

07/04/2016

Kit Components

Product code	Description
Q4132	SILVER SEQUENCE™ Staining Reagents 10gels

Components:

Q413	Silver Nitrate 10 x 2g
Q421	Bind Silane
Q427A	Formaldehyde 37%
Q428	Sodium Thiosulfate
Q440	Sodium Carbonate, Anhydrous

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 07/03/2016

1 Identification

Product identifier

Trade name: Silver Nitrate 10 x 2g

Article number: Q413

CAS Number:

7761-88-8

EC number:

231-853-9

Index number:

047-001-00-2

Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Promega Corporation

2800 Woods Hollow Road

Madison, WI 53711

U.S.A.

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

Information department: SDS author: Regulatory.Affairs@promega.com

Emergency telephone number:

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

Classification of the substance or mixture



GHS03 Flame over circle

Ox. Sol. 2 H272 May intensify fire; oxidizer.



GHS05 Corrosion

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

Label elements

GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms GHS03, GHS05

Signal word Danger

Hazard-determining components of labeling:

silver nitrate

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Hazard statements*May intensify fire; oxidizer.**Causes severe skin burns and eye damage.***Precautionary statements***Keep/Store away from clothing/combustible materials.**Wash thoroughly after handling.**Do not breathe dusts or mists.**Take any precaution to avoid mixing with combustibles.**Wear protective gloves / eye protection / face protection.**Keep away from heat.**If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**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.**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**Wash contaminated clothing before reuse.**If swallowed: Rinse mouth. Do NOT induce vomiting.**In case of fire: Use for extinction: CO2, powder or water spray.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***Classification system:****NFPA ratings (scale 0 - 4)***Health = 3**Fire = 3**Reactivity = 0**The substance possesses oxidizing properties.***HMIS-ratings (scale 0 - 4)***Health = 3**Fire = 3**Reactivity = 0***OSHA Hazard Overview (Criteria according to 29CFR1910.1200):***Highly Toxic**Corrosive**Environmental Toxin**Environmental Hazard**Oxidizer***Primary route(s) of entry:***Dermal**Inhalation**Oral***Target Organ(s):***May affect Nervous system (Neurotoxin)**Risk of damage to eyes***Other hazards***This mixture has not been tested to determine the overall health hazard; therefore in accordance with 29CFR1910.1200, the data reported above pertains to the hazardous ingredients of this mixture.***Results of PBT and vPvB assessment***PBT: Not applicable.**vPvB: Not applicable.*

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Trade name: Silver Nitrate 10 x 2g

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3 Composition/information on ingredients

Chemical characterization: Substances

CAS No. Description

7761-88-8 silver nitrate

Identification number(s)

EC number: 231-853-9

Index number: 047-001-00-2

4 First-aid measures

Description of first aid measures

General information:

Immediately remove any clothing soiled by the product.

Seek medical treatment.

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

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact: Call a doctor immediately.

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

Information for doctor:

Most important symptoms and effects, both acute and delayed None

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

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

Special hazards arising from the substance or mixture None known

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

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Remove persons from danger area.

Wear protective equipment. Keep unprotected persons away.

Avoid formation of dust.

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.

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

Methods and material for containment and cleaning up:

Use neutralizing agent.

Dispose contaminated material as waste according to Section 13.

Pick up mechanically.

Ensure adequate ventilation.

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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

Thorough dedusting.

Open and handle receptacle with care.

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

Conditions for safe storage, including any incompatibilities

Storage:

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

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

Further information about storage conditions: Keep receptacle tightly sealed.

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

8 Exposure controls/personal protection

Control parameters

Components with limit values that require monitoring at the workplace:

7761-88-8 silver nitrate

PEL Long-term value: 0.01 mg/m³
as Ag

REL Long-term value: 0.01 mg/m³
as Ag

TLV Long-term value: 0.01 mg/m³
as Ag

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

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Ensure that washing facilities are available at the work place.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Do not eat or drink while working.

Breathing equipment: Not required.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Select the glove material considering penetration time, rate of diffusion and degradation time.

It is recommended that the selected protective gloves be tested and approved under NIOSH or EU Directive 89/686/EEC and the standard EN 374 derived from it.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

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Eye protection:

Tightly sealed goggles

Use equipment for eye protection tested and approved under government NIOSH standards.

9 Physical and chemical properties

Information on basic physical and chemical properties**General Information****Appearance:**

Form:	Crystalline
Color:	Colorless
Odor:	Odorless
Odor threshold:	Not determined.

pH-value: Not applicable.

