## 1 Identification

**Product identifier**

*Trade name:* **Dual-Glo® Stop & Glo® Buffer**

*Article number:* E314

*Relevant identified uses of the substance or mixture and uses advised against:* No further relevant information available.

*Application of the substance / the preparation* Laboratory chemicals

*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*

*Classification according to Regulation (EC) No 1272/2008*

- **GHS08 Health hazard**

  **H361** Suspected of damaging fertility or the unborn child.

*Label elements*

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

The product is classified and labeled according to the CLP regulation.

*Hazard pictograms* GHS08

*Signal word* Warning

*Hazard statements*

H361 Suspected of damaging fertility or the unborn child.

*Precautionary statements*

P281 Use personal protective equipment as required.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P308 + P313 If exposed or concerned: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)
Trade name: Dual-Glo® Stop & Glo® Buffer

Classification system:
NFPA ratings (scale 0 - 4)
Health = 1
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.

3 Composition/Information on ingredients

Chemical characterization: Mixtures
Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical Name</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>13291-61-7</td>
<td>1,2-Diaminocyclohexane-N,N,N',N'-tetraacetic acid monohydrate</td>
<td>&lt;2.50%</td>
</tr>
<tr>
<td>67-56-1</td>
<td>Methanol</td>
<td>&lt;2.50%</td>
</tr>
<tr>
<td>62-56-6</td>
<td>Thiourea</td>
<td>&lt;1.00%</td>
</tr>
</tbody>
</table>

4 First-aid measures

Description of first aid measures
General Information: No special measures required.
After Inhalation: Supply fresh air; consult doctor in case of complaints.
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 symptoms persist consult doctor.
Information for doctor:
Most Important symptoms and effects, both acute and delayed None
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
Advice for firefighters
No special advice
No special advice

(Contd. on page 3)
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:
67-56-1 methanol

| PEL | 260 mg/m³, 206 ppm |
| REL | Short-term value: 325 mg/m³, 250 ppm |
|     | Long-term value: 260 mg/m³, 200 ppm |
| Skin| |
| TLV | Short-term value: 328 mg/m³, 250 ppm |
|     | Long-term value: 262 mg/m³, 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: Ensure that washing facilities are available at the workplace.
Breathing equipment: Not required.

(Contd. on page 4)
### 9 Physical and chemical properties

#### Information on basic physical and chemical properties

**General Information:**

**Appearance:**
- **Form:** Fluid
- **Color:** Colorless
- **Odor:** Characteristic
- **Odour threshold:** Not determined.

**pH-value at 20 °C (68 °F):** 5.5

**Change in condition:**
- **Melting point/Melting range:** Undetermined
- **Boiling point/Boiling range:** 100 °C (212 °F)

**Flash point:** Not applicable.

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

**Ignition temperature:**
- **Decomposition temperature:** Not determined.
- **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):** 1.0186 g/cm³ (8.5 lbs/gal)

**Relative density:** Not determined.

**Vapour density:** Not determined.

**Evaporation rate:** Not determined.

**Solubility in / Miscibility with Water:** Fully miscible.

**Partition coefficient (n-octanol/water):** Not determined.

**Viscosity:**
- **Dynamic:** Not determined.
- **Kinematic:** Not determined.

**Solvent content:**
- **Organic solvents:** 2.0%
- **Water:** 92.6%
Safety Data Sheet
acc. to OSHA HCS

Trade name: Dual-Glo® Stop & Glo® Buffer

| VOC content: | 2.0 % |
| Solid content: | 5.2 % |
| Other information | No further relevant information available. |

10 Stability and reactivity

Reactivity
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: 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:
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>IARC (International Agency for Research on Cancer)</th>
</tr>
</thead>
<tbody>
<tr>
<td>62-56-6 thiourea</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NTP (National Toxicology Program)</th>
</tr>
</thead>
<tbody>
<tr>
<td>62-56-6 thiourea</td>
</tr>
</tbody>
</table>

12 Ecological information

Toxicity
Aquatic toxicity: Not harmful to the aquatic environment
Persistence and degradability: Not available
Behavior in environmental systems:
Bioaccumulative potential: Not known
Mobility in soil: No further relevant information available.
Ecotoxic effects:
Remark: Not available
Additional ecological information:
General notes: Generally not hazardous for water
Results of PBT and vPvB assessment
PBT: Not applicable.

(Contd. on page 6)
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>None</th>
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</thead>
<tbody>
<tr>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Void</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Packing group</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT, ADR, IMDG, IATA</td>
<td>Void</td>
</tr>
</tbody>
</table>

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":

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
62-56-6 thiourea

TSCA (Toxic Substances Control Act):
All ingredients are listed.
Trade name: Dual-Glo® Stop & Glo® Buffer

**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

Carcinogenicity categories

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

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

**MAK (German Maximum Workplace Concentration)**

<table>
<thead>
<tr>
<th>Compound</th>
<th>MAK Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiourea</td>
<td>62-56-6</td>
</tr>
<tr>
<td>Nonylphenol Ethoxylate</td>
<td>127087-87-6</td>
</tr>
</tbody>
</table>

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

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

National 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 MSDS:**
Promega Corporation
Environmental Health and Safety Department
2800 Woods Hollow Road
Madison, WI
Ph: (608) 274-4350

**Abbreviations and acronyms:**
- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- ICAO: International Civil Aviation Organization
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- ACGIH: American Conference of Governmental Industrial Hygienists
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- VOC: Volatile Organic Compounds (USA, EU)
Trade name: Dual-Glo® Stop & Glo® Buffer

LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
* Data compared to the previous version altered.