08/21/2020	Kit Components
Product code	Description
A9345	Wizard® SV 96 PCR Clean-Up System, 100 x 96
Components:	
A227	SV 96 DNA Binding Plate - Article
A930	Membrane Binding Solution
P119	Nuclease-Free Water

Collection Plates - Article

A916



Page 1/7

Safety Data Sheet acc. to OSHA HCS

Printing date 08/21/2020 Reviewed on 07/20/2020

1 Identification

Product identifier

Trade name: SV 96 DNA Binding Plate - Article

Article number: A227

Application of the substance / the mixture For Laboratory Use

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: ChemicalRegulatory@promega.com

Promega Corporation 2800 Woods Hollow Road Madison, WI 53711

U.S.A.

1-800-356-9526 or (608)-274-4330

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 Not applicable Hazard pictograms Not applicable

Signal word Not applicable

Hazard statements Not applicable

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

(Contd. on page 2)

Printing date 08/21/2020 Reviewed on 07/20/2020

Trade name: SV 96 DNA Binding Plate - Article

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

 $(Contd.\ of\ page\ 1)$

3 Composition/information on ingredients

Chemical characterization: Substances

CAS No. Description

Article

4 First-aid measures

Description of first aid measures

General information: No special measures required.

After inhalation: If the patient feels unwell or is concerned, obtain medical advice.

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

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

After swallowing: If the patient feels unwell or is concerned, obtain medical advice.

Information for doctor:

Most important symptoms and effects, both acute and delayed

None

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

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

Special hazards arising from the substance or mixture

None known

No further relevant information available.

Advice for firefighters No special advice

Protective equipment: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Not required.

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

Methods and material for containment and cleaning up: Pick up mechanically.

Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 13 for disposal information.

US ·

Printing date 08/21/2020 Reviewed on 07/20/2020

Trade name: SV 96 DNA Binding Plate - Article

(Contd. of page 2)

7 Handling and storage

Handling:

Precautions for safe handling No special measures required.

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

Conditions for safe storage, including any incompatibilities

Storage:

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

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

Further information about storage conditions: None.

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

8 Exposure controls/personal protection

Control parameters

Components with limit values that require monitoring at the workplace: 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: Solid
Color: Colorless
Odor: Not determined
Odor threshold: Not determined.

pH-value:

Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Undetermined.
Flash point: Not applicable.

Flammability (solid, gaseous): Product is not flammable.

Decomposition temperature: Not determined.

Auto igniting: Not determined.

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

Not applicable.

(Contd. on page 4)

Printing date 08/21/2020 Reviewed on 07/20/2020

Trade name: SV 96 DNA Binding Plate - Article

(Contd. of page 3)

Explosion limits:

Lower:Not determined.Upper:Not determined.Vapor pressure:Not applicable.

Density:Not determined.Relative densityNot determined.Vapor densityNot applicable.Evaporation rateNot applicable.

Solubility in / Miscibility with

Water: Insoluble.

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

Viscosity:

Dynamic:Not applicable.Kinematic:Not applicable.

VOC content: 0.00 %

Other information No further relevant information available.

10 Stability and reactivity

Reactivity No further relevant information available.

Chemical stability

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

Possibility of hazardous reactions No dangerous reactions known. **Conditions to avoid** No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects

Acute toxicity:

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

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

Sensitization: No sensitizing effects known.

Additional toxicological information: The substance is not subject to classification.

Carcinogenic categories

IARC (International Agency for Research on Cancer)

Substance is not listed.

NTP (National Toxicology Program)

Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

US-

Printing date 08/21/2020 Reviewed on 07/20/2020

Trade name: SV 96 DNA Binding Plate - Article

(Contd. of page 4)

12 Ecological information

Toxicity

Aquatic toxicity:

Not available

No further relevant information available.

Persistence and degradability

Not available

No further relevant information available.

Bioaccumulative potential

Not known

No further relevant information available.

Mobility in soil No further relevant information available.

Ecotoxicological effects: Remark: Not available

Additional ecological information:

General notes: Not known to be hazardous to water.

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation:

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

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

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

UN-Number DOT, ADR, ADN, IMDG, IATA	Not hazardous for transportation Not applicable	
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	None Not applicable	
Transport hazard class(es)	None	
DOT, ADR, ADN, IMDG, IATA Class	Not applicable	
Packing group DOT, ADR, IMDG, IATA	None Not applicable	
Environmental hazards: Marine pollutant:	No	
Special precautions for user	Not applicable.	

(Contd. on page 6)

Printing date 08/21/2020 Reviewed on 07/20/2020

Trade name: SV 96 DNA Binding Plate - Article

(Contd. of page 5)

Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code Not applicable.

UN "Model Regulation": Not applicable

15 Regulatory information

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

Section 355 (extremely hazardous substances):

Substance is not listed.

Section 313 (Specific toxic chemical listings):

Substance is not listed.

TSCA (Toxic Substances Control Act) Inventory:

Substance is not listed.

Hazardous Air Pollutants

Substance is not listed.

Proposition 65

Chemicals known to cause cancer:

Substance is not listed.

Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

Chemicals known to cause developmental toxicity:

Substance is not listed.

Cancerogenity categories

EPA (Environmental Protection Agency)

Substance is not listed.

TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

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

Substance is not listed.

GHS label elements Not applicable

Signal word Not applicable

Hazard statements Not applicable

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.

(Contd. on page 7)

Printing date 08/21/2020 Reviewed on 07/20/2020

Trade name: SV 96 DNA Binding Plate - Article

(Contd. of page 6)

Department issuing SDS:

Promega Corporation Chemical Regulatory Department 2800 Woods Hollow Road

Madison, WI Ph:(608)274-4330

Date of preparation / last revision 08/21/2020 / 1.0

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)

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

-US

^{*} Data compared to the previous version altered.





Reviewed on 08/12/2020 Printing date 08/21/2020

1 Identification

Product identifier

Trade name: Membrane Binding Solution

Article number: A930

Application of the substance / the mixture

For Laboratory Use 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: ChemicalRegulatory@promega.com

Promega Corporation 2800 Woods Hollow Road Madison, WI 53711

U.S.A.

1-800-356-9526 or (608)-274-4330

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. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed. Acute Tox. 4 H332 Harmful if inhaled.

Label elements

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

(Contd. on page 2)

(Contd. of page 1)

Safety Data Sheet acc. to OSHA HCS

Printing date 08/21/2020 Reviewed on 08/12/2020

Trade name: Membrane Binding Solution

Hazard pictograms





GHS05

GHS07

Signal word Danger

Hazard-determining components of labeling:

guanidinium thiocyanate

Hazard statements

Harmful if swallowed or if inhaled.

Causes severe skin burns and eye damage.

Precautionary statements

Do not breathe dusts or mists.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

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

If swallowed: Call a poison center/doctor if you feel unwell.

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.

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):

Corrosive

Environmental Hazard

Primary route(s) of entry:

Dermal

Inhalation

Oral

Target Organ(s):

May affect Nervous system (Neurotoxin)

May cause Kidney damage (Nephrotoxin)

Risk of damage to eyes

Affects Gastrointestinal System

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

(Contd. on page 3)

Printing date 08/21/2020 Reviewed on 08/12/2020

Trade name: Membrane Binding Solution

vPvB: Not applicable.

(Contd. of page 2)

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description:

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

Dangerous components:

593-84-0 guanidinium thiocyanate

50-75%

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.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Seek medical treatment.

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.

Seek medical treatment in case of complaints.

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:

Immediately call a doctor.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

Seek immediate medical advice.

Information for doctor:

Most important symptoms and effects, both acute and delayed

None

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

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

Special hazards arising from the substance or mixture

None known

No further relevant information available.

Advice for firefighters In the case of fire, wear respiratory protective equipment and chemical protective suit.

(Contd. on page 4)

Printing date 08/21/2020 Reviewed on 08/12/2020

Trade name: Membrane Binding Solution

Protective equipment: Mouth respiratory protective device.

(Contd. of page 3)

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Remove persons from danger area.

Wear protective equipment. Keep unprotected persons away.

Keep people at a distance and stay upwind.

Wear protective clothing.

Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

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.

Keep away from water.

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.

Open and handle receptacle with care.

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: Do not store together with acids.

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.

(Contd. on page 5)

Printing date 08/21/2020 Reviewed on 08/12/2020

Trade name: Membrane Binding Solution

(Contd. of page 4)

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.

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

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 c General Information	chemical properties
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: Boiling point/Boiling range: Flash point:	Undetermined. 100°C (212°F) Not applicable.
Flammability (solid, gaseous): Decomposition temperature:	Not applicable. Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion: Explosion limits:	Product does not present an explosion hazard.
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.

(Contd. on page 6)

Printing date 08/21/2020 Reviewed on 08/12/2020

Trade name: Membrane Binding Solution

(Contd. of page 5)

Density:Not determined.Relative densityNot determined.Vapor densityNot determined.Evaporation rateNot determined.

Solubility in / Miscibility with

Water: Fully miscible.
Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Dynamic: Not determined. **Kinematic:** Not determined.

 Water:
 41.9 %

 VOC content:
 0.00 %

Solids content: 58.1 %

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 oxidizing agents.

Reacts with acids.

Conditions to avoid No further relevant information available.

Incompatible materials:

Exposure to strong acid will result in the generation of toxic gases

Exposure to bleach may result in the generation of toxic gas

Hazardous decomposition products:

Carbon monoxide and carbon dioxide

Nitrogen oxides

Sulfuric acid

11 Toxicological information

Information on toxicological effects

Acute toxicity:

593-84-0 guanidinium thiocyanate

Oral LD50 475 mg/kg (Rat)
By analogy to guanidine hydrochloride

Dermal LD50 >2,000 mg/kg (Rabbit)
By analogy to Guanidine hydrochloride.

Primary irritant effect:

on the skin: Caustic effect on skin and mucous membranes.

on the eye: Strong caustic effect.

Sensitization: Sensitization possible through inhalation.

Additional toxicological information:

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

Harmful

(Contd. on page 7)

(Contd. of page 6)

Safety Data Sheet acc. to OSHA HCS

Printing date 08/21/2020 Reviewed on 08/12/2020

Trade name: Membrane Binding Solution

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

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: Harmful to aquatic life with long lasting effects.

Persistence and degradability

Not available

No further relevant information available.

Bioaccumulative potential

Not known

No further relevant information available.

Mobility in soil No further relevant information available.

Ecotoxicological effects: Remark: Harmful to fish

Additional ecological information:

General notes:

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Harmful to aquatic organisms

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.

HS

Printing date 08/21/2020 Reviewed on 08/12/2020

Trade name: Membrane Binding Solution

(Contd. of page 7)

UN-Number DOT, ADR, IMDG, IATA	UN1760
UN proper shipping name DOT ADR IMDG, IATA	None Corrosive liquid, n.o.s. solution 1760 CORROSIVE LIQUID, N.O.S. solution CORROSIVE LIQUID, N.O.S. solution
Transport hazard class(es)	None
DOT GORROSIVE	
Class Label	8 Corrosive substances 8
ADR	
Class	8 (C9) Corrosive substances
Label	8
IMDG, IATA Class Label	8 Corrosive substances 8
Packing group DOT, ADR, IMDG, IATA	None II
Environmental hazards: Marine pollutant:	No
Special precautions for user Hazard identification number (Kemler code) EMS Number: Stowage Category Stowage Code	Warning: Corrosive substances : 80 F-A,S-B B SW2 Clear of living quarters.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

Printing date 08/21/2020 Reviewed on 08/12/2020

Trade name: Membrane Binding Solution

(Contd. of page 8)

Transport/Additional information:

ADR

Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

IMDG

Limited quantities (LQ) 1L Excepted quantities (EO) 1Code: E2

> Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

UN "Model Regulation": UN 1760 CORROSIVE LIQUID, N.O.S. SOLUTION, 8, II

15 Regulatory information

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

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory:

All ingredients are listed.

Hazardous Air Pollutants

None of the ingredients are listed.

Proposition 65

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Cancerogenity categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

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

None of the ingredients are listed.

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

(Contd. on page 10)

Printing date 08/21/2020 Reviewed on 08/12/2020

Trade name: Membrane Binding Solution

(Contd. of page 9)

Hazard-determining components of labeling:

guanidinium thiocyanate

Hazard statements

Harmful if swallowed or if inhaled.

Causes severe skin burns and eye damage.

Precautionary statements

Do not breathe dusts or mists.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

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

If swallowed: Call a poison center/doctor if you feel unwell.

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.

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

Chemical Regulatory Department

2800 Woods Hollow Road

Madison, WI

Ph:(608)274-4330

Date of preparation / last revision 08/21/2020 / 1.0

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

(Contd. on page 11)

Printing date 08/21/2020 Reviewed on 08/12/2020

Trade name: Membrane Binding Solution

(Contd. of page 10)

TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

* Data compared to the previous version altered.





Printing date 08/21/2020 Reviewed on 08/12/2020

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 For Laboratory Use

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: ChemicalRegulatory@promega.com

Promega Corporation 2800 Woods Hollow Road Madison, WI 53711

U.S.A.

1-800-356-9526 or (608)-274-4330

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 Not applicable

Hazard pictograms Not applicable

Signal word Not applicable

Hazard statements Not applicable

Classification system:

NFPA ratings (scale 0 - 4)

Health = 0

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 0

Fire = 0

Reactivity = 0

(Contd. on page 2)

(Contd. of page 1)

Safety Data Sheet acc. to OSHA HCS

Printing date 08/21/2020 Reviewed on 08/12/2020

Trade name: Nuclease-Free Water

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

Target Organ(s): Not applicable or unknown

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable. vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances

CAS No. Description 7732-18-5 water *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

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

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

Special hazards arising from the substance or mixture

None known

No further relevant information available.

Advice for firefighters No special advice

Protective equipment: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Not required.

Environmental precautions: Dilute with plenty of water.

Methods and material for containment and cleaning up:

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

Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling.

(Contd. on page 3)

Printing date 08/21/2020 Reviewed on 08/12/2020

Trade name: Nuclease-Free Water

See Section 13 for disposal information.

(Contd. of page 2)

7 Handling and storage

Handling:

Precautions for safe handling No special measures required.

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

Conditions for safe storage, including any incompatibilities

Storage:

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

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

Further information about storage conditions: None.

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

8 Exposure controls/personal protection

Control parameters

Components with limit values that require monitoring at the workplace: 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

Danger of explosion:

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.	

Product does not present an explosion hazard.

(Contd. on page 4)

Printing date 08/21/2020 Reviewed on 08/12/2020

Trade name: Nuclease-Free Water

(Contd. of page 3)

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 densityNot determined.Vapor densityNot determined.Evaporation rateNot determined.

Solubility in / Miscibility with

Water: Fully miscible.
Partition coefficient (n-octanol/water): Not determined.

Viscosity:

 Dynamic at 20 °C (68 °F):
 0.0952 mPas

 Kinematic:
 Not determined.

 Water:
 100.0 %

 VOC content:
 0.00 %

Solids content: 0.0 %

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

Sensitization: No sensitizing effects known.

Additional toxicological information: The substance is not subject to classification.

Carcinogenic categories

IARC (International Agency for Research on Cancer)

Substance is not listed.

