

## Kit components

Product PureYield™Plasmid Midiprep System, 100 Prep

Product code A2495

<b>Substance number</b>	<b>Description</b>	<b>Amount</b>	<b>Symbols</b>
A711	Cell Resuspension Solution (CRA)	1	-
A712	Cell Lysis Solution (CLA)	1	Xi
A148	Neutralization Solution (NSA)	1	Xn
A251	Endotoxin Removal Wash	1	Xn
A252	Column Wash	2	-
P119	Nuclease-Free Water	4	-
A245	PureYield™Binding Columns - article, MSDS not available	10	-
A246	PureYield™Clearing Columns Article, MSDS not available.	10	-



**Material Safety Data Sheet**  
*acc. to ISO/DIS 11014*

Printing date 06/15/2009

Reviewed on 06/15/2009

\* **1 Identification of substance**

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

**Article number:** A711

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

**Manufacturer/Supplier:**

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

**MSDS author:** Regulatory.Affairs@promega.com

**Emergency information:**

CHEMTREC 1-800-424-9300

for call originating outside the United States dial 001-703-527-3887

**2 Composition/Data on components**

**Chemical characterization**

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:** Void

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

\* **3 Hazards identification**

**Hazard description:** Not applicable. Product has been classified as non-hazardous.

**Information pertaining to particular dangers for man and environment:**

The product does not have to be labelled due to the calculation procedure of international guidelines.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**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

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

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

(Contd. of page 1)

## 4 First aid measures

**General information:** No special measures required.

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Generally the product does not irritate the skin.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If symptoms persist consult doctor.

## 5 Fire fighting measures

**Suitable extinguishing agents:**

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

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

## 6 Accidental release measures

**Person-related safety precautions:** Not required.

**Measures for environmental protection:** No special measures required.

**Measures for cleaning/collecting:**

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

**Additional information:** No dangerous substances are released.

## 7 Handling and storage

**Handling:**

**Information for safe handling:** No special measures required.

**Information about protection against explosions and fires:** No special measures required.

**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.

## 8 Exposure controls and personal protection

**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.

**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:**

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

(Contd. on page 3)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

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

(Contd. of page 2)

### 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:** Goggles recommended during refilling.

## 9 Physical and chemical properties

### General Information

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic

### Change in condition

<b>Melting point/Melting range:</b>	0°C (32°F)
<b>Boiling point/Boiling range:</b>	100°C (212°F)

**Flash point:** Not applicable.

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

**Danger of explosion:** Product does not present an explosion hazard.

**Density at 20°C (68°F):** 1 g/cm<sup>3</sup>

### Solubility in / Miscibility with

**Water:** Not miscible or difficult to mix.

**pH-value at 20°C (68°F):** 13

### Solvent content:

<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	98.9 %

**Solids content:** 1.1 %

## 10 Stability and reactivity

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

**Dangerous reactions** No dangerous reactions known.

**Dangerous products of decomposition:** No dangerous decomposition products known.

## 11 Toxicological information

### Acute toxicity:

#### 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:

(Contd. on page 4)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

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

(Contd. of page 3)

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.

## 12 Ecological information

**General notes:**

Generally not hazardous for water

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

## 13 Disposal considerations

**Product:**

**Recommendation:**

Smaller quantities can be disposed of with household waste.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packagings:**

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

## 14 Transport information

Contact Promega Safety Department for additional transportation information

**DOT regulations:** Not regulated

**Hazard class:** -

**Land transport ADR/RID (cross-border):** Not regulated

**ADR/RID class:** -

**UN-Number:** Not regulated

**Maritime transport IMDG:**

**IMDG Class:** -

**Marine pollutant:** No

**Air transport ICAO-TI and IATA-DGR:**

**ICAO/IATA Class:** -

## 15 Regulations

**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.

(Contd. on page 5)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

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

(Contd. of page 4)

**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.

**Carcinogenicity categories****EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

**NTP (National Toxicology Program)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

**MAK (German Maximum Workplace Concentration)**

None of the ingredients are listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

**Product related hazard informations:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

**National regulations:****Water hazard class:** Generally not hazardous for water.

## 16 Other information

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

**Department issuing MSDS:**

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

\* Data compared to the previous version altered.

**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**1 Identification of substance**

**Trade name:** Cell Lysis Solution (CLA)

**Article number:** A712

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

**Manufacturer/Supplier:**

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

**MSDS author:** Regulatory.Affairs@promega.com

**Emergency information:**

CHEMTREC 1-800-424-9300

for call originating outside the United States dial 001-703-527-3887

**2 Composition/Data on components**

**Chemical characterization**

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**

151-21-3	sodium dodecyl sulphate	<2.00%
1310-73-2	sodium hydroxide	<1.00%

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

**3 Hazards identification**

**Hazard description:**



Xi Irritant

**Information pertaining to particular dangers for man and environment:**

Irritating to eyes and skin.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**NFPA ratings (scale 0 - 4)**

Health = 1

Fire = 0

Reactivity = 0

(Contd. on page 2)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Cell Lysis Solution (CLA)**

(Contd. of page 1)

**HMIS-ratings (scale 0 - 4)**

Health = 1

Fire = 0

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** Irritant**Primary route(s) of entry:**

Dermal

Oral

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

## 4 First aid measures

*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.*After eye contact:*

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

*After swallowing:* If symptoms persist consult doctor.

## 5 Fire fighting measures

**Suitable extinguishing agents:**CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

## 6 Accidental release measures

**Person-related safety precautions:** Not required.**Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.**Measures for cleaning/collecting:**

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

Ensure adequate ventilation.

## 7 Handling and storage

**Handling:****Information for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

No special precautions are necessary if used correctly.

**Information about protection against explosions and fires:** No special measures required.**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.

USA

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

Trade name: Cell Lysis Solution (CLA)

(Contd. of page 2)

## 8 Exposure controls and personal protection

**Components with limit values that require monitoring at the workplace:**

**1310-73-2 sodium hydroxide**

PEL	2 mg/m <sup>3</sup>
REL	Short-term value: C 2 mg/m <sup>3</sup>
TLV	Short-term value: C 2 mg/m <sup>3</sup>

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

**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.

**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

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**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

## 9 Physical and chemical properties

**General Information**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic

**Change in condition**

**Melting point/Melting range:** 0°C (32°F)

**Boiling point/Boiling range:** 100°C (212°F)

**Flash point:** Not applicable.

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

**Danger of explosion:** Product does not present an explosion hazard.

**Density at 20°C (68°F):** 1 g/cm<sup>3</sup>

**Solubility in / Miscibility with**

**Water:** Not miscible or difficult to mix.

**pH-value at 20°C (68°F):** 13

**Solvent content:**

**Organic solvents:** 0.0 %

**Water:** 98.2 %

(Contd. on page 4)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Cell Lysis Solution (CLA)**

(Contd. of page 3)

**Solids content:** 1.8 %

## 10 Stability and reactivity

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

**Dangerous reactions** No dangerous reactions known.

**Dangerous products of decomposition:** No dangerous decomposition products known.

## 11 Toxicological information

**Acute toxicity:**

**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

## \* 12 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.

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

## 13 Disposal considerations

**Product:**

**Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packagings:**

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

## \* 14 Transport information

Contact Promega Safety Department for additional transportation information

**DOT regulations:** Not regulated

**Hazard class:** -

**Land transport ADR/RID (cross-border):** Not regulated

**UN-Number:** Not regulated

(Contd. on page 5)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Cell Lysis Solution (CLA)**

(Contd. of page 4)

**Maritime transport IMDG:**  
**Marine pollutant:**

No

## 15 Regulations

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.

**Carcinogen categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

**NTP (National Toxicology Program)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

**MAK (German Maximum Workplace Concentration)**

None of the ingredients are listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

**Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

**Hazard symbols:**

Xi Irritant

**Risk phrases:**

Irritating to eyes and skin.