Change in condition

Melting point/Melting range:	210 °C (410 °F)
Boiling point/Boiling range:	444 °C (831 °F)
Flash point:	Not applicable.

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

Ignition temperature:

Decomposition temperature: Not determined.

Auto igniting: Not determined.

Danger of explosion:

Product does not present an explosion hazard.

Explosion limits:

Lower: Not determined.

Upper: Not determined.

Vapor pressure: Not applicable.

Density at 20 °C (68 °F): 4.35 g/cm³ (36.301 lbs/gal)

Relative density: Not determined.

Vapor density: Not applicable.

Evaporation rate: Not applicable.

Solubility in / Miscibility with

Water at 20 °C (68 °F): 2.192 g/l

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

Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

Organic solvents: 0.0 %

Solids content: 100.0 %

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.

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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:

7761-88-8 silver nitrate

Oral	LD50	1173 mg/kg (Rat)
Irritation of eyes	acute	1 mg (Rabbit) Severe

Primary irritant effect:

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

on the eye:

Strong caustic effect.

Irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:

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)

Substance is not listed.

NTP (National Toxicology Program)

Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

* 12 Ecological information

Toxicity

Aquatic toxicity: Very toxic to aquatic life with long lasting effects.

Persistence and degradability Not available

Behavior in environmental systems:

Bioaccumulative potential May be accumulated in organism

Mobility in soil No further relevant information available.

Ecotoxicological effects:

Remark: Very toxic for fish

Additional ecological information:

General notes:

Water hazard class 3 (Assessment by list): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

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

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

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Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.* **13 Disposal considerations****Waste treatment methods****Recommendation:**

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

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

Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agent:** Water, if necessary with cleansing agents.* **14 Transport information****UN-Number****DOT, ADR, IMDG, IATA**

UN1493

UN proper shipping name**DOT**

Silver nitrate

ADR

1493 Silver nitrate, ENVIRONMENTALLY HAZARDOUS

IMDG, IATA

SILVER NITRATE

Transport hazard class(es)**DOT****Class**

5.1 Oxidizing substances

Label

5.1

ADR**Class**

5.1 (O2) Oxidizing substances

Label

5.1

IMDG, IATA**Class**

5.1 Oxidizing substances

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Label	5.1
Packing group DOT, ADR, IMDG, IATA	II
Environmental hazards: Marine pollutant: Special marking (ADR):	No Symbol (fish and tree)
Special precautions for user Danger code (Kemler): EMS Number: Segregation groups Stowage Category	Warning: Oxidizing substances 50 F-A,S-Q Heavy metals and their salts (including their organometallic compounds) A
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
ADR Exempted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
IMDG Limited quantities (LQ) Exempted quantities (EQ)	1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
UN "Model Regulation":	UN 1493 SILVER NITRATE, 5.1, II, ENVIRONMENTALLY HAZARDOUS

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 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.

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Chemicals known to cause developmental toxicity:

Substance is not listed.

Carcinogenicity 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

The substance is classified and labeled according to the Globally Harmonized System (GHS).

Signal word Danger

Hazard-determining components of labeling:

silver nitrate

Hazard statements

May intensify fire; oxidizer.

Causes severe skin burns and eye damage.

Precautionary statements

Keep/Store away from clothing/combustible materials.

Wash thoroughly after handling.

Do not breathe dusts or mists.

Take any precaution to avoid mixing with combustibles.

Wear protective gloves / eye protection / face protection.

Keep away from heat.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Wash contaminated clothing before reuse.

If swallowed: Rinse mouth. Do NOT induce vomiting.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store locked up.

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

National regulations:

Water hazard class: Water hazard class 3 (Assessment by list): extremely hazardous for water.

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

16 Other information

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

Department issuing SDS:

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608) 274-4330

Date of preparation / last revision 07/04/2016 / -

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Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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)

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

Ox. Sol. 2: Oxidizing solids – Category 2

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

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

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/04/2016

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1 Identification

Product identifier

Trade name: Bind Silane

Article number: Q421

CAS Number:

2530-85-0

EC number:

219-785-8

Index number:

607-134-00-4

Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Promega Corporation

2800 Woods Hollow Road

Madison, WI 53711

U.S.A.

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

Information department: SDS author: Regulatory.Affairs@promega.com

Emergency telephone number:

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

Classification of the substance or mixture



Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

Label elements

GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms GHS07

Signal word Warning

Hazard-determining components of labeling:

3-(Trimethoxysilyl)propyl methacrylate

Hazard statements

Causes skin irritation.

Causes serious eye irritation.

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Trade name: Bind Silane

(Contd. of page 1)

*May cause respiratory irritation.***Precautionary statements***Wash thoroughly after handling.**Avoid breathing dust/fume/gas/mist/vapors/spray**Wear protective gloves.**Wear eye protection / face protection.**Use only outdoors or in a well-ventilated area.**IF ON SKIN: Wash with plenty of water.**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**Call a POISON CENTER/doctor if you feel unwell.**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**If skin irritation occurs: Get medical advice/attention.**If eye irritation persists: Get medical advice/attention.**Take off contaminated clothing and wash it before reuse.**Store in a well-ventilated place. Keep container tightly closed.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***Classification system:****NFPA ratings (scale 0 - 4)**

Health = 1

Fire = 1

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 1

Fire = 1

Reactivity = 0

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

Dermal

Inhalation

Oral

Target Organ(s):*May cause Kidney damage (Nephrotoxin)**Risk of damage to eyes***Other hazards***This mixture has not been tested to determine the overall health hazard; therefore in accordance with 29CFR1910.1200, the data reported above pertains to the hazardous ingredients of this mixture.***Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

* 3 Composition/information on ingredients

Chemical characterization: Substances**CAS No. Description**

2530-85-0 3-(Trimethoxysilyl)propyl methacrylate

Identification number(s)**EC number:** 219-785-8**Index number:** 607-134-00-4

US

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Trade name: Bind Silane

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4 First-aid measures

Description of first aid measures

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:

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

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

Information for doctor:

Most important symptoms and effects, both acute and delayed None

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

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

Special hazards arising from the substance or mixture None known

Advice for firefighters No special advice

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Remove persons from danger area.

Wear protective clothing.

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

Methods and material for containment and cleaning up:

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

Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 13 for disposal information.

7 Handling and storage

Handling:

Precautions for safe handling No special precautions are necessary if used correctly.

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

Conditions for safe storage, including any incompatibilities

Storage:

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

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

Further information about storage conditions: Keep receptacle tightly sealed.

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Trade name: Bind Silane

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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:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Do not eat or drink while working.

Clean skin thoroughly immediately after handling the product.

Breathing equipment:

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

Protection of hands:

Protective gloves

Select the glove material considering penetration time, rate of diffusion and degradation time.

It is recommended that the selected protective gloves be tested and approved under NIOSH or EU Directive 89/686/EEC and the standard EN 374 derived from it.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Eye protection:

Safety glasses

Use equipment for eye protection tested and approved under government NIOSH standards.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form:	Liquid
Color:	Colorless
Odor:	Light
Odor threshold:	Not determined.

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	190 °C (374 °F)
Flash point:	108 °C (226 °F)

Flammability (solid, gaseous): Not applicable.

Ignition temperature:

Decomposition temperature: Not determined.

Auto igniting: Not determined.

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Trade name: Bind Silane

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Danger of explosion: Product does not present an explosion hazard.
Explosion limits:
Lower: 0.9 Vol %
Upper: 5.4 Vol %
Vapor pressure: Not determined.

Density at 20 °C (68 °F): 1.045 g/cm³ (8.721 lbs/gal)
Relative density Not determined.
Vapor density Not determined.
Evaporation rate Not determined.
Solubility in / Miscibility with
Water: Not miscible or difficult to mix.
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
Dynamic: Not determined.
Kinematic: Not determined.

Organic solvents: 100.0 %
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:

2530-85-0 3-(Trimethoxysilyl)propyl methacrylate

Oral LD50 22600 uL/kg (Rat)

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:

Carcinogenic categories

IARC (International Agency for Research on Cancer)

Substance is not listed.

NTP (National Toxicology Program)

Substance is not listed.

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Trade name: *Bind Silane*

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OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

12 Ecological information

Toxicity**Aquatic toxicity:** Not harmful to the aquatic environment**Persistence and degradability** Not available**Behavior in environmental systems:****Bioaccumulative potential** Not known**Mobility in soil** No further relevant information available.**Ecotoxicological effects:****Remark:** Not available**Additional ecological information:****General notes:**

Water hazard class 1 (Assessment by list): slightly hazardous for water

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

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.

13 Disposal considerations

Waste treatment methods**Recommendation:**

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

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

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

14 Transport information

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

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Trade name: Bind Silane

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Special precautions for user	Not applicable.
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Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
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UN "Model Regulation":	Void
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15 Regulatory information

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

Sara

Section 355 (extremely hazardous substances):

Substance is not listed.

Section 313 (Specific toxic chemical listings):

Substance is not listed.

TSCA (Toxic Substances Control Act):

Substance is listed.

Proposition 65

Chemicals known to cause cancer:

Substance is not listed.

Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

Chemicals known to cause developmental toxicity:

Substance is not listed.

Carcinogenicity 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

The substance is classified and labeled according to the Globally Harmonized System (GHS).

Signal word Warning

Hazard-determining components of labeling:

3-(Trimethoxysilyl)propyl methacrylate

Hazard statements

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

Precautionary statements

Wash thoroughly after handling.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves.

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Trade name: Bind Silane

(Contd. of page 7)

Wear eye protection / face protection.
 Use only outdoors or in a well-ventilated area.
 IF ON SKIN: Wash with plenty of water.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Call a POISON CENTER/doctor if you feel unwell.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 If skin irritation occurs: Get medical advice/attention.
 If eye irritation persists: Get medical advice/attention.
 Take off contaminated clothing and wash it before reuse.
 Store in a well-ventilated place. Keep container tightly closed.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations:

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

16 Other information

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

Department issuing SDS:

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

Date of preparation / last revision 07/04/2016 / -

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 ICAO: International Civil Aviation Organization
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 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)
 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
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 * **Data compared to the previous version altered.**

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 07/03/2016

1 Identification

Product identifier

Trade name: Formaldehyde 37%

Article number: Q427A

Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

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

Information department: SDS author: Regulatory.Affairs@promega.com

Emergency telephone number:

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer.

STOT SE 1 H370 Causes damage to organs.



GHS05 Corrosion

(Contd. on page 2)

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acc. to OSHA HCS

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Reviewed on 07/03/2016

Trade name: Formaldehyde 37%

(Contd. of page 1)

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

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

Label elements

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

Hazard pictograms GHS02, GHS05, GHS06, GHS07, GHS08

Signal word Danger

Hazard-determining components of labeling:

formaldehyde

methanol

Hazard statements

Flammable liquid and vapor.

Toxic if swallowed, in contact with skin or if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

Causes damage to organs.

Precautionary statements

Obtain special instructions before use.

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

Take precautionary measures against static discharge.

Wash thoroughly after handling.

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

Contaminated work clothing must not be allowed out of the workplace.

Use explosion-proof electrical/ventilating/lighting/equipment.

Do not breathe dusts or mists.

Wear protective gloves / eye protection / face protection.

Wear protective gloves / protective clothing.

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Use only outdoors or in a well-ventilated area.

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Call a POISON CENTER/doctor if you feel unwell.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

If swallowed: Rinse mouth. Do NOT induce vomiting.

In case of fire: Use for extinction: CO₂, powder or water spray.

Take off immediately all contaminated clothing and wash it before reuse.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

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

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 07/03/2016

Trade name: Formaldehyde 37%

(Contd. of page 2)

Classification system:**NFPA ratings (scale 0 - 4)**

Health = 3

Fire = 2

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = *3

Fire = 2

Reactivity = 0

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

Highly Toxic

Corrosive

Irritant

Sensitizer

Combustible

Reproductive Hazard

Suspected Carcinogen

Primary route(s) of entry:

Dermal

Inhalation

Oral

Target Organ(s):

May cause Liver damage (Hepatotoxin)

May affect Reproductive System (Mutagen, Teratogen)

May cause Kidney damage (Nephrotoxin)

Risk of damage to eyes

Other hazards

Limited evidence of carcinogenic effect.

Product has been observed to have sensitizing effects.

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.

* 3 Composition/information on ingredients

Chemical characterization: Mixtures**Description:**

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

Dangerous components:

50-00-0	formaldehyde	25-50%
67-56-1	methanol	5-10%

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

* 4 First-aid measures

Description of first aid measures**General information:**

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

(Contd. on page 4)

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acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 07/03/2016

Trade name: Formaldehyde 37%

(Contd. of page 3)

In case of irregular breathing or respiratory arrest provide artificial respiration.

Take affected persons out into the fresh air.

Do not leave affected persons unattended.

Seek medical treatment.

Provide oxygen treatment if affected person has difficulty breathing.

Medical supervision for at least 48 hours.

After inhalation:

Supply fresh air or oxygen; call for doctor.

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

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

Call a doctor immediately.

Seek medical treatment in case of complaints.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

Call a doctor immediately.

If skin irritation continues, consult a doctor.

After eye contact: *Call a doctor immediately.*

After swallowing:

Do not induce vomiting; immediately call for medical help.

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

Information for doctor:

Most important symptoms and effects, both acute and delayed *Allergic reactions*

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

* 5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents: *Use fire fighting measures that suit the environment.*

Special hazards arising from the substance or mixture *None known*

Advice for firefighters

No special advice

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

Protective equipment: *Mouth respiratory protective device.*

* 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

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:

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.

