## Kit Components

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A2380</strong></td>
<td>Wizard® MagneSil Tfx™ System, 4x96 preps</td>
</tr>
</tbody>
</table>

Components:

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A164</td>
<td>MagneSil® Red</td>
</tr>
<tr>
<td>A219D</td>
<td>Endotoxin Removal Resin</td>
</tr>
<tr>
<td>A220A</td>
<td>MagneSil® Paramagnetic Particles</td>
</tr>
<tr>
<td>A222</td>
<td>4/40 Wash Solution</td>
</tr>
<tr>
<td>A711</td>
<td>Cell Resuspension Solution (CRA)</td>
</tr>
<tr>
<td>A712</td>
<td>Cell Lysis Solution (CLA)</td>
</tr>
<tr>
<td>A7131</td>
<td>Neutralization Solution (NSA), 150ml</td>
</tr>
<tr>
<td>P119</td>
<td>Nuclease-Free Water</td>
</tr>
</tbody>
</table>
1 Identification

Product identifier
Trade name: MagneSil® Red

Article number: A164
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

GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 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
Signal word Warning

Hazard-determining components of labeling:
guanidinium chloride

Hazard statements
Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.

Precautionary statements
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves / eye protection / face protection.
If swallowed: Call a poison center/doctor if you feel unwell.

(Contd. on page 2)
Trade name: MagneSil® Red

If on skin: Wash with plenty of water.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Rinse mouth.
Take off contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
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
OSHAA Hazard Overview (Criteria according to 29CFR1910.1200):
Toxic
Irritant
Primary route(s) of entry:
Dermal
Oral
Target Organ(s):
May affect Nervous system (Neurotoxin)
May affect Bones
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 a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances may be withheld as a Promega Corp. trade secret.

Dangerous components:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>% Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-01-1 guanidinium chloride</td>
<td>59.23%</td>
</tr>
<tr>
<td>1309-37-1 iron trioxide</td>
<td>1-5%</td>
</tr>
</tbody>
</table>

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:
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.
Trade name: MagneSil® Red

After skin contact:
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:
Seek immediate medical advice.

Information for doctor:
Most important symptoms and effects, both acute and delayed: Dizziness
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

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures:
Remove persons from danger area.
Wear protective clothing.

Environmental precautions:
Dilute with plenty of water.
Do not allow to enter sewers/surface or ground water.

Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to Section 13.
Ensure adequate ventilation.

Reference to other sections:
See Section 7 for information on safe handling.
See Section 13 for disposal information.

7 Handling and storage

Handling:
Precautions for safe handling:
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

Information about protection against explosions and fires:
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:
Keep receptacle tightly sealed.
**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 and skin. Do not eat or drink while working. Clean skin thoroughly immediately after handling the product.

**Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

**Protection of hands:**
Protective gloves
Select the glove material considering penetration time, rate of diffusion and degradation time. It is recommended that the selected protective gloves be tested and approved under NIOSH or EU Directive 89/686/EEC and the standard EN 374 derived from it.

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

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

**9 Physical and chemical properties**

**Information on basic physical and chemical properties**

**General Information**

**Appearance:**

<table>
<thead>
<tr>
<th>Form</th>
<th>Fluid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Not determined</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>

**pH-value at 20 °C (68 °F):**

| 5.4 |

**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. |
Trade name: MagneSil® Red

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.

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.
- Water: 32.8 %
- VOC content: 0.00 %

Solids content: 70.4 %

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: Reacts with strong acids and oxidizing agents.

Conditions to avoid: No further relevant information available.

Incompatible materials: Oxidizing 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:

<table>
<thead>
<tr>
<th>50-01-1 guanidinium chloride</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>LD50</td>
</tr>
<tr>
<td>Irritation of eyes</td>
<td>acute</td>
</tr>
<tr>
<td></td>
<td>Severe Irritation</td>
</tr>
</tbody>
</table>

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:

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

Harmful
Trade name: MagneSil® Red

Irritant

Carcinogenic categories

IARC (International Agency for Research on Cancer)
- 7631-86-9 silicon dioxide: Category 3
- 1309-37-1 iron trioxide: Category 3

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
Behavior in environmental systems:
Bioaccumulative potential: Not known
Mobility in soil: No further relevant information available.
Ecotoxicological effects:
Remark: Not available

Additional ecological information:
General notes:
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach groundwater, water course or sewage system.