(Contd. on page 6)

**Material Safety Data Sheet**  
*acc. to ISO/DIS 11014*

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Cell Lysis Solution (CLA)**

(Contd. of page 5)

**Safety phrases:**

*Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).*

*In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.*

*Wear suitable gloves.*

*This material and its container must be disposed of as hazardous waste.*

**National regulations:**

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

**16 Other information**

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

**Department issuing MSDS:**

*Promega Corporation*

*Environmental Health and Safety Department*

*2800 Woods Hollow Road*

*Madison, WI*

*Ph: (608)274-4330*

**\* Data compared to the previous version altered.**

USA

**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**1 Identification of substance**

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

**Article number:** A148

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

**Manufacturer/Supplier:**

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

**MSDS author:** Regulatory.Affairs@promega.com

**Emergency information:**

CHEMTREC 1-800-424-9300

for call originating outside the United States dial 001-703-527-3887

**2 Composition/Data on components**

**Chemical characterization**

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**

50-01-1	guanidinium chloride	25-50%
64-19-7	acetic acid	10-15%

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

**3 Hazards identification**

**Hazard description:**



Xn Harmful

**Information pertaining to particular dangers for man and environment:**

Harmful if swallowed.

Irritating to eyes and skin.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**NFPA ratings (scale 0 - 4)**

Health = 2

Fire = 0

Reactivity = 0

(Contd. on page 2)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

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

(Contd. of page 1)

**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 cause Kidney damage (Nephrotoxin)

Risk of damage to eyes

Affects Teeth

May affect Bones

## 4 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:** In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:**

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

**After swallowing:** Immediately call a doctor.

## 5 Fire fighting measures

**Suitable extinguishing agents:**

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

## \* 6 Accidental release measures

**Person-related safety precautions:** Not required.

**Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.

**Measures for cleaning/collecting:**

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

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

## 7 Handling and storage

**Handling:**

**Information for safe handling:**

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

No special precautions are necessary if used correctly.

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

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

(Contd. of page 2)

**Information about protection against explosions and fires:** No special measures required.

**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 and personal protection

**Components with limit values that require monitoring at the workplace:**

**64-19-7 acetic acid**

PEL	25 mg/m <sup>3</sup> , 10 ppm
REL	Short-term value: 37 mg/m <sup>3</sup> , 15 ppm Long-term value: 25 mg/m <sup>3</sup> , 10 ppm
TLV	Short-term value: 37 mg/m <sup>3</sup> , 15 ppm Long-term value: 25 mg/m <sup>3</sup> , 10 ppm

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

**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.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

**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

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**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

## \* 9 Physical and chemical properties

**General Information**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic

**Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 100°C (212°F)

**Flash point:** Not applicable.

**Ignition temperature:** 485°C (905°F)

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

(Contd. on page 4)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

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

(Contd. of page 3)

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**

**Lower:** 4.0 Vol %

**Upper:** 17.0 Vol %

**Vapor pressure at 20°C (68°F):** 16 hPa (12 mm Hg)

**Density at 20°C (68°F):** 1.10895 g/cm<sup>3</sup>

**Solubility in / Miscibility with**

**Water:** Not miscible or difficult to mix.

**pH-value at 20°C (68°F):** 4.2

**Solvent content:**

**Organic solvents:** 12.7 %

**Water:** 40.8 %

**VOC content:** 12.7 %

**Solids content:** 46.5 %

## 10 Stability and reactivity

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

**Dangerous reactions**

Reacts with strong oxidizing agents.

Reacts with strong acids and oxidizing agents.

**Dangerous products of decomposition:**

Carbon monoxide and carbon dioxide

Hydrogen chloride (HCl)

## 11 Toxicological information

**Acute toxicity:**

**LD/LC50 values that are relevant for classification:**

**50-01-1 guanidinium chloride**

Oral	LD50	475 mg/kg (Rat)
Irritation of eyes	acute	500 mg (Rabbit)
		Severe Irritation

**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

Irritant

USA

(Contd. on page 5)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

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

(Contd. of page 4)

## 12 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.*

## \* 13 Disposal considerations

**Product:****Recommendation:**

*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*

**Uncleaned packagings:**

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

## \* 14 Transport information

*Contact Promega Safety Department for additional transportation information*

**DOT regulations:** *Not regulated*

**Hazard class:** ---

**Label:** *Not transport regulated*

**Remarks:** *Not transport regulated.*

**Land transport****ADR/RID**

**(cross-border):** *Not regulated*

**ADR/RID class:** --- (---)

**UN-Number:** *Not regulated*

**Label:** *Not regulated*

**Maritime transport IMDG:**

**Marine pollutant:** *No*

## \* 15 Regulations

**Sara****Section 355 (extremely hazardous substances):**

*None of the ingredients are listed.*

**Section 313 (Specific toxic chemical listings):**

*None of the ingredients are listed.*

(Contd. on page 6)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

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

(Contd. of page 5)

**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.

**Carcinogenicity categories****EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

**NTP (National Toxicology Program)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

**MAK (German Maximum Workplace Concentration)**

None of the ingredients are listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

**Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

**Hazard symbols:**

Xn Harmful

**Hazard-determining components of labelling:**

guanidinium chloride

**Risk phrases:**

Harmful if swallowed.