(Contd. on page 5)

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acc. to OSHA HCS

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Reviewed on 07/03/2016

Trade name: Formaldehyde 37%

(Contd. of page 4)

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.
Work only in fume cabinet.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.
Keep respiratory protective device available.

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Keep receptacle tightly sealed.
Specific end use(s) No further relevant information available.

* 8 Exposure controls/personal protection

Control parameters

Components with limit values that require monitoring at the workplace:

50-00-0 formaldehyde

PEL	Short-term value: 2 ppm Long-term value: 0.75 ppm see 29 CFR 1910.1048(c)
REL	Long-term value: 0.016 ppm Ceiling limit value: 0.1* ppm *15-min; See Pocket Guide App. A
TLV	Short-term value: NIC-0.37 mg/m ³ , NIC-0.3 ppm Long-term value: NIC-0.12 mg/m ³ , NIC-0.1 ppm Ceiling limit value: (0.37) mg/m ³ , (0.3) ppm NIC-A1; DSEN; RSEN

67-56-1 methanol

PEL	Long-term value: 260 mg/m ³ , 200 ppm
REL	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm Skin; BEI

(Contd. on page 6)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 07/03/2016

Trade name: Formaldehyde 37%

(Contd. of page 5)

Ingredients with biological limit values:**67-56-1 methanol**

BEI	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
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Additional information: The lists that were valid during the creation were used as basis.

Exposure controls**Personal protective equipment:****General protective and hygienic measures:**

Ensure that washing facilities are available at the work place.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Pregnant women should strictly avoid inhalation or skin contact.

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 chemical properties**General Information****Appearance:**

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

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	64 °C (147 °F)
Flash point:	23 - 60 °C (73 - 140 °F)

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Safety Data Sheet

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Reviewed on 07/03/2016

Trade name: Formaldehyde 37%

(Contd. of page 6)

Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	300 °C (572 °F)
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	5.5 Vol %
Upper:	73.0 Vol %
Vapor pressure at 20 °C (68 °F):	128 hPa (96 mm Hg)
Density at 20 °C (68 °F):	0.9087 g/cm ³ (7.583 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Organic solvents:	47.0 %
Water:	53.0 %
VOC content:	47.0 %
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:

50-00-0 formaldehyde

Oral	LD50	>100 mg/kg (Rat)
------	------	------------------

Irritation of skin	acute	2 mg/ 24H (Rabbit)
		Severe irritation

67-56-1 methanol

Oral	LD50	5628 mg/kg (Rat)
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Primary irritant effect:

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

(Contd. on page 8)

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acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 07/03/2016

Trade name: Formaldehyde 37%

(Contd. of page 7)

on the eye:*Strong caustic effect.**Irritating effect.****Sensitization:** Sensitization possible through skin contact.***Additional toxicological information:***The product shows the following dangers according to internally approved calculation methods for preparations:**Toxic**Corrosive**Irritant**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)**

50-00-0 formaldehyde

I

NTP (National Toxicology Program)

50-00-0 formaldehyde

K

OSHA-Ca (Occupational Safety & Health Administration)

50-00-0 formaldehyde

* 12 Ecological information

Toxicity***Aquatic toxicity:** Not harmful to the aquatic environment****Persistence and degradability** Not available****Behavior in environmental systems:******Bioaccumulative potential** Not known****Mobility in soil** No further relevant information available.****Ecotoxicological effects:******Remark:** Not available****Additional ecological information:******General notes:****Water hazard class 2 (Self-assessment): hazardous for water**Do not allow product to reach ground water, water course or sewage system.**Must not reach bodies of water or drainage ditch undiluted or unneutralized.**Danger to drinking water if even small quantities leak into the ground.****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.*

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US

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 07/03/2016

Trade name: Formaldehyde 37%

(Contd. of page 8)

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

14 Transport information

UN-Number

DOT, ADR, IMDG, IATA

UN1198

UN proper shipping name

DOT

Formaldehyde solutions, flammable

ADR

1198 Formaldehyde solutions, flammable

IMDG, IATA

FORMALDEHYDE SOLUTION, FLAMMABLE

Transport hazard class(es)

DOT



Class

3 Flammable liquids

Label

3, 8

ADR



Class

3 Flammable liquids

Label

3 + 8

IMDG



Class

3 Flammable liquids

Label

3/8

IATA



Class

3 Flammable liquids

Label

3 (8)

Packing group

DOT, ADR, IMDG, IATA

III

Environmental hazards:

Marine pollutant:

No

Special precautions for user

Warning: Flammable liquids

Stowage Category

A

(Contd. on page 10)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 07/03/2016

Trade name: Formaldehyde 37%

(Contd. of page 9)

Stowage Code	SW2 Clear of living quarters.
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Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
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Transport/Additional information:**ADR****Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

IMDG**Limited quantities (LQ)**

5L

Excepted quantities (EQ)

Code: E0

Not permitted as Excepted Quantity

UN "Model Regulation":

UN 1198 FORMALDEHYDE SOLUTIONS, FLAMMABLE, 3 (8), III

15 Regulatory information

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

Section 355 (extremely hazardous substances):

50-00-0 formaldehyde

Section 313 (Specific toxic chemical listings):

50-00-0 formaldehyde

67-56-1 methanol

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Proposition 65**Chemicals known to cause cancer:**

50-00-0 formaldehyde

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

67-56-1 methanol

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

50-00-0 formaldehyde

B1

TLV (Threshold Limit Value established by ACGIH)

50-00-0 formaldehyde

A2

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

50-00-0 formaldehyde

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

(Contd. on page 11)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 07/03/2016

Trade name: Formaldehyde 37%

(Contd. of page 10)

Signal word *Danger***Hazard-determining components of labeling:***formaldehyde**methanol***Hazard statements***Flammable liquid and vapor.**Toxic if swallowed, in contact with skin or if inhaled.**Causes severe skin burns and eye damage.**May cause an allergic skin reaction.**Suspected of causing genetic defects.**May cause cancer.**Causes damage to organs.***Precautionary statements***Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**Take precautionary measures against static discharge.**Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**Contaminated work clothing must not be allowed out of the workplace.**Use explosion-proof electrical/ventilating/lighting/equipment.**Do not breathe dusts or mists.**Wear protective gloves / eye protection / face protection.**Wear protective gloves / protective clothing.**Keep away from heat/sparks/open flames/hot surfaces. No smoking.**Ground/bond container and receiving equipment.**Use only non-sparking tools.**Use only outdoors or in a well-ventilated area.**IF SWALLOWED: Immediately call a POISON CENTER/ doctor.**If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Call a POISON CENTER/doctor if you feel unwell.**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**IF exposed or concerned: Get medical advice/attention.**If skin irritation or rash occurs: Get medical advice/attention.**If swallowed: Rinse mouth. Do NOT induce vomiting.**In case of fire: Use for extinction: CO₂, powder or water spray.**Take off immediately all contaminated clothing and wash it before reuse.**Store in a well-ventilated place. Keep container tightly closed.**Store in a well-ventilated place. Keep cool.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***National regulations:****Additional classification according to Decree on Hazardous Materials:** *Can cause cancer.***Water hazard class:** *Water hazard class 2 (Self-assessment): 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 12)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 07/03/2016

Trade name: Formaldehyde 37%

(Contd. of page 11)

Department issuing SDS:

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

Date of preparation / last revision 07/04/2016 / -

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 3: Acute toxicity – Category 3

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

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

Skin Sens. 1: Skin sensitisation – Category 1

Muta. 2: Germ cell mutagenicity – Category 2

Carc. 1B: Carcinogenicity – Category 1B

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

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

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 06/27/2016

* **1 Identification**

Product identifier

Trade name: Sodium Thiosulfate

Article number: Q428

Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

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

Information department: SDS author: Regulatory.Affairs@promega.com

Emergency telephone number:

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

* **2 Hazard(s) identification**

Classification of the substance or mixture

The product is not classified as hazardous according to the Globally Harmonized System (GHS).

Label elements

GHS label elements Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

Classification system:

NFPA ratings (scale 0 - 4)

Health = 0

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 0

Fire = 0

Reactivity = 0

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

Target Organ(s): Not applicable or unknown

Other hazards

This mixture has not been tested to determine the overall health hazard; therefore in accordance with 29CFR1910.1200, the data reported above pertains to the hazardous ingredients of this mixture.

Results of PBT and vPvB assessment

PBT: Not applicable.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 06/27/2016

Trade name: Sodium Thiosulfate

vPvB: Not applicable.

(Contd. of page 1)

3 Composition/information on ingredients

Chemical characterization: Substances

CAS No. Description

7772-98-7 sodium thiosulphate

Identification number(s)

EC number: 231-867-5

Chemical characterization: Mixtures

Description:

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

Dangerous components: Void

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

4 First-aid measures

Description of first aid measures

General information: No special measures required.