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 cleaning 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)

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

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

### 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**

<table>
<thead>
<tr>
<th>Section 355 (extremely hazardous substances):</th>
<th>None of the ingredients are listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 313 (Specific toxic chemical listings):</td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td>TSCA (Toxic Substances Control Act):</td>
<td>All ingredients are listed.</td>
</tr>
</tbody>
</table>

**Proposition 65**

<table>
<thead>
<tr>
<th>Chemicals known to cause cancer:</th>
<th>None of the ingredients are listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemicals known to cause reproductive toxicity for females:</td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td>Chemicals known to cause reproductive toxicity for males:</td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td>Chemicals known to cause developmental toxicity:</td>
<td>None of the ingredients are listed.</td>
</tr>
</tbody>
</table>

**Carcinogenity categories**

<table>
<thead>
<tr>
<th>EPA (Environmental Protection Agency)</th>
<th>None of the ingredients are listed.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>TLV (Threshold Limit Value established by ACGIH)</th>
<th>1309-37-1 iron trioxide</th>
<th>A4</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>NIOSH-Ca (National Institute for Occupational Safety and Health)</th>
<th>None of the ingredients are listed.</th>
</tr>
</thead>
</table>

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

**Signal word** Warning

**Hazard-determining components of labeling:**

guanidinium chloride

(Contd. on page 8)
Hazard statements
Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.

Precautionary statements
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves / eye protection / face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
If on skin: Wash with plenty of water.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Rinse mouth.
Take off contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations:

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

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

16 Other information

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

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

Date of preparation / last revision 06/22/2018 /

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
(Contd. of page 8)

Trade name: MagneSil® Red

47.0

Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

* Data compared to the previous version altered.
1 Identification

Product identifier
Trade name: Endotoxin Removal Resin

Article number: A219D

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):
Irritant
Sensitizer

Primary route(s) of entry: Dermal
Target Organ(s): Not applicable or unknown
Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.

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

Chemical characterization: Mixtures
Description:
The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances may be withheld as a Promega Corp. trade secret.

Dangerous components:

| 1309-37-1 iron trioxide | <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: 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: Allergic reactions
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
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).
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 measures required.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
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:
Immediately remove all soiled and contaminated clothing.
Do not eat or drink while working.
Clean skin thoroughly immediately after handling the product.
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
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

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): 4
**Change in condition**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point/Melting range</td>
<td>Undetermined</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>
</tbody>
</table>

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

**Ignition temperature:** >370 °C (>698 °F)

**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.

**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.

**Organic solvents:** 0.0 %

**Water:** 89.3 %

**VOC content:** 0.05 %

**Solids content:** 10.3 %

**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: Irritating effect.

(Contd. on page 5)
**Trade name: Endotoxin Removal Resin**

**Sensitization:** Sensitization possible through skin contact.

**Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
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.

**Irritant**

**Carcinogenic categories**

<table>
<thead>
<tr>
<th>IARC (International Agency for Research on Cancer)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7631-86-9 silicon dioxide</td>
<td>3</td>
</tr>
<tr>
<td>1309-37-1 iron trioxide</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NTP (National Toxicology Program)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients are listed.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OSHA-Ca (Occupational Safety &amp; Health Administration)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients are listed.</td>
<td></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:**

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

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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><strong>UN-Number</strong></th>
<th>Not hazardous for transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DOT, ADR, ADN, IMDG, IATA</strong></td>
<td>Void</td>
</tr>
<tr>
<td><strong>UN proper shipping name</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>DOT, ADR, ADN, IMDG, IATA</strong></td>
<td>Void</td>
</tr>
<tr>
<td><strong>Transport hazard class(es)</strong></td>
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</tr>
<tr>
<td><strong>DOT, ADR, ADN, IMDG, IATA</strong></td>
<td>Void</td>
</tr>
<tr>
<td><strong>Packing group</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>DOT, ADR, IMDG, IATA</strong></td>
<td>Void</td>
</tr>
<tr>
<td><strong>Environmental hazards:</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Marine pollutant:</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Special precautions for user</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>UN &quot;Model Regulation&quot;:</strong></td>
<td>Void</td>
</tr>
</tbody>
</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):**
  - All 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):**
  - 1309-37-1 iron trioxide
Trade name: Endotoxin Removal Resin

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

National regulations:

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

16 Other information

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

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

Date of preparation / last revision: 06/22/2018 /

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.
# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/22/2018 Reviewed on 06/22/2018

## 1 Identification

**Product identifier**

Trade name: MagneSil® Paramagnetic Particles

Article number: A220A

**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):**

Irritant

Sensitizer

**Primary route(s) of entry:** Dermal

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

**Other hazards**

**Results of PBT and vPvB assessment**

PBT: Not applicable.

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

Chemical characterization: Mixtures

Description:
The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances may be withheld as a Promega Corp. trade secret.

**Dangerous components:**

| 1309-37-1 iron trioxide | <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: 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: Allergic reactions

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

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).

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 measures required.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
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:
Immediately remove all soiled and contaminated clothing.
Do not eat or drink while working.
Clean skin thoroughly immediately after handling the product.
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
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

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): 4.8
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: >370 °C (>698 °F)
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.
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.
Water: 89.2 %
VOC content: 0.00 %
Solids content: 10.3 %
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: Irritating effect.
Sensitization: Sensitization possible through skin contact.
Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
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.

Irritant

Carcinogenic categories

| IARC (International Agency for Research on Cancer) |  
| 7631-86-9 silicon dioxide | 3  
| 1309-37-1 iron trioxide | 3  

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
Behavior in environmental systems:
Bioaccumulative potential: Not known
Mobility in soil: No further relevant information available.
Ecotoxicological effects:
Remark: Not available

Additional ecological information:

General notes:
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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.
Trade name: MagneSil® Paramagnetic Particles

14 Transport information

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<th>Environmental hazards:</th>
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<td>Marine pollutant:</td>
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</table>

<table>
<thead>
<tr>
<th>Special precautions for user</th>
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</thead>
<tbody>
<tr>
<td>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</td>
<td>Not applicable.</td>
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</table>

<table>
<thead>
<tr>
<th>UN &quot;Model Regulation&quot;:</th>
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</tr>
</thead>
</table>

15 Regulatory information

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

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):
All 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)

1309-37-1 iron trioxide
Trade name: MagneSil® Paramagnetic Particles

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

National regulations:

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

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

16 Other information

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

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

Date of preparation / last revision 06/22/2018 / -

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
TLF: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

* Data compared to the previous version altered.
1 Identification

Product identifier
Trade name: 4/40 Wash Solution
Article number: A222
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

GHS07
Acute Tox. 4 H302 Harmful if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 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
Signal word Warning

Hazard-determining components of labeling:
guanidinium chloride

Hazard statements
Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.

Precautionary statements
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves / eye protection / face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Trade name: 4/40 Wash Solution

(Contd. of page 1)

If on skin: Wash with plenty of water.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Rinse mouth.
Take off contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
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):
Toxic
Irritant

Primary route(s) of entry:
Dermal
Oral

Target Organ(s):
May affect Nervous system (Neurotoxin)
May affect Bones

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 a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances may be withheld as a Promega Corp. trade secret.

Dangerous components:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-01-1 guanidinium chloride</td>
<td>66.83%</td>
</tr>
</tbody>
</table>

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:
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.
If skin irritation continues, consult a doctor.