Irritating to eyes and skin.

**Safety phrases:**

Do not breathe fumes/aerosol.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing and gloves.

This material and its container must be disposed of as hazardous waste.

(Contd. on page 7)

USA

**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

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

(Contd. of page 6)

**National regulations:**

<i>Class</i>	<i>Share in %</i>
<i>Water</i>	<i>40.8</i>
<i>II</i>	<i>12.7</i>

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

**16 Other information**

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

**Department issuing MSDS:**

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

**\* Data compared to the previous version altered.**

USA

**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**1 Identification of substance**

**Trade name:** Endotoxin Removal Wash

**Article number:** A251

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

**Manufacturer/Supplier:**

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

**MSDS author:** Regulatory.Affairs@promega.com

**Emergency information:**

CHEMTREC 1-800-424-9300

for call originating outside the United States dial 001-703-527-3887

**2 Composition/Data on components**

**Chemical characterization**

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**

50-01-1	guanidinium chloride	50-75%
---------	----------------------	--------

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

**3 Hazards identification**

**Hazard description:**



Xn Harmful

**Information pertaining to particular dangers for man and environment:**

Harmful if swallowed.

Irritating to eyes and skin.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**NFPA ratings (scale 0 - 4)**

Health = 2

Fire = 0

Reactivity = 0

(Contd. on page 2)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Endotoxin Removal Wash**

(Contd. of page 1)

**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

## 4 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:** In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:**

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

**After swallowing:** Immediately call a doctor.

## 5 Fire fighting measures

**Suitable extinguishing agents:**

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

## \* 6 Accidental release measures

**Person-related safety precautions:** Not required.

**Measures for environmental protection:**

Dilute with plenty of water.

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

**Measures for cleaning/collecting:**

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

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

## \* 7 Handling and storage

**Handling:**

**Information for safe handling:**

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

No special precautions are necessary if used correctly.

**Information about protection against explosions and fires:** No special measures required.

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Endotoxin Removal Wash**

(Contd. of page 2)

**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 and personal protection

**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.

**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.

**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

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**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

## \* 9 Physical and chemical properties

**General Information**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic

**Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 100°C (212°F)

**Flash point:** Not applicable.

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

**Danger of explosion:** Product does not present an explosion hazard.

**Density at 20°C (68°F):** 1.2278 g/cm<sup>3</sup>

**Solubility in / Miscibility with**

**Water:** Fully miscible.

**pH-value at 20°C (68°F):** 5.2

(Contd. on page 4)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Endotoxin Removal Wash**

(Contd. of page 3)

**Solvent content:**

**Organic solvents:** 0.0 %  
**Water:** 33.0 %

**Solids content:** 67.0 %

## 10 Stability and reactivity

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

**Dangerous reactions** Reacts with strong acids and oxidizing agents.

**Dangerous products of decomposition:**

Hydrogen chloride (HCl)

Nitrogen oxides (NO<sub>x</sub>)

## 11 Toxicological information

**Acute toxicity:****LD/LC50 values that are relevant for classification:****50-01-1 guanidinium chloride**

Oral	LD50	475 mg/kg (Rat)
Irritation of eyes	acute	500 mg (Rabbit) Severe Irritation

**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

Irritant

## 12 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.

## 13 Disposal considerations

**Product:****Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packagings:**

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

(Contd. on page 5)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Endotoxin Removal Wash**

(Contd. of page 4)

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

## 14 Transport information

Contact Promega Safety Department for additional transportation information

**DOT regulations:** Not regulated  
**Hazard class:** -

**Land transport ADR/RID (cross-border):** Not regulated

**ADR/RID class:** -  
**UN-Number:** Not regulated

**Maritime transport IMDG:**  
**IMDG Class:** -  
**Marine pollutant:** No

**Air transport ICAO-TI and IATA-DGR:**  
**ICAO/IATA Class:** -

## 15 Regulations

**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.

**Carcinogenicity categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

**NTP (National Toxicology Program)**

None of the ingredients are listed.