NTP (National Toxicology Program)

Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

US

Printing date 08/21/2020 Reviewed on 08/12/2020

Trade name: Nuclease-Free Water

(Contd. of page 4)

12 Ecological information

Toxicity

Aquatic toxicity:

Not available

No further relevant information available.

Persistence and degradability

Not available

No further relevant information available.

Bioaccumulative potential

Not known

No further relevant information available.

Mobility in soil No further relevant information available.

Ecotoxicological effects: Remark: Not available

Additional ecological information:

General notes: Not available.

Not known to be hazardous to water.

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation:

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

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

Uncleaned packagings:

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

UN-Number DOT, ADR, ADN, IMDG, IATA	Not hazardous for transportation Not applicable	
UN proper shipping name	None	
DOT, ADR, IMDG, IATA ADN	Not applicable	
Transport hazard class(es)	None	
DOT, ADR, ADN, IMDG, IATA		
Class	Not applicable	
Packing group	None	
DOT, ÅDR, İMDG, IATA	Not applicable	

(Contd. on page 6)

Printing date 08/21/2020 Reviewed on 08/12/2020

Trade name: Nuclease-Free Water

(Contd. of page 5)

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": Not applicable

15 Regulatory information

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

Section 355 (extremely hazardous substances):

Substance is not listed.

Section 313 (Specific toxic chemical listings):

Substance is not listed.

TSCA (Toxic Substances Control Act) Inventory:

Substance is listed.

Hazardous Air Pollutants

Substance is not listed.

Proposition 65

Chemicals known to cause cancer:

Substance is not listed.

Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

Chemicals known to cause developmental toxicity:

Substance is not listed.

Cancerogenity categories

EPA (Environmental Protection Agency)

Substance is not listed.

TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

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

Substance is not listed.

GHS label elements Not applicable

Signal word Not applicable

Hazard statements Not applicable

Water hazard class: Generally not hazardous for water.

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

US

Printing date 08/21/2020 Reviewed on 08/12/2020

Trade name: Nuclease-Free Water

(Contd. of page 6)

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

Chemical Regulatory Department

2800 Woods Hollow Road

Madison, WI

Ph:(608)274-4330

Date of preparation / last revision 08/21/2020 / 1.0

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

-US

^{*} Data compared to the previous version altered.



Page 1/7

Safety Data Sheet acc. to OSHA HCS

Printing date 08/21/2020 Reviewed on 07/16/2020

1 Identification

Product identifier

Trade name: Collection Plates - Article

Article number: A916

Application of the substance / the mixture For Laboratory Use

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: ChemicalRegulatory@promega.com

Promega Corporation 2800 Woods Hollow Road Madison, WI 53711

U.S.A.

1-800-356-9526 or (608)-274-4330

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 Not applicable

Hazard pictograms Not applicable **Signal word** Not applicable

Hazard statements Not applicable

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

(Contd. on page 2)

Printing date 08/21/2020 Reviewed on 07/16/2020

Trade name: Collection Plates - Article

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

(Contd. of page 1)

3 Composition/information on ingredients

Chemical characterization: Substances

CAS No. Description

Article

4 First-aid measures

Description of first aid measures

General information: No special measures required.

After inhalation: If the patient feels unwell or is concerned, obtain medical advice.

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

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

After swallowing: If the patient feels unwell or is concerned, obtain medical advice.

Information for doctor:

Most important symptoms and effects, both acute and delayed

None

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

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

Special hazards arising from the substance or mixture

None known

No further relevant information available.

Advice for firefighters No special advice

Protective equipment: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Not required.

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

Methods and material for containment and cleaning up: Pick up mechanically.

Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 13 for disposal information.

US ·

Printing date 08/21/2020 Reviewed on 07/16/2020

Trade name: Collection Plates - Article

(Contd. of page 2)

7 Handling and storage

Handling:

Precautions for safe handling No special measures required.

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

Conditions for safe storage, including any incompatibilities

Storage:

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

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

Further information about storage conditions: None.