(Contd. on page 3)
Safety Data Sheet
acc. to OSHA HCS

Trade name: 4/40 Wash Solution

After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:
Immediately call a doctor.
Seek immediate medical advice.

Information for doctor:
Most important symptoms and effects, both acute and delayed Dizziness
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

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Remove persons from danger area.
Wear protective clothing.

Environmental precautions:
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to Section 13.
Ensure adequate ventilation.

Reference to other sections
See Section 7 for information on safe handling.
See Section 13 for disposal information.

7 Handling and storage

Handling:
Precautions for safe handling
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

Information about protection against explosions and fires: 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: 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 and skin.
Do not eat or drink while working.
Clean skin thoroughly immediately after handling the product.

Breathing equipment:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use
respiratory protective device that is independent of circulating air.

Protection of hands:
Protective gloves
Select the glove material considering penetration time, rate of diffusion and degradation time.
It is recommended that the selected protective gloves be tested and approved under NIOSH or EU Directive
89/686/EEC and the standard EN 374 derived from it.

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

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

9 Physical and chemical properties

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

pH-value at 20 °C (68 °F): 5.2

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.

Auto igniting: Product is not selfigniting.
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
Reacts with strong acids and oxidizing agents.

Conditions to avoid
No further relevant information available.

Incompatible materials: Oxidizing agents

Hazardous decomposition products:
Hydrogen chloride (HCl)
Nitrogen oxides (NOx)

11 Toxicological information

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification:

<table>
<thead>
<tr>
<th>50-01-1 guanidinium chloride</th>
<th>LD50/LC50</th>
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<tbody>
<tr>
<td>Oral</td>
<td>475 mg/kg (Rat)</td>
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<tr>
<td>Irritation of eyes</td>
<td>500 mg (Rabbit)</td>
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</table>

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
**Trade name:** 4/40 Wash Solution

### 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.
- **Ecotoxicological effects:**
- **Remark:** Not available
- **Additional ecological information:**
- **General notes:**
  - Water hazard class 1 (Self-assessment): slightly hazardous for water
  - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**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:** Hand over to hazardous waste disposers.

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

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

### 14 Transport information

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**Transport hazard class(es)**
- **DOT, ADR, ADN, IMDG, IATA** None

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**Packing group**
- **None**

*(Contd. on page 7)*
**Trade name:** 4/40 Wash Solution

**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):**
None of the ingredients are listed.

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

**TSCA (Toxic Substances Control Act):**
All 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**
The product is classified and labeled according to the Globally Harmonized System (GHS).

**Signal word** Warning

**Hazard-determining components of labeling:**
guanidinium chloride

**Hazard statements**
Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.

**Precautionary statements**
Wash thoroughly after handling.
Trade name: 4/40 Wash Solution

Do not eat, drink or smoke when using this product. Wear protective gloves / eye protection / face protection. If swallowed: Call a poison center/doctor if you feel unwell. If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse mouth. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations:

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

16 Other information

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

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

Date of preparation / last revision 06/22/2018 / -

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)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
dPvB: 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
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

* Data compared to the previous version altered.
1 Identification

Product identifier
Trade name: Cell Resuspension Solution (CRA)
Article number: A711
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.
Trade name: Cell Resuspension Solution (CRA)

3 Composition/information on ingredients

**Chemical characterization:** Mixtures

**Description:**
The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances 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** Dizziness

**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

**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.
Trade name: Cell Resuspension Solution (CRA)

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.
pH-value at 20 °C (68 °F): 7.5
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.
### 10 Stability and reactivity

<table>
<thead>
<tr>
<th>Reactivity</th>
<th>No further relevant information available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical stability</td>
<td></td>
</tr>
<tr>
<td>Thermal decomposition / conditions to be avoided</td>
<td>No decomposition if used according to specifications.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>No dangerous reactions known.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>No further relevant information available.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>No further relevant information available.</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>No dangerous decomposition products known.</td>
</tr>
</tbody>
</table>

### 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

| 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 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.
Ecotoxicological effects:
Remark: Not available
Additional ecological information:
   General notes: Generally not hazardous for 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 |
| 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. |
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):
All 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

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

**Date of preparation / last revision**: 06/22/2018 / -

**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: Cell Lysis Solution (CLA)*

**Article number:** A712

**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)

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**2 Hazard(s) identification**

**Classification of the substance or mixture**

*GHS08 Health hazard*

STOT SE 2 H371 May cause damage to organs.

**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-determining components of labeling:**

sodium dodecyl sulphate

**Hazard statements**

May cause damage to 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.  
IF exposed or concerned: Call a poison center/doctor.  
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: Cell Lysis Solution (CLA)

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

OSHA Hazard Overview (Criteria according to 29CFR1910.1200):
Toxic
Irritant

Primary route(s) of entry:
Dermal
Oral

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 a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances may be withheld as a Promega Corp. trade secret.

Dangerous components:
- 151-21-3 sodium dodecyl sulphate <2%
- 1310-73-2 sodium hydroxide <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:
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
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.

Information for doctor:
Most important symptoms and effects, both acute and delayed Dizziness
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
Trade name: Cell Lysis Solution (CLA)

Advice for firefighters: No special advice

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures:
Remove persons from danger area.
Wear protective clothing.

Environmental precautions:
Dilute with plenty of water.
Do not allow to enter sewers/surface or ground water.

Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
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:
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

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:
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 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.

1310-73-2 sodium hydroxide

PEL: Long-term value: 2 mg/m³
REL: Ceiling limit value: 2 mg/m³
TLV: Ceiling limit value: 2 mg/m³

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 and skin.  
Do not eat or drink while working. 
Clean skin thoroughly immediately after handling the product.  

**Breathing equipment:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.  

**Protection of hands:**  
Protective gloves  
Select the glove material considering penetration time, rate of diffusion and degradation time.  
It is recommended that the selected protective gloves be tested and approved under NIOSH or EU Directive 89/686/EEC and the standard EN 374 derived from it.  

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

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

---  

**9 Physical and chemical properties**  

| Information on basic physical and chemical properties  
| General Information  
| **Appearance:**  
| Form: Fluid  
| Color: Colorless  
| Odor: Not determined  
| Odor threshold: Not determined.  
| **pH-value at 20 °C (68 °F):** 11  
| 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.  
| Vapor pressure: Not determined.  
| Density at 20 °C (68 °F): 1.00304 g/cm³ (8.37037 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.  

(Contd. on page 5)
Trade name: Cell Lysis Solution (CLA)

Viscosity:
- Dynamic: Not determined.
- Kinematic: Not determined.
- Water: 98.2 %
- VOC content: 0.00 %
- Solids content: 1.8 %
- 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.
  - 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: No data available
    - LD/LC50 values that are relevant for classification
  - Primary irritant effect:
    - on the skin: Irritant to skin and mucous membranes.
    - on the eye: Irritating effect.
  - Sensitization: No sensitizing effects known.
- Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
  - 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
  - Behavior in environmental systems:
  - Bioaccumulative potential: Not known
  - Mobility in soil: No further relevant information available.
- Ecotoxicological effects:
- Remark: No available
Additional ecological information:

General notes:
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach groundwater, water course or sewage system.

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

DOT, ADR, ADN, IMDG, IATA: Void

UN proper shipping name
DOT, ADR, ADN, IMDG, IATA: None

DOT, ADR, ADN, IMDG, IATA: Void

Transport hazard class(es)
DOT, ADR, ADN, IMDG, IATA: None

DOT, ADR, ADN, IMDG, IATA: Void

Packing group
DOT, ADR, IMDG, IATA: 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):
None of the ingredients are listed.
Trade name: Cell Lysis Solution (CLA)

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

TSCA (Toxic Substances Control Act):
All 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 The product is classified and labeled according to the Globally Harmonized System (GHS).