(Contd. on page 6)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Endotoxin Removal Wash**

(Contd. of page 5)

**TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

**MAK (German Maximum Workplace Concentration)**

None of the ingredients are listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

**Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

**Hazard symbols:**

Xn Harmful

**Hazard-determining components of labelling:**

guanidinium chloride

**Risk phrases:**

Harmful if swallowed.

Irritating to eyes and skin.

**Safety phrases:**

Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing and gloves.

This material and its container must be disposed of as hazardous waste.

**National regulations:**

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

**16 Other information**

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

**Department issuing MSDS:**

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

\* Data compared to the previous version altered.

**Material Safety Data Sheet**  
*acc. to ISO/DIS 11014*

Printing date 06/15/2009

Reviewed on 06/15/2009

**1 Identification of substance**

**Trade name:** Column Wash

**Article number:** A252

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

**Manufacturer/Supplier:**

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

**MSDS author:** Regulatory.Affairs@promega.com

**Emergency information:**

CHEMTREC 1-800-424-9300

for call originating outside the United States dial 001-703-527-3887

**2 Composition/Data on components**

**Chemical characterization**

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:** Void

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

**3 Hazards identification**

**Hazard description:** Not applicable. Product has been classified as non-hazardous.

**Information pertaining to particular dangers for man and environment:**

The product does not have to be labelled due to the calculation procedure of international guidelines.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**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

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

Trade name: Column Wash

(Contd. of page 1)

## 4 First aid measures

**General information:** No special measures required.

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Generally the product does not irritate the skin.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If symptoms persist consult doctor.

## 5 Fire fighting measures

**Suitable extinguishing agents:**

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

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

## 6 Accidental release measures

**Person-related safety precautions:** Not required.

**Measures for environmental protection:** Dilute with plenty of water.

**Measures for cleaning/collecting:**

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

**Additional information:** No dangerous substances are released.

## 7 Handling and storage

**Handling:**

**Information for safe handling:** No special measures required.

**Information about protection against explosions and fires:** No special measures required.

**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.

## 8 Exposure controls and personal protection

**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.

**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:**

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

(Contd. on page 3)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Column Wash**

(Contd. of page 2)

### 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:** Goggles recommended during refilling.

## 9 Physical and chemical properties

### General Information

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic

### Change in condition

<b>Melting point/Melting range:</b>	0°C (32°F)
<b>Boiling point/Boiling range:</b>	100°C (212°F)

**Flash point:** Not applicable.

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

**Danger of explosion:** Product does not present an explosion hazard.

**Density at 20°C (68°F):** 1 g/cm<sup>3</sup>

### Solubility in / Miscibility with

**Water:** Fully miscible.

**pH-value at 20°C (68°F):** 7.6

### Solvent content:

<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	98.1 %

**Solids content:** 1.9 %

## 10 Stability and reactivity

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

**Dangerous reactions** No dangerous reactions known.

**Dangerous products of decomposition:** No dangerous decomposition products known.

## 11 Toxicological information

### Acute toxicity:

#### 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:

(Contd. on page 4)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name:** Column Wash

(Contd. of page 3)

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.

## 12 Ecological information

**General notes:** Generally not hazardous for water

## 13 Disposal considerations

**Product:**

**Recommendation:**

Smaller quantities can be disposed of with household waste.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packagings:**

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

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

## 14 Transport information

Contact Promega Safety Department for additional transportation information

**DOT regulations:** Not regulated

**Hazard class:** -

**Land transport ADR/RID (cross-border):** Not regulated

**ADR/RID class:** -

**UN-Number:** Not regulated

**Maritime transport IMDG:**

**IMDG Class:** -

**Marine pollutant:** No

**Air transport ICAO-TI and IATA-DGR:**

**ICAO/IATA Class:** -

## 15 Regulations

**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.

(Contd. on page 5)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Column Wash**

(Contd. of page 4)

**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.

**Carcinogenicity categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

**NTP (National Toxicology Program)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

**MAK (German Maximum Workplace Concentration)**

None of the ingredients are listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

**Product related hazard informations:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

**National regulations:**

**Water hazard class:** Generally not hazardous for water.

**16 Other information**

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

**Department issuing MSDS:**

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

\* Data compared to the previous version altered.

