

06/24/2008

## Kit ingredients

Product: A9280 Components, AKP-pack

Product code: A9360

<b>Substance number</b>	<b>Description</b>	<b>Count</b>	<b>Symbols</b>
A929	Membrane Wash Solution	1	-
A930	Membrane Binding Solution	1	Xn
P119	Nuclease-Free Water	1	-



**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Printing date 24.06.2008

Revision: 24.06.2008

\* **1 Identification of substance**

**Trade name:** Membrane Wash Solution

**Article number:** A929

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

**Manufacturer/Supplier:**

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

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

**Further information obtainable from:**

Promega UK Ltd.  
Delta House  
Southampton Science Park  
Southampton SO16 7NS  
UNITED KINGDOM  
Tel: (44) 23 8076 0225  
Fax: (44) 23 8076 7014  
FREEPHONE: 0800 378994  
E-mail Address: ukcustserve@promega.com  
Web Address: www.promega.com/uk/

**Information in case of emergency:**

CHEMTREC 1-800-424-9300

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

**2 Hazards identification**

**Hazard description:** not applicable

**Information concerning to particular hazards to man and environment**

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

**Classification system:**

The classification is in line with current EC lists. It is extended, by information from technical literature and company information.

**3 Composition/information on ingredients**

**Chemical characterization**

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

**Components:** Void

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**Trade name: Membrane Wash Solution**

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**Additional information:** For the wording of the listed risk phrases refer to section 16.

#### 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>, 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 fire - and explosion protection:** 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 gear

**Additional information about design of technical facilities:** No further data; see item 7.

**Ingredients 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 valid during the making were used as basis.

**Personal protective equipment**  
**General protective and hygienic measures**  
 The usual precautionary measures are to be adhered to when handling chemicals.  
**Respiratory protection:** Not required.  
**Protection of hands:**  
 Protective gloves.  
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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Trade name: Membrane Wash Solution

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**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.

**Penetration time of glove material:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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

## 9 Physical and chemical properties

**General Information**

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Characteristic

**Change in condition**

<b>Melting point/Melting range:</b>	0°C
<b>Boiling point/Boiling range:</b>	100°C

<b>Flash point:</b>	Not applicable
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<b>Self-igniting:</b>	Product is not selfigniting.
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<b>Danger of explosion:</b>	Product does not present an explosion hazard.
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<b>Density at 20°C:</b>	1 g/cm <sup>3</sup>
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**Solubility in / Miscibility with**

<b>Water:</b>	Fully miscible
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**Solvent content:**

<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	99.5 %

<b>Solids content:</b>	0.5 %
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## 10 Stability and reactivity

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

**Dangerous reactions:** No dangerous reactions known

**Dangerous decomposition products:** 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 the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

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When used and handled according to specifications, the product does not have any harmful effects 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 together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packaging:**

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

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

**14 Transport information**

Contact Promega Safety Department for additional transport information.

**Land transport ADR/RID (cross-border)**

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

**Maritime transport IMDG:**

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

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

**ICAO/IATA Class:** -

**15 Regulations**

**Labelling according to EU guidelines:**

Observe the general safety regulations when handling chemicals

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).

**National regulations**

**Waterhazard 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.

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**Trade name: Membrane Wash Solution**

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**Department issuing MSDS:**

Promega Corporation  
Safety Department  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.

**Contact:**

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Southampton SO16 7NS  
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Free Fax +44 800 181037

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

GB

**Safety Data Sheet**  
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Printing date 24.06.2008

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\* **1 Identification of substance**

**Trade name:** Membrane Binding Solution

**Article number:** A930

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

**Manufacturer/Supplier:**

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

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

**Further information obtainable from:**

Promega UK Ltd.  
Delta House  
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Southampton SO16 7NS  
UNITED KINGDOM  
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Fax: (44) 23 8076 7014  
FREEPHONE: 0800 378994  
E-mail Address: ukcustserve@promega.com  
Web Address: www.promega.com/uk/

**Information in case of emergency:**

CHEMTREC 1-800-424-9300

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

**2 Hazards identification**

**Hazard description:**



Xn Harmful

**Information concerning to particular hazards to man and environment**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R 36/38 Irritating to eyes and skin.

**Classification system:**

The classification is in line with current EC lists. It is extended, by information from technical literature and company information.

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Trade name: **Membrane Binding Solution**

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### 3 Composition/information on ingredients

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

**Components:**

CAS: 593-84-0	guanidinium thiocyanate	☒ Xn, ☒ Xi; R 20/21/22-36/38	50-75%
EINECS: 209-812-1			

**Additional information:** For the wording of the listed risk phrases refer to section 16.

### 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:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

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

**After eye contact:**

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

**After swallowing:** Call for a doctor immediately.

### 5 Fire fighting measures

**Suitable extinguishing agents:**

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

**Protective equipment:** Mount respiratory protective device.

### 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 fire - and explosion protection:** No special measures required.

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Trade name: **Membrane Binding Solution**

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**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 gear****Additional information about design of technical facilities:** No further data; see item 7.**Ingredients 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 valid during the making 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.

**Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

**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.

**Penetration time of glove material:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Tightly sealed goggles.**9 Physical and chemical properties****General Information**

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Characteristic

**Change in condition****Melting point/Melting range:** undetermined**Boiling point/Boiling range:** undetermined**Flash point:** Not applicable**Self-igniting:** Product is not selfigniting.**Danger of explosion:** Product does not present an explosion hazard.**Density:** Not determined

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Trade name: Membrane Binding Solution

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<b>Solubility in / Miscibility with Water:</b>	Fully miscible
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<b>pH-value at 20°C:</b>	4.8
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<b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	41.9 %

<b>Solids content:</b>	58.1 %
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### 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 acids

**Dangerous decomposition products:**

Carbon monoxide and carbon dioxide

Nitrogen oxides

Sulphuric acid

### 11 Toxicological information

**Acute toxicity:**

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

**593-84-0 guanidinium thiocyanate**

Oral	LD50	475 mg/kg (Rat)
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Dermal	LD50	>2000 mg/kg (Rabbit)
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**Primary irritant effect:**

**on the skin:** Irritant to skin and mucous membranes.

**on the eye:** Irritating effect.

**Sensitization:** Sensitization possible through inhalation.

**Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

Harmful

Irritant

### 12 Ecological information

**General notes:**

Water hazard class 1 (German Regulation) (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.

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Trade name: **Membrane Binding Solution**

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**13 Disposal considerations****Product:****Recommendation**

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

**Uncleaned packaging:**

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

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

**14 Transport information**

Contact Promega Safety Department for additional transport information.

**Land transport ADR/RID (cross-border)**

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

**Maritime transport IMDG:**

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

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

**ICAO/IATA Class:** -

**15 Regulations****Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

**Hazard-determining components of labelling:**

guanidinium thiocyanate

**Risk phrases:**

20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

36/38 Irritating to eyes and skin.

**Safety phrases:**

9 Keep container in a well-ventilated place.

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

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

36/37 Wear suitable protective clothing and gloves.

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

**National regulations**

**Waterhazard 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.

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**Trade name: Membrane Binding Solution**

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**Relevant R-phrases**

20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

36/38 Irritating to eyes and skin.

**Department issuing MSDS:**

Promega Corporation

Safety Department

2800 Woods Hollow Road

Madison, WI 53711

U.S.A.

**Contact:**

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

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**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

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\* **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.  
1-608-274-4330  
1-800-356-9526

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

**Further information obtainable from:**

Promega UK Ltd.  
Delta House  
Southampton Science Park  
Southampton SO16 7NS  
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Fax: (44) 23 8076 7014  
FREEPHONE: 0800 378994  
E-mail Address: ukcustserve@promega.com  
Web Address: www.promega.com/uk/

**Information in case of emergency:**

CHEMTREC 1-800-424-9300

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

**2 Hazards identification**

**Hazard description:** not applicable

**Information concerning to particular hazards to man and environment** not applicable

**Classification system:**

The classification is in line with current EC lists. It is extended, by information from technical literature and company information.

**3 Composition/information on ingredients**

**Chemical characterization:**

**CAS No. Description:**

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

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**Trade name: Nuclease-Free Water**

**Identification number(s):**  
**EEC Number: 231-791-2**

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#### 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>, 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 fire - and explosion protection:** 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 gear

**Additional information about design of technical facilities:** No further data; see item 7.  
**Ingredients with limit values that require monitoring at the workplace:** Not required.  
**Additional information:** The lists valid during the making were used as basis.  
**Personal protective equipment**  
**General protective and hygienic measures**  
The usual precautionary measures are to be adhered to when handling chemicals.  
**Respiratory protection:** Not required.  
**Protection of hands:**  
Protective gloves.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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**Trade name: Nuclease-Free Water**

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**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.

**Penetration time of glove material:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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

## 9 Physical and chemical properties

### General Information

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Odourless

### Change in condition

<b>Melting point/Melting range:</b>	0°C
<b>Boiling point/Boiling range:</b>	100°C

**Flash point:** Not applicable

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

**Density at 20°C:** 1 g/cm<sup>3</sup>

### Solubility in / Miscibility with

<b>Water:</b>	Fully miscible
<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	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 decomposition products:** 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 to our experience and the information provided to us.

The substance is not subject to classification according to the latest version of the EU lists.

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Trade name: *Nuclease-Free Water*

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**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 together with household garbage. Do not allow product to reach sewage system.***Uncleaned packaging:****Recommendation:** *Disposal must be made according to official regulations.***Recommended cleansing agents:** *Water, if necessary together with cleansing agents.***14 Transport information***Contact Promega Safety Department for additional transport information.***Land transport ADR/RID (cross-border)****ADR/RID class:** -*Not regulated***Maritime transport IMDG:****Marine pollutant:** *No***15 Regulations****Labelling according to EU guidelines:***Observe the general safety regulations when handling chemicals**The substance is not subject to classification according to EU lists and other sources of literature known to us.**The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).***National regulations****Waterhazard 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**Safety Department**2800 Woods Hollow Road**Madison, WI 53711**U.S.A.*

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**Safety Data Sheet**  
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**Trade name: Nuclease-Free Water**

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