(2012 OSHA Hazard Communication Standard (29 CFR 1910.1200))

SAFETY DATA SHEET

SIEMENS

pCO2 Electrode

MSDS no. 476247

Section 1. Identification

GHS product identifier : pCO2 Electrode

Product code : 476247, 10317498

Other means of identification : pCO2 Electrolyte Solution 00156011P

Product type : Liquid.

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

Not applicable.

Manufactured/supplied : Siemens Healthcare Diagnostics Inc.
511 Benedict Avenue
Tarrytown, NY 10591-5097 USA
1-877-229-3711

(800) 424-9300 (CHEMTREC) (24/365)

Section 2. Hazards identification

OSHA/HCS status	:	pCO2 Electrolyte Solution	This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	:	pCO2 Electrolyte Solution	Not classified.

GHS label elements

Signal word	:	pCO2 Electrolyte Solution	No signal word.
Hazard statements	:	pCO2 Electrolyte Solution	No known significant effects or critical hazards.

Precautionