:

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

Carcinogenic categories

IARC (International Agency for Research on Cancer)

10102-18-8 sodium selenite
12 Ecological information

Toxicity
Aquatic toxicity:
Not available
No further relevant information available.

Persistence and degradability
Not available
No further relevant information available.

Behavior in environmental systems:
Bioaccumulative potential
Not known
No further relevant information available.

Mobility in soil
No further relevant information available.

Ecotoxicological effects:
Remark: Not available

Additional ecological information:
General notes: Not known to be hazardous to water.

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

Other adverse effects
No further relevant information available.

13 Disposal considerations

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

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

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

14 Transport information

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>DOT</th>
<th>ADR, IMDG, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not hazardous for transportation</td>
<td>Void</td>
<td>UN3245 GENETICALLY MODIFIED MICROORGANISMS</td>
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</table>

<table>
<thead>
<tr>
<th>UN proper shipping name</th>
<th>DOT</th>
<th>ADR</th>
<th>IMDG, IATA</th>
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</thead>
<tbody>
<tr>
<td>None</td>
<td>Void</td>
<td>3245 GENETICALLY MODIFIED MICROORGANISMS</td>
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Trade name: IL-2 Bioassay Cells

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<tr>
<th>Transport hazard class(es)</th>
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<tbody>
<tr>
<td>DOT</td>
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<td>Class</td>
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</table>

ADR

<table>
<thead>
<tr>
<th>Class</th>
<th>9 (M8) Miscellaneous dangerous substances and articles</th>
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</thead>
<tbody>
<tr>
<td>Label</td>
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</tr>
</tbody>
</table>

IMDG, IATA

<table>
<thead>
<tr>
<th>Class</th>
<th>9 Miscellaneous dangerous substances and articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label</td>
<td>9</td>
</tr>
</tbody>
</table>

Packing group

<table>
<thead>
<tr>
<th>DOT, ADR, IMDG, IATA</th>
<th>None</th>
</tr>
</thead>
</table>

Environmental hazards:

<table>
<thead>
<tr>
<th>Marine pollutant:</th>
<th>No</th>
</tr>
</thead>
</table>

Special precautions for user

<table>
<thead>
<tr>
<th>Danger code (Kemler):</th>
<th>Warning: Miscellaneous dangerous substances and articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS Number:</td>
<td>F-A,S-T</td>
</tr>
<tr>
<td>Stowage Code</td>
<td>SW7 As approved by the competent authorities of the countries involved in the shipment</td>
</tr>
<tr>
<td>Segregation Code</td>
<td>SG50 Segregation from foodstuffs as in 7.3.4.2.1, 7.6.3.1.2 or 7.7.3.6.</td>
</tr>
</tbody>
</table>

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

| Not applicable. |

Transport/Additional information:

<table>
<thead>
<tr>
<th>ADR</th>
<th>Code: E0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excepted quantities (EQ)</td>
<td>Not permitted as Excepted Quantity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMDG</th>
<th>Code: E0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited quantities (LQ)</td>
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</tr>
<tr>
<td>Excepted quantities (EQ)</td>
<td>Not permitted as Excepted Quantity</td>
</tr>
</tbody>
</table>

UN "Model Regulation":

| UN 3245 GENETICALLY MODIFIED MICROORGANISMS, 9 |

(Contd. on page 7)
## 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 |

#### Hazardous Air Pollutants

| 10102-18-8 sodium selenite |

#### Proposition 65

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

#### Cancerogenity categories

| EPA (Environmental Protection Agency) | 10102-18-8 sodium selenite | D |

| TLV (Threshold Limit Value established by ACGIH) | None of the ingredients are listed. |

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

#### GHS label elements

| Void |
| Void |

#### Signal word

| Void |

#### Hazard statements

| Void |

#### Water hazard class

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

#### Chemical safety assessment

| A Chemical Safety Assessment has not been carried out. |

## Other information

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

**Department issuing SDS:**
Promega Corporation
Environmental Health and Safety Department
2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330
Date of preparation / last revision 08/19/2019 / -
Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: Internation Civil Aviation Organization
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
* Data compared to the previous version altered.
1 Identification

Product identifier
Trade name: Fetal Bovine Serum

Article number: J121A
Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: SDS author: Regulatory.Affairs@promega.com
Emergency telephone number:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

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

Label elements
GHS label elements Void
Hazard pictograms Void
Signal word Void
Hazard statements Void
Classification system:
NFPA ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0

HMIS-ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0

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

(Contd. on page 2)
3 Composition/information on ingredients

Chemical characterization: Substances
CAS No. Description
Fetal bovine serum

4 First-aid measures

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

5 Fire-fighting measures

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

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Not required.
Environmental precautions: Do not allow to enter sewers/surface or ground water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Reference to other sections
See Section 7 for information on safe handling.
See Section 13 for disposal information.

7 Handling and storage

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

Control parameters
Components with limit values that require monitoring at the workplace: Not required.
Additional information: The lists that were valid during the creation were used as basis.

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
Breathing equipment: Not required.
Protection of hands: Not required.
Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Eye protection: Not required.

9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:
Form: Fluid
Color: Colorless
Odor: Not determined
Odor threshold: Not determined.

Change in condition
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Undetermined.
Flash point: Not applicable.

Flammability (solid, gaseous): Not applicable.
Decomposition temperature: Not determined.

Auto igniting: Not determined.

Danger of explosion: Product does not present an explosion hazard.
Explosion limits:
Lower: Not determined.
Upper: Not determined.
Vapor pressure: Not determined.

Density: Not determined.
Relative density: Not determined.
Vapor density: Not determined.
Evaporation rate: Not determined.
Trade name: Fetal Bovine Serum

Solubility in / Miscibility with
Water: Not miscible or difficult to mix.
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
  Dynamic: Not determined.
  Kinematic: Not determined.
VOC content: 0.00 %
Other information No further relevant information available.

10 Stability and reactivity

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

11 Toxicological information

Information on toxicological effects
Acute toxicity:
  LD/LC50 values that are relevant for classification: No data available
Primary irritant effect:
  on the skin: No irritant effect.
  on the eye: No irritating effect.
Sensitization: No sensitizing effects known.
Additional toxicological information: The substance is not subject to classification.

Carcinogenic categories
IARC (International Agency for Research on Cancer)
  Substance is not listed.
NTP (National Toxicology Program)
  Substance is not listed.
OSHA-Ca (Occupational Safety & Health Administration)
  Substance is not listed.

12 Ecological information

Toxicity
Aquatic toxicity:
  Not available
  No further relevant information available.
Persistence and degradability
  Not available
  No further relevant information available.

(Contd. on page 5)
Behavior in environmental systems:
Bioaccumulative potential
Not known
No further relevant information available.
Mobility in soil No further relevant information available.
Ecotoxicological effects:
Remark: Not available
Additional ecological information:
General notes: Not known to be hazardous to water.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects No further relevant information available.

13 Disposal considerations

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

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport information

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

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

Sara

Section 355 (extremely hazardous substances):
Substance is not listed.

Section 313 (Specific toxic chemical listings):
Substance is not listed.

TSCA (Toxic Substances Control Act) Inventory:
Substance is not listed.

Hazardous Air Pollutants
Substance is not listed.

Proposition 65

Chemicals known to cause cancer:
Substance is not listed.

Chemicals known to cause reproductive toxicity for females:
Substance is not listed.

Chemicals known to cause reproductive toxicity for males:
Substance is not listed.

Chemicals known to cause developmental toxicity:
Substance is not listed.

Cancerogenity categories

EPA (Environmental Protection Agency)
Substance is not listed.

TLV (Threshold Limit Value established by ACGIH)
Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)
Substance is not listed.

GHS label elements Void
Signal word Void
Hazard statements Void

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

16 Other information

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

Department issuing SDS:
Promega Corporation
Environmental Health and Safety Department
2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330
Date of preparation / last revision 08/19/2019 / -
Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
* Data compared to the previous version altered.
1 Identification

Product identifier

Trade name: Bio-Glo™ Luciferase Assay Buffer

Article number: G719A

Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

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

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

Emergency telephone number:

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

2 Hazard(s) identification

Classification of the substance or mixture

GHS08 Health hazard

Carc. 2  H351  Suspected of causing cancer.
Repr. 2  H361  Suspected of damaging fertility or the unborn child.

Label elements

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
Hazard pictograms GHS08

Signal word Warning

Hazard statements

Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.