Signal word Warning

Hazard-determining components of labeling:
sodium dodecyl sulphate

Hazard statements
May cause damage to 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.
If exposed or concerned: Call a poison center/doctor.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations:

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

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

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

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

Date of preparation / last revision 06/22/2018 / -

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
STOT SE 2: Specific target organ toxicity (single exposure) – Category 2
* Data compared to the previous version altered.
1 Identification

Product identifier
Trade name: Neutralization Solution (NSA)

Article number: A713
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

GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

Label elements
GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
Hazard pictograms GHS05
Signal word Danger

Hazard-determining components of labeling:
acetic acid

Hazard statements
Causes severe skin burns and eye damage.

Precautionary statements
Do not breathe dusts or mists.
Wash thoroughly after handling.
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.

(Contd. on page 2)
Trade name: Neutralization Solution (NSA)

Wash contaminated clothing before reuse.
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):
Highly Toxic
Corrosive

Primary route(s) of entry:
Dermal
Inhalation
Oral
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 a mixture of the hazardous substances listed below along with unlisted nonhazardous substances.
The exact concentration percentages of the hazardous substances may be withheld as a Promega Corp. trade secret.

Dangerous components:
64-19-7 acetic acid 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:
Immediately remove any clothing soiled by the product.
Seek medical treatment.
After inhalation: In case of unconsciousness place patient stably in side position for transportation.
After skin contact:
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
After eye contact: Call a doctor immediately.
After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a doctor.
Information for doctor:
Most important symptoms and effects, both acute and delayed Dizziness
**Trade name: Neutralization Solution (NSA)**

**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** 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:**
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**
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 Open and handle receptacle with care.
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: 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:

<table>
<thead>
<tr>
<th>Component</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-19-7 acetic acid</td>
<td>PEL Long-term value: 25 mg/m³, 10 ppm</td>
</tr>
</tbody>
</table>

(Contd. on page 4)
**Safety Data Sheet**  
acc. to OSHA HCS  

**Trade name:** Neutralization Solution (NSA)  

**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:** Not required.

**Protection of hands:**

Protective gloves
- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- 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:**
- Tightly sealed goggles
- 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):** 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:** 485 °C (905 °F)
**Decomposition temperature:** Not determined.

**Auto igniting:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.
Trade name: Neutralization Solution (NSA)

**Explosion limits:**
- Lower: Not determined.
- Upper: Not determined.
- Vapor pressure: Not determined.

**Density at 20 °C (68 °F):** 0.9515 g/cm³ (7.94027 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: 80.0 %
- VOC content: 7.00 %

**Solids content:** 13.0 %
- 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.

### 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: Caustic effect on skin and mucous membranes.
- on the eye: Strong caustic effect.
- Irritating effect.
- Sensitization: No sensitizing effects known.

**Additional toxicological information:**
- The product shows the following dangers according to internally approved calculation methods for preparations:
  - Corrosive
  - Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
Trade name: Neutralization Solution (NSA)  

Carcinogenic categories

<table>
<thead>
<tr>
<th>Agency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC (International Agency for Research on Cancer)</td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td>NTP (National Toxicology Program)</td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td>OSHA-Ca (Occupational Safety &amp; Health Administration)</td>
<td>None of the ingredients are listed.</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.
Ecotoxicological effects:
Remark: Not available
Additional ecological information:
General notes:
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
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>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Not hazardous for transportation</td>
</tr>
<tr>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Void</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UN proper shipping name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Void</td>
</tr>
</tbody>
</table>
### 15 Regulatory information

**Sara**

<table>
<thead>
<tr>
<th>Section 355 (extremely hazardous substances):</th>
<th>None of the ingredients are listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 313 (Specific toxic chemical listings):</td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td>TSCA (Toxic Substances Control Act):</td>
<td>All ingredients are listed.</td>
</tr>
<tr>
<td>Proposition 65</td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td><strong>Chemicals known to cause cancer:</strong></td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td><strong>Chemicals known to cause reproductive toxicity for females:</strong></td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td><strong>Chemicals known to cause reproductive toxicity for males:</strong></td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td><strong>Chemicals known to cause developmental toxicity:</strong></td>
<td>None of the ingredients are listed.</td>
</tr>
</tbody>
</table>