**Material Safety Data Sheet**  
*acc. to ISO/DIS 11014*

Printing date 06/15/2009

Reviewed on 06/15/2009

\* **1 Identification of substance**

**Trade name:** Nuclease-Free Water

**Article number:** P119

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

**Manufacturer/Supplier:**

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

**MSDS author:** Regulatory.Affairs@promega.com

**Emergency information:**

CHEMTREC 1-800-424-9300

for call originating outside the United States dial 001-703-527-3887

**2 Composition/Data on components**

**Chemical characterization:**

**CAS No. Description**

7732-18-5 water, distilled, conductivity or of similar purity

**Identification number(s)**

**EINECS Number:** 231-791-2

\* **3 Hazards identification**

**Hazard description:** Not applicable. Product has been classified as non-hazardous.

**Information pertaining to particular dangers for man and environment:** Not applicable.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**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

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Nuclease-Free Water**

(Contd. of page 1)

## 4 First aid measures

**General information:** No special measures required.  
**After inhalation:** Supply fresh air; consult doctor in case of complaints.  
**After skin contact:** Generally the product does not irritate the skin.  
**After eye contact:** Rinse opened eye for several minutes under running water.  
**After swallowing:** If symptoms persist consult doctor.

## 5 Fire fighting measures

**Suitable extinguishing agents:**  
 CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.  
**Protective equipment:** No special measures required.

## 6 Accidental release measures

**Person-related safety precautions:** Not required.  
**Measures for environmental protection:** Dilute with plenty of water.  
**Measures for cleaning/collecting:**  
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
**Additional information:** No dangerous substances are released.

## 7 Handling and storage

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

## 8 Exposure controls and personal protection

**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.  
**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:**  
 Protective gloves  
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation  
**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.

(Contd. on page 3)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Nuclease-Free Water**

(Contd. of page 2)

**Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

### General Information

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Odorless

### Change in condition

**Melting point/Melting range:** 0°C (32°F)  
**Boiling point/Boiling range:** 100°C (212°F)

**Flash point:** Not applicable.

**Danger of explosion:** Product does not present an explosion hazard.

**Density at 20°C (68°F):** 1 g/cm<sup>3</sup>

### Solubility in / Miscibility with

**Water:** Fully miscible.

**pH-value at 20°C (68°F):** 7

**Organic solvents:** 0.0 %

**Water:** 100.0 %

## 10 Stability and reactivity

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

**Dangerous reactions** No dangerous reactions known.

**Dangerous products of decomposition:** No dangerous decomposition products known.

## 11 Toxicological information

**Acute toxicity:**

**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.

## 12 Ecological information

**General notes:** Generally not hazardous for water

USA

(Contd. on page 4)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Nuclease-Free Water**

(Contd. of page 3)

## 13 Disposal considerations

**Product:**

**Recommendation:**

Smaller quantities can be disposed of with household waste.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packagings:**

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

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

## \* 14 Transport information

Contact Promega Safety Department for additional transportation information

**DOT regulations:** Not regulated

**Hazard class:** -

**Land transport ADR/RID (cross-border):** Not regulated

**ADR/RID class:** -

**UN-Number:** Not regulated

**Maritime transport IMDG:**

**Marine pollutant:** No

## \* 15 Regulations

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.

**Carcinogenicity categories**

**EPA (Environmental Protection Agency)**

Substance is not listed.

(Contd. on page 5)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Nuclease-Free Water**

(Contd. of page 4)

**IARC (International Agency for Research on Cancer)**

Substance is not listed.

**NTP (National Toxicology Program)**

Substance is not listed.

**TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

**MAK (German Maximum Workplace Concentration)**

Substance is not listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

**Product related hazard informations:**

Observe the general safety regulations when handling chemicals.

The substance is not subject to classification according to the sources of literature known to us.

The product is not subject to identification regulations according to directives on hazardous materials.

**National regulations:**

**Water hazard class:** Generally not hazardous for water.

**16 Other information**

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

**Department issuing MSDS:**

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

\* Data compared to the previous version altered.