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

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

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

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

Information for doctor:

Most important symptoms and effects, both acute and delayed None

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

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

Special hazards arising from the substance or mixture None known

Advice for firefighters

No special advice

No special advice

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.

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Safety Data Sheet

acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 06/27/2016

Trade name: Sodium Thiosulfate

(Contd. of page 2)

See Section 13 for disposal information.

7 Handling and storage

Handling:

Precautions for safe handling No special measures required.

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

Conditions for safe storage, including any incompatibilities

Storage:

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

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

Further information about storage conditions: None.

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

8 Exposure controls/personal protection

Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands: Not required.

Material of gloves

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

Eye protection: Not required.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

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

pH-value at 20 °C (68 °F): 10.8

Change in condition

Melting point/Melting range:	0 °C (32 °F)
Boiling point/Boiling range:	>100 °C (>212 °F)
Flash point:	Not applicable.

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Safety Data Sheet

acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 06/27/2016

Trade name: Sodium Thiosulfate

(Contd. of page 3)

Flammability (solid, gaseous):	Not determined.
Ignition temperature:	
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not applicable.
Density at 20 °C (68 °F):	1.45 g/cm ³ (12.1 lbs/gal)
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
Water:	Soluble.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
Organic solvents:	0.0 %
Water:	99.0 %
Solids content:	99.0 %
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: 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 5)

US

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Printing date 07/04/2016

Reviewed on 06/27/2016

Trade name: Sodium Thiosulfate

(Contd. of page 4)

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

Carcinogenic categories

IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

NTP (National Toxicology Program)

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

12 Ecological information

Toxicity

Aquatic toxicity: Not harmful to the aquatic environment

Persistence and degradability Not available

Behavior in environmental systems:

Bioaccumulative potential Not known

Mobility in soil No further relevant information available.

Ecotoxicological effects:

Remark: Not available

Additional ecological information:

General notes:

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

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

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation:

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

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

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

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

14 Transport information

UN-Number

Not hazardous for transportation

DOT, ADR, ADN, IMDG, IATA

Void

UN proper shipping name

None

DOT, ADR, ADN, IMDG, IATA

Void

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Trade name: Sodium Thiosulfate

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Transport hazard class(es)	None
DOT, ADR, ADN, IMDG, IATA Class	Void
Packing group	None
DOT, ADR, IMDG, IATA	Void
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Void

15 Regulatory information

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

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

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.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

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

None of the ingredients are listed.

GHS label elements Void

Signal word Void

Hazard statements Void

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acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 06/27/2016

Trade name: Sodium Thiosulfate

(Contd. of page 6)

National regulations:

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

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

16 Other information

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

Department issuing SDS:

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph:(608)274-4330

Date of preparation / last revision 07/04/2016 / -

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

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

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 07/03/2016

1 Identification

Product identifier

Trade name: Sodium Carbonate, Anhydrous

Article number: Q440

CAS Number:

497-19-8

EC number:

207-838-8

Index number:

011-005-00-2

Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Promega Corporation

2800 Woods Hollow Road

Madison, WI 53711

U.S.A.

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

Information department: SDS author: Regulatory.Affairs@promega.com

Emergency telephone number:

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

Classification of the substance or mixture



Eye Irrit. 2 H319 Causes serious eye irritation.

Label elements

GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms GHS07

Signal word Warning

Hazard statements

Causes serious eye irritation.

Precautionary statements

Wash thoroughly after handling.

Wear eye protection / face protection.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

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Trade name: Sodium Carbonate, Anhydrous

(Contd. of page 1)

Classification system:**NFPA ratings (scale 0 - 4)**

Health = 1

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 1

Fire = 0

Reactivity = 0

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

Dermal

Oral

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

This mixture has not been tested to determine the overall health hazard; therefore in accordance with 29CFR1910.1200, the data reported above pertains to the hazardous ingredients of this mixture.

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.

* 3 Composition/information on ingredients

Chemical characterization: Substances**CAS No. Description**

497-19-8 sodium carbonate

Identification number(s)**EC number:** 207-838-8**Index number:** 011-005-00-2

* 4 First-aid measures

Description of first aid measures**After inhalation:** If the patient feels unwell or is concerned, obtain medical advice.**After skin contact:** Generally the product does not irritate the skin.**After eye contact:**

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

After swallowing: If the patient feels unwell or is concerned, obtain medical advice.**Information for doctor:****Most important symptoms and effects, both acute and delayed** None**Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

* 5 Fire-fighting measures

Extinguishing media**Suitable extinguishing agents:**CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture** None known

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Reviewed on 07/03/2016

Trade name: Sodium Carbonate, Anhydrous

Advice for firefighters No special advice

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6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Remove persons from danger area.