Precautionary statements

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)
Health = 2
Fire = 0
Reactivity = 0

(Contd. on page 2)
Trade name: Bio-Glo™ Luciferase Assay Buffer

HMIS-ratings (scale 0 - 4)
Health  = 2
Fire     = 0
Reactivity = 0

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

3 Composition/information on ingredients

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

Dangerous components:
62-56-6 thiourea <1%

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

4 First-aid measures

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

5 Fire-fighting measures

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

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Remove persons from danger area.
Wear protective clothing.
Trade name: Bio-Glo™ Luciferase Assay Buffer

Environmental precautions: Dilute with plenty of water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Reference to other sections
See Section 7 for information on safe handling.
See Section 13 for disposal information.

7 Handling and storage
Handling:
Precautions for safe handling No special precautions are necessary if used correctly.
Information about protection against explosions and fires: The product is not flammable.
Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: None.
Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection
Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: The lists that were valid during the creation were used as basis.

Exposure controls
Personal protective equipment:
General protective and hygienic measures: Wash hands before breaks and at the end of work.
Breathing equipment: Not required.
Protection of hands:
Protective gloves
Select the glove material considering penetration time, rate of diffusion and degradation time.
It is recommended that the selected protective gloves be tested and approved under NIOSH or EU Directive 89/686/EEC and the standard EN 374 derived from it.
Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Eye protection: Use equipment for eye protection tested and approved under government NIOSH standards.

9 Physical and chemical properties
Information on basic physical and chemical properties
General Information
Appearance:
Form: Fluid
Color: Colorless
Odor: Not determined
Trade name: Bio-Glo™ Luciferase Assay Buffer

<table>
<thead>
<tr>
<th>Odor threshold:</th>
<th>Not determined.</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH-value at 20 °C (68 °F):</td>
<td>6.7</td>
</tr>
<tr>
<td>Change in condition</td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range:</td>
<td>0 °C (32 °F)</td>
</tr>
<tr>
<td>Boiling point/Boiling range:</td>
<td>100 °C (212 °F)</td>
</tr>
<tr>
<td>Flash point:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Flammability (solid, gaseous):</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Decomposition temperature:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Auto igniting:</td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td>Danger of explosion:</td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td>Explosion limits:</td>
<td></td>
</tr>
<tr>
<td>Lower:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Upper:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Density:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Solubility in / Miscibility with</td>
<td></td>
</tr>
<tr>
<td>Water:</td>
<td>Fully miscible.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Viscosity:</td>
<td></td>
</tr>
<tr>
<td>Dynamic:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Kinematic:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Organic solvents:</td>
<td>0.5 %</td>
</tr>
<tr>
<td>Water:</td>
<td>95.1 %</td>
</tr>
<tr>
<td>VOC content:</td>
<td>0.53 %</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

10 Stability and reactivity

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

11 Toxicological information

Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification: No data available
Primary irritant effect:
on the skin: No data available.
on the eye: No data available.
Sensitization: No sensitizing effects known.

(Contd. on page 5)
**Trade name:** Bio-Glo™ Luciferase Assay Buffer

**Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

**Carcinogenic categories**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Code</th>
<th>Substance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC (International Agency for Research on Cancer)</td>
<td>62-56-6 thiourea</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>NTP (National Toxicology Program)</td>
<td>62-56-6 thiourea</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>OSHA-Ca (Occupational Safety &amp; Health Administration)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

None of the ingredients are listed.

**12 Ecological information**

**Toxicity**

**Aquatic toxicity:**
Not available

No further relevant information available.

**Persistence and degradability**
Not available

No further relevant information available.

**Behavior in environmental systems:**

**Bioaccumulative potential**
Not known

No further relevant information available.

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

**Ecotoxicological effects:**

**Remark:** Not available

**Additional ecological information:**

**General notes:** Not available.

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

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

**13 Disposal considerations**

**Waste treatment methods**

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

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

**Uncleaned packagings:**

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

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

**14 Transport information**

**UN-Number**
Not hazardous for transportation
Trade name: Bio-Glo™ Luciferase Assay Buffer

DOT, ADR, ADN, IMDG, IATA  
Void

UN proper shipping name  
None

DOT, ADR, ADN, IMDG, IATA  
Void

Transport hazard class(es)  
None

DOT, ADR, ADN, IMDG, IATA  
Void

Packing group  
None

DOT, ADR, IMDG, IATA  
Void

Environmental hazards:  
Marine pollutant:  
No

Special precautions for user  
Not applicable.

