Conforms to US OSHA Hazard Communication 29CFR1910.1200

SAFETY DATA SHEET

Agilent Technologies

Agilent CrossLab Refillable pH Combination Electrode with Glass Body, Part Number 8010-0985

Section 1. Identification

1.1 Product identifier

Product name : Agilent CrossLab Refillable pH Combination Electrode with Glass Body, Part Number 8010-0985

Part No. (Chemical Kit) : 8010-0985

Part No. : * Electrode 8010-0971
pH reference solution 8010-0984-1

Validation date : 4/30/2015.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Material uses : Analytical chemistry.

* Electrode Electrodes. (1 x 7 ml)
pH reference solution 1 x 30 ml

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Note * : *** This component is considered an article. Information provided is based on the encapsulated substance or mixture in this article.**

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status : * Electrode This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

pH reference solution This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

*** Electrode**

H320 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B
H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

pH reference solution

H320 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B

Ingredients of unknown toxicity : * Electrode Percentage of the mixture consisting of ingredient (s) of unknown toxicity: 1.5%

pH reference solution Not applicable.

2.2 GHS label elements

Section 2. Hazards identification

Hazard pictograms :

Signal word	: * Electrode	Warning
	pH reference solution	Warning
Hazard statements	: * Electrode	H320 - Causes eye irritation. H373 - May cause damage to organs through prolonged or repeated exposure.
	pH reference solution	H320 - Causes eye irritation.

Precautionary statements

Prevention	: * Electrode	P280 - Wear eye or face protection. P260 - Do not breathe vapor. P264 - Wash hands thoroughly after handling.
	pH reference solution	P280 - Wear eye or face protection. P264 - Wash hands thoroughly after handling.
Response	: * Electrode	P314 - Get medical attention if you feel unwell. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
	pH reference solution	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
Storage	: * Electrode	Not applicable.
	pH reference solution	Not applicable.
Disposal	: * Electrode	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	pH reference solution	Not applicable.

2.3 Other hazards

Hazards not otherwise classified	: * Electrode	None known.
	pH reference solution	None known.

Section 3. Composition/information on ingredients

Substance/mixture	: * Electrode	Mixture (encapsulated in article)
	pH reference solution	Mixture

Ingredient name	%	CAS number
*** Electrode**		
Glycerol	10 - 30	56-81-5
Potassium chloride	5 - 10	7447-40-7
Ethanediol	1 - 5	107-21-1
Disodium hydrogenorthophosphate	1 - 5	7558-79-4
pH reference solution		
Potassium chloride	10 - 30	7447-40-7

Section 3. Composition/information on ingredients

*Electrodes. (Article.) No dangerous substances are released.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact	:	* Electrode	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.
		pH reference solution	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
Inhalation	:	* Electrode	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		pH reference solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	:	* Electrode	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		pH reference solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Section 4. First aid measures

Ingestion	:	* Electrode	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		pH reference solution	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	:	* Electrode	Causes eye irritation.
		pH reference solution	Causes eye irritation.
Inhalation	:	* Electrode	No known significant effects or critical hazards.
		pH reference solution	No known significant effects or critical hazards.
Skin contact	:	* Electrode	No known significant effects or critical hazards.
		pH reference solution	No known significant effects or critical hazards.
Ingestion	:	* Electrode	No known significant effects or critical hazards.
		pH reference solution	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	* Electrode	Adverse symptoms may include the following: irritation watering redness
		pH reference solution	Adverse symptoms may include the following: irritation watering redness
Inhalation	:	* Electrode	No specific data.
		pH reference solution	No specific data.
Skin contact	:	* Electrode	No specific data.
		pH reference solution	No specific data.

Section 4. First aid measures

Ingestion	:	* Electrode	No specific data.
		pH reference solution	No specific data.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	:	* Electrode	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		pH reference solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	* Electrode	No specific treatment.
		pH reference solution	No specific treatment.
Protection of first-aiders	:	* Electrode	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
		pH reference solution	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	* Electrode	Use an extinguishing agent suitable for the surrounding fire.
		pH reference solution	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:	* Electrode	None known.
		pH reference solution	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	:	* Electrode	In a fire or if heated, a pressure increase will occur and the container may burst.
		pH reference solution	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	:	* Electrode	Decomposition products may include the following materials: carbon dioxide carbon monoxide phosphorus oxides halogenated compounds metal oxide/oxides
		pH reference solution	Decomposition products may include the following materials: halogenated compounds metal oxide/oxides

5.3 Advice for firefighters

Section 5. Fire-fighting measures

Special protective actions for fire-fighters :	* Electrode	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	pH reference solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters :	* Electrode	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	pH reference solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel :	* Electrode	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	pH reference solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders :	* Electrode	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	pH reference solution	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2 Environmental precautions :	* Electrode	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	pH reference solution	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Section 6. Accidental release measures

6.3 Methods and materials for containment and cleaning up

* Electrode	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
pH reference solution	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures	:	* Electrode	Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
		pH reference solution	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.	

7.2 Conditions for safe storage, including any incompatibilities	:	* Electrode	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
		pH reference solution	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 7. Handling and storage

7.3 Specific end use(s)

Recommendations : * Electrode — Industrial applications, Professional applications.
pH reference solution — Industrial applications, Professional applications.

Industrial sector specific solutions : Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
*** Electrode**	
Glycerol	**OSHA PEL 1989 (United States, 3/1989).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust **OSHA PEL (United States, 2/2013).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
Ethanediol	**OSHA PEL 1989 (United States, 3/1989).** CEIL: 50 ppm CEIL: 125 mg/m³ **ACGIH TLV (United States, 4/2014).** C: 100 mg/m³ Form: Aerosol

8.2 Exposure controls

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Section 8. Exposure controls/personal protection

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	* Electrode	Liquid.
	pH reference solution	Liquid.
Color	* Electrode	Not available.
	pH reference solution	White.
Odor	* Electrode	Not available.
	pH reference solution	Not available.
Odor threshold	* Electrode	Not available.
	pH reference solution	Not available.
pH	* Electrode	6
	pH reference solution	6
Melting point	* Electrode	-25°C (-13°F)
	pH reference solution	0°C (32°F)
Boiling point	* Electrode	110°C (230°F)
	pH reference solution	100°C (212°F)
Flash point	* Electrode	Not available.
	pH reference solution	Not available.
Evaporation rate	* Electrode	Not available.
	pH reference solution	Not available.
Flammability (solid, gas)	* Electrode	Not applicable.
	pH reference solution	Not applicable.
Lower and upper explosive (flammable) limits	* Electrode	Not available.
	pH reference solution	Not available.
Vapor pressure	* Electrode	Not available.
	pH reference solution	Not available.
Vapor density	* Electrode	Not available.
	pH reference solution	Not available.
Relative density	* Electrode	1.1
	pH reference solution	1
Solubility	* Electrode	Soluble in the following materials: cold water and hot water.
	pH reference solution	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	* Electrode	Not available.
	pH reference solution	Not available.
Auto-ignition temperature	* Electrode	Not available.
	pH reference solution	Not available.
Decomposition temperature	* Electrode	Not available.
	pH reference solution	Not available.

Section 9. Physical and chemical properties

Viscosity : * Electrode — Not available.
pH reference solution — Not available.

Section 10. Stability and reactivity

10.1 Reactivity : * Electrode — No specific test data related to reactivity available for this product or its ingredients.
pH reference solution — No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : * Electrode — The product is stable.
pH reference solution — The product is stable.

10.3 Possibility of hazardous reactions : * Electrode — Under normal conditions of storage and use, hazardous reactions will not occur.
pH reference solution — Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : * Electrode — No specific data.
pH reference solution — No specific data.

10.5 Incompatible materials : * Electrode — No specific data.
pH reference solution — No specific data.

10.6 Hazardous decomposition products : * Electrode — Under normal conditions of storage and use, hazardous decomposition products should not be produced.
pH reference solution — Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
*** Electrode**				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-
Ethanediol	LD50 Oral	Rat	4700 mg/kg	-
Disodium hydrogenorthophosphate	LD50 Oral	Rat	17000 mg/kg	-
pH reference solution				
Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-

Conclusion/Summary : *Electrodes. (Article.) No dangerous substances are released.

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
*** Electrode**					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Ethanediol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	1 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	6 hours 1440 milligrams	-
	Skin - Mild irritant	Rabbit	-	555 milligrams	-
Disodium hydrogenorthophosphate	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
pH reference solution					
Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
*** Electrode**			
Ethanediol	Category 2	Not determined	kidneys

Aspiration hazard

Not available.