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

8 Exposure controls/personal protection

Control parameters

Components with limit values that require monitoring at the workplace: 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

Inf	rormatioi	ı on	basic	physical	and	chemical	properties

General Information

Appearance:

Form: Solid
Color: Colorless
Odor: Not determined
Odor threshold: Not determined.

pH-value:

Not applicable.

Change in condition

Melting point/Melting range:Undetermined.Boiling point/Boiling range:Undetermined.Flash point:Not applicable.

Flammability (solid, gaseous): Product is not flammable.

Decomposition temperature: Not determined.

Auto igniting: Not determined.

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

(Contd. on page 4)

Printing date 08/21/2020 Reviewed on 07/16/2020

Trade name: Collection Plates - Article

(Contd. of page 3)

Explosion limits:

Lower:Not determined.Upper:Not determined.Vapor pressure:Not applicable.

Density:Not determined.Relative densityNot determined.Vapor densityNot applicable.Evaporation rateNot applicable.

Solubility in / Miscibility with

Water: Insoluble.

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

Viscosity:

Dynamic:Not applicable.Kinematic:Not applicable.

VOC content: 0.00 %

Other information No further relevant information available.

10 Stability and reactivity

Reactivity No further relevant information available.

Chemical stability

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

Possibility of hazardous reactions No dangerous reactions known. **Conditions to avoid** No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects

Acute toxicity:

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

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

Sensitization: No sensitizing effects known.

Additional toxicological information: The substance is not subject to classification.

Carcinogenic categories

IARC (International Agency for Research on Cancer)

Substance is not listed.

NTP (National Toxicology Program)

Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

US

Printing date 08/21/2020 Reviewed on 07/16/2020

Trade name: Collection Plates - Article

(Contd. of page 4)

12 Ecological information

Toxicity

Aquatic toxicity:

Not available

No further relevant information available.

Persistence and degradability

Not available

No further relevant information available.

Bioaccumulative potential

Not known

No further relevant information available.

Mobility in soil No further relevant information available.

Ecotoxicological effects: Remark: Not available

Additional ecological information:

General notes: Not known to be hazardous to water.

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation:

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

Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional

handling information and protection of employees.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

UN-Number DOT, ADR, ADN, IMDG, IATA	Not hazardous for transportation Not applicable	
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	None Not applicable	
Transport hazard class(es)	None	
DOT, ADR, ADN, IMDG, IATA Class	Not applicable	
Packing group DOT, ADR, IMDG, IATA	None Not applicable	
Environmental hazards: Marine pollutant:	No	
Special precautions for user	Not applicable.	

(Contd. on page 6)

Printing date 08/21/2020 Reviewed on 07/16/2020

Trade name: Collection Plates - Article

(Contd. of page 5)

Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code Not applicable.

UN "Model Regulation": Not applicable

15 Regulatory information

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

Section 355 (extremely hazardous substances):

Substance is not listed.

Section 313 (Specific toxic chemical listings):

Substance is not listed.

TSCA (Toxic Substances Control Act) Inventory:

Substance is not listed.

Hazardous Air Pollutants

Substance is not listed.

Proposition 65

Chemicals known to cause cancer:

Substance is not listed.

Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

Chemicals known to cause developmental toxicity:

Substance is not listed.

Cancerogenity categories

EPA (Environmental Protection Agency)

Substance is not listed.

TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

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

Substance is not listed.

GHS label elements Not applicable

Signal word Not applicable

Hazard statements Not applicable

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.

(Contd. on page 7)

Printing date 08/21/2020 Reviewed on 07/16/2020

Trade name: Collection Plates - Article

(Contd. of page 6)

Department issuing SDS:

Promega Corporation Chemical Regulatory Department 2800 Woods Hollow Road Madison, WI

Ph:(608)274-4330

Date of preparation / last revision 08/21/2020 / 1.0

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)

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

-US

^{*} Data compared to the previous version altered.