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

UN "Model Regulation":  
Void

* 15 Regulatory information

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

Sara

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

Section 313 (Specific toxic chemical listings):  
62-56-6 thiourea

TSCA (Toxic Substances Control Act) Inventory:  
62-56-6 thiourea

Hazardous Air Pollutants  
67-56-1 methanol

Proposition 65

Chemicals known to cause cancer:  
62-56-6 thiourea

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

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

Chemicals known to cause developmental toxicity:  
67-56-1 methanol

Cancerogenity categories

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

TLV (Threshold Limit Value established by ACGIH)  
None of the ingredients are listed.
### GHS label elements

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

#### Signal word

**Warning**

#### Hazard statements

Suspected of causing cancer.

Suspected of damaging fertility or the unborn child.

#### Precautionary statements

Obtain special instructions before use.

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

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

IF exposed or concerned: Get medical advice/attention.

Store locked up.

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

**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

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608) 274-4330

**Date of preparation / last revision:** 08/19/2019 / -

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Carc. 2: Carcinogenicity – Category 2

Repr. 2: Reproductive toxicity – Category 2

* Data compared to the previous version altered.
1 Identification

**Product identifier**

*Trade name: Bio-Glo™ Luciferase Assay Substrate*

**Article number:** G720A

**Application of the substance / the mixture** Laboratory chemicals

**Details of the supplier of the safety data sheet**

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

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

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

2 Hazard(s) identification

**Classification of the substance or mixture**

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

**Label elements**

*GHS label elements* Void

*Hazard pictograms* Void

*Signal word* Void

*Hazard statements* Void

**Classification system:**

*NFPA ratings (scale 0 - 4)*

Health = 0  
Fire = 0  
Reactivity = 0

*HMIS-ratings (scale 0 - 4)*

Health = 1  
Fire = 0  
Reactivity = 0

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

**Target Organ(s):** Not applicable or unknown

**Other hazards**

**Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

(Contd. on page 2)
Trade name: Bio-Glo™ Luciferase Assay Substrate

* 3 Composition/information on ingredients

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

Dangerous components:
3483-12-3 DL-Dithiothreitol <2%

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

* 4 First-aid measures

Description of first aid measures
General information: No special measures required.
After inhalation: If the patient feels unwell or is concerned, obtain medical advice.
After skin contact: Generally the product does not irritate the skin.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: If the patient feels unwell or is concerned, obtain medical advice.

Information for doctor:
Most important symptoms and effects, both acute and delayed
None
No further relevant information available.

Indication of any immediate medical attention and special treatment needed
No further relevant information available.

* 5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture
None known
No further relevant information available.

Advice for firefighters
No special advice

Protective equipment: No special measures required.

* 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Not required.
Environmental precautions: Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up: 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.
7 Handling and storage

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

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

8 Exposure controls/personal protection

Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
Breathing equipment: Not required.
Protection of hands: Not required.

Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Eye protection: Not required.

9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:
Form: Solid
Color: Colorless
Odor: Not determined
Odor threshold: Not determined.
pH-value at 20 °C (68 °F): 6.7

Change in condition
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Undetermined.
Flash point: Not applicable.

Flammability (solid, gaseous): Not determined.
Decomposition temperature: Not determined.
## Trade name: Bio-Glo™ Luciferase Assay Substrate

### 49.0.2

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

## 10 Stability and reactivity

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

**Chemical stability**

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

## 11 Toxicological information

**Information on toxicological effects**

**Acute toxicity**:

- **LD/LC50 values that are relevant for classification**: No data available
- **Primary irritant effect**:
  - on the skin: No irritant effect.
  - on the eye: No irritating effect.
- **Sensitization**: No sensitizing effects known.

**Additional toxicological information**:

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

**Carcinogenic categories**

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

- **NTP (National Toxicology Program)**
  None of the ingredients are listed.
12 Ecological information

Toxicity
Aquatic toxicity:
Not available
No further relevant information available.

Persistence and degradability
Not available
No further relevant information available.

Behavior in environmental systems:
Bioaccumulative potential
Not known
No further relevant information available.

Mobility in soil
No further relevant information available.