Avoid formation of dust.

Wear protective clothing.

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

See Section 7 for information on safe handling.

See Section 13 for disposal information.

7 Handling and storage

Handling:

Precautions for safe handling No special precautions are necessary if used correctly.

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

Conditions for safe storage, including any incompatibilities

Storage:

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

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

Further information about storage conditions: Keep receptacle tightly sealed.

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

8 Exposure controls/personal protection

Control parameters

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

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Do not eat or drink while working.

Breathing equipment:

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

Protection of hands:

Protective gloves

Select the glove material considering penetration time, rate of diffusion and degradation time.

It is recommended that the selected protective gloves be tested and approved under NIOSH or EU Directive 89/686/EEC and the standard EN 374 derived from it.

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Safety Data Sheet

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Printing date 07/04/2016

Reviewed on 07/03/2016

Trade name: Sodium Carbonate, Anhydrous

(Contd. of page 3)

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:

Safety glasses

Use equipment for eye protection tested and approved under government NIOSH standards.

9 Physical and chemical properties

Information on basic physical and chemical properties**General Information****Appearance:**

Form: Crystalline powder

Color: White

Odor: Odorless

Odor threshold: Not determined.

pH-value at 20 °C (68 °F): 11.5

Change in condition

Melting point/Melting range: 854 °C (1569 °F)

Boiling point/Boiling range: Undetermined.

Flash point: Not applicable.

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

Ignition temperature:

Decomposition temperature: Not determined.

Auto igniting: Not determined.

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

Explosion limits:

Lower: Not determined.

Upper: Not determined.

Vapor pressure: Not applicable.

Density at 20 °C (68 °F): 2.533 g/cm³ (21.138 lbs/gal)

Bulk density at 20 °C (68 °F): 500-600 kg/m³

Relative density Not determined.

Vapor density Not applicable.

Evaporation rate Not applicable.

Solubility in / Miscibility with

Water at 20 °C (68 °F): 212 g/l

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

Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

Organic solvents: 0.0 %

Solids content: 99.0 %

Other information No further relevant information available.

US

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 07/03/2016

Trade name: Sodium Carbonate, Anhydrous

(Contd. of page 4)

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:

497-19-8 sodium carbonate

Oral	LD50	4000 mg/kg (Rat)
Irritation of eyes	acute	50 mg (Rabbit) Severe

Primary irritant effect:

on the skin: No irritant effect.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:

Carcinogenic categories

IARC (International Agency for Research on Cancer)

Substance is not listed.

NTP (National Toxicology Program)

Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

12 Ecological information

Toxicity

Aquatic toxicity: Not harmful to the aquatic environment

Persistence and degradability Not available

Behavior in environmental systems:

Bioaccumulative potential Not known

Mobility in soil No further relevant information available.

Ecotoxicological effects:

Remark: Not available

Additional ecological information:

General notes:

Water hazard class 1 (Assessment by list): slightly hazardous for water

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

Results of PBT and vPvB assessment

PBT: Not applicable.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 07/03/2016

Trade name: Sodium Carbonate, Anhydrous

(Contd. of page 5)

vPvB: Not applicable.

Other adverse effects No further relevant information available.

* 13 Disposal considerations

Waste treatment methods

Recommendation:

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

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

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

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

* 14 Transport information

UN-Number DOT, ADR, ADN, IMDG, IATA	Not hazardous for transportation Void
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	None Void
Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Class	None Void
Packing group DOT, ADR, IMDG, IATA	None Void
Environmental hazards: Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Void

* 15 Regulatory information

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

Sara

Section 355 (extremely hazardous substances):

Substance is not listed.

Section 313 (Specific toxic chemical listings):

Substance is not listed.

TSCA (Toxic Substances Control Act):

Substance is listed.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 07/03/2016

Trade name: Sodium Carbonate, Anhydrous

(Contd. of page 6)

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.

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

The substance is classified and labeled according to the Globally Harmonized System (GHS).

Signal word Warning**Hazard statements**

Causes serious eye irritation.

Precautionary statements

Wash thoroughly after handling.

Wear eye protection / face protection.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

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

16 Other information

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

Department issuing SDS:

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

Date of preparation / last revision 07/04/2016 / -**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

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

IMDG: International Maritime Code for Dangerous Goods

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Safety Data Sheet
acc. to OSHA HCS

Printing date 07/04/2016

Reviewed on 07/03/2016

Trade name: Sodium Carbonate, Anhydrous

(Contd. of page 7)

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)
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
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
*** Data compared to the previous version altered.**

US