Information on the likely routes of exposure : * Electrode — Routes of entry anticipated: Oral, Dermal, Inhalation.

pH reference solution — Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Section 11. Toxicological information

Eye contact	:	* Electrode	Causes eye irritation.
		pH reference solution	Causes eye irritation.
Inhalation	:	* Electrode	No known significant effects or critical hazards.
		pH reference solution	No known significant effects or critical hazards.
Skin contact	:	* Electrode	No known significant effects or critical hazards.
		pH reference solution	No known significant effects or critical hazards.
Ingestion	:	* Electrode	No known significant effects or critical hazards.
		pH reference solution	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	* Electrode	Adverse symptoms may include the following: irritation watering redness
		pH reference solution	Adverse symptoms may include the following: irritation watering redness
Inhalation	:	* Electrode	No specific data.
		pH reference solution	No specific data.
Skin contact	:	* Electrode	No specific data.
		pH reference solution	No specific data.
Ingestion	:	* Electrode	No specific data.
		pH reference solution	No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	:	* Electrode	May cause damage to organs through prolonged or repeated exposure.
		pH reference solution	No known significant effects or critical hazards.
Carcinogenicity	:	* Electrode	No known significant effects or critical hazards.
		pH reference solution	No known significant effects or critical hazards.
Mutagenicity	:	* Electrode	No known significant effects or critical hazards.
		pH reference solution	No known significant effects or critical hazards.
Teratogenicity	:	* Electrode	No known significant effects or critical hazards.
		pH reference solution	No known significant effects or critical hazards.
Developmental effects	:	* Electrode	No known significant effects or critical hazards.
		pH reference solution	No known significant effects or critical hazards.
Fertility effects	:	* Electrode	No known significant effects or critical hazards.
		pH reference solution	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Route	ATE value
*** Electrode**	
Oral	11255.4 mg/kg
pH reference solution	
Oral	11158.8 mg/kg

Other information : * Electrode — Not available.
pH reference solution — Not available.

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
*** Electrode**			
Potassium chloride	Acute EC50 1337000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 9.24 g/L Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 83000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 9.68 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	48 hours
	Acute LC50 880000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Ethanediol	Acute LC50 100000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 10000000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 8050000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Disodium hydrogenorthophosphate	Acute LC50 3580000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
pH reference solution			
Potassium chloride	Acute EC50 1337000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 9.24 g/L Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 83000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 9.68 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	48 hours
	Acute LC50 880000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

12.2 Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
*** Electrode**			
Ethanediol	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
*** Electrode**			
Glycerol	-1.76	-	low
Ethanediol	-1.36	-	low
Disodium hydrogenorthophosphate	-5.8	-	low

Section 12. Ecological information

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

12.5 Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

Regulatory information

DOT / IMDG / IATA : Not regulated.

Section 15. Regulatory information

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

U.S. Federal regulations : **United States inventory (TSCA 8b)**: All components are listed or exempted.
Clean Water Act (CWA) 307: Silver chloride
Clean Water Act (CWA) 311: Disodium hydrogenorthophosphate

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

Section 15. Regulatory information

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
*** Electrode**						
Glycerol	10 - 30	No.	No.	No.	Yes.	No.
Potassium chloride	5 - 10	No.	No.	No.	Yes.	No.
Ethanediol	1 - 5	No.	No.	No.	Yes.	Yes.
Disodium hydrogenorthophosphate	1 - 5	No.	No.	No.	Yes.	No.
pH reference solution						
Potassium chloride	10 - 30	No.	No.	No.	Yes.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	*** Electrode** Ethanediol Silver chloride	 107-21-1 7783-90-6	 1 - 5 0.5 - 1.5
Supplier notification	*** Electrode** Ethanediol Silver chloride	 107-21-1 7783-90-6	 1 - 5 0.5 - 1.5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: GLYCERINE MIST; ETHYLENE GLYCOL

New York : The following components are listed: Ethylene glycol

New Jersey : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL; ETHYLENE GLYCOL; 1,2-ETHANEDIOL

Pennsylvania : The following components are listed: 1,2,3-PROPANETRIOL; 1,2-ETHANEDIOL

California Prop. 65

No products were found.

Canada inventory : All components are listed or exempted.

International regulations

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.

Section 15. Regulatory information

Taiwan inventory (CSNN): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Section 16. Other information

History

Date of issue : 4/30/2015.

Date of previous issue : No previous validation.

Version : 1

Indicates information that has changed from previously issued version.

Note * : *** This component is considered an article. Information provided is based on the encapsulated substance or mixture in this article.**

Notice to reader

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