Ecotoxicological effects:

Remark: Not available

Additional ecological information:
General notes: Not known to be hazardous to water.

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

Other adverse effects
No further relevant information available.

13 Disposal considerations

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

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

14 Transport information

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>DOT, ADR, ADN, IMDG, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not hazardous for transportation</td>
<td>Void</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UN proper shipping name</th>
<th>DOT, ADR, ADN, IMDG, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Void</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transport hazard class(es)</th>
<th>DOT, ADR, ADN, IMDG, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Void</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Packing group</th>
<th></th>
</tr>
</thead>
</table>
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:
3483-12-3 DL-Dithiothreitol

Hazardous Air Pollutants
None of the ingredients are listed.

Proposition 65

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

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

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

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

Cancerogenity categories

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

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

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

GHS label elements Void

Signal word Void

Hazard statements Void

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

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.
Trade name: Bio-Glo™ Luciferase Assay Substrate

16 Other information

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

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

Date of preparation / last revision 08/19/2019 / -

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

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

Product identifier
Trade name: RPMI 1640 Medium
Article number: G708A
Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330
Information department: SDS author: Regulatory.Affairs@promega.com
Emergency telephone number:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

* 2 Hazard(s) identification

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

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

Chemical characterization: Mixtures

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

Dangerous components: Void

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

4 First-aid measures

Description of first aid measures

General information: No special measures required.
After inhalation: If the patient feels unwell or is concerned, obtain medical advice.
After skin contact: Generally the product does not irritate the skin.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: If the patient feels unwell or is concerned, obtain medical advice.

Information for doctor:
Most important symptoms and effects, both acute and delayed
None

No further relevant information available.

Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture
None known

No further relevant information available.

Advice for firefighters
No special advice

Protective equipment: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Not required.

Environmental precautions: Dilute with plenty of water.

Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Reference to other sections
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 13 for disposal information.
7 Handling and storage

**Handling:**

Precautions for safe handling: No special measures required.

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

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

**Storage:**

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

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

Further information about storage conditions: None.

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

8 Exposure controls/personal protection

**Control parameters**

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

**Exposure controls**

**Personal protective equipment:**

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands: Not required.

Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Eye protection: Not required.

9 Physical and chemical properties

**Information on basic physical and chemical properties**

**General Information**

Appearance:

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

Change in condition

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

Flammability (solid, gaseous): Not applicable.

Decomposition temperature: Not determined.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.
### Explosion limits:

- **Lower:** Not determined.
- **Upper:** Not determined.

### 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 at 20 °C (68 °F):** 0.0952 mPas
- **Kinematic:** Not determined.
- **Water:** 98.4 %
- **VOC content:** 0.00 %

### Solids content:

- **1.6 %**

### Other information

- **No further relevant information available.**

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### 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.

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### 11 Toxicological information

**Information on toxicological effects**

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

- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** No irritating effect.

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

- **Additional toxicological information:**
  - The product is not subject to classification according to internally approved calculation methods for preparations:

**Carcinogenic categories**

- **IARC (International Agency for Research on Cancer):** None of the ingredients are listed.
- **NTP (National Toxicology Program):** None of the ingredients are listed.
12 Ecological information

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

13 Disposal considerations

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

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

14 Transport information

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

| UN proper shipping name | None |
| DOT, ADR, ADN, IMDG, IATA | Void |

| Transport hazard class(es) | None |

(Contd. on page 6)
Trade name: RPMI 1640 Medium

DOT, ADR, ADN, IMDG, IATA
Class: Void

Packing group
DOT, ADR, IMDG, IATA: None

Environmental hazards:
Marine pollutant: No

Special precautions for user
Not applicable.

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

UN "Model Regulation": Void

15 Regulatory information

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

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

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

TSCA (Toxic Substances Control Act) Inventory:
All ingredients are listed.

Hazardous Air Pollutants
None of the ingredients are listed.

Proposition 65
Chemicals known to cause cancer:
None of the ingredients are listed.

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

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

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

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

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

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

GHS label elements Void
Signal word Void
Hazard statements Void

(Contd. on page 7)
Trade name: RPMI 1640 Medium

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

Date of preparation / last revision 08/19/2019 / -

Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: Internation Civil Aviation Organization
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

* Data compared to the previous version altered.