**Cancerogenity categories**

<table>
<thead>
<tr>
<th>EPA (Environmental Protection Agency)</th>
<th>None of the ingredients are listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLV (Threshold Limit Value established by ACGIH)</td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td><strong>NIOSH-Ca (National Institute for Occupational Safety and Health)</strong></td>
<td>None of the ingredients are listed.</td>
</tr>
</tbody>
</table>

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

**Signal word** Danger

**Hazard-determining components of labeling:**

- acetic acid
Trade name: Neutralization Solution (NSA)

Hazard statements
Causes severe skin burns and eye damage.

Precautionary statements
Do not breathe dusts or mists.
Wash thoroughly after handling.
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 locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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

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

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

Date of preparation / last revision 06/22/2018 /

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
tvPvB: 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 Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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

**Product identifier**

Trade name: Nuclease-Free Water

**Article number:** P119

**CAS Number:**

7732-18-5

**EC number:**

231-791-2

**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 vPoB assessment**

PBT: Not applicable.

(Contd. on page 2)
Trade name: Nuclease-Free Water

vPvB: Not applicable.

### 3 Composition/information on ingredients

**Chemical characterization: Substances**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7732-18-5</td>
<td>water</td>
</tr>
</tbody>
</table>

**Identification number(s)**

| EC number: | 231-791-2 |

### 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: Dizziness
- Indication of any immediate medical attention and special treatment needed: None

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

**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.
**Trade name:** Nuclease-Free Water

**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:** 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:** Odorless

**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:** 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 at 20 °C (68 °F):** 1 g/cm³ (8.345 lbs/gal)

**Relative density** Not determined.

**Vapor density** Not determined.

**Evaporation rate** Not determined.
**Trade name: Nuclease-Free Water**

<table>
<thead>
<tr>
<th>Solubility in / Miscibility with</th>
<th>Fully miscible.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td></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 at 20 °C (68 °F):</td>
<td>0.0952 mPas</td>
</tr>
<tr>
<td>Kinematic:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Water:</td>
<td>100.0 %</td>
</tr>
<tr>
<td>VOC content:</td>
<td>0.00 %</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**: No data available
  - **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**:
    - 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.
    - 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 harmful to the aquatic environment
  - **Persistence and degradability**: Not available
  - **Behavior in environmental systems**: Not known
  - **Bioaccumulative potential**: Not known

(Contd. on page 5)
**Safety Data Sheet**  
*acc. to OSHA HCS*

**Trade name:** Nuclease-Free Water

(Contd. of page 4)

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

**Ecotoxicical effects:**

**Remark:** Not available

**Additional ecological information:**

**General notes:** Generally not hazardous for 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><strong>UN-Number</strong></th>
<th>Not hazardous for transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DOT, ADR, ADN, IMDG, IATA</strong></td>
<td>Void</td>
</tr>
<tr>
<td><strong>UN proper shipping name</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>DOT, ADR, IMDG, IATA</strong></td>
<td>Void</td>
</tr>
<tr>
<td><strong>ADN</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Transport hazard class(es)</strong></td>
<td>None</td>
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<tr>
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<td>Void</td>
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<td><strong>Class</strong></td>
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<tr>
<td><strong>Packing group</strong></td>
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<td><strong>DOT, ADR, IMDG, IATA</strong></td>
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<tr>
<td><strong>Environmental hazards:</strong></td>
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<tr>
<td><strong>Marine pollutant:</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Special precautions for user</strong></td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

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

**UN "Model Regulation":** Void

(Contd. on page 6)
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):
Substance is 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

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 SDS:
Promega Corporation
Environmental Health and Safety Department
2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330
Date of preparation / last revision 06/22/2018 / -
Trade name: Nuclease-Free Water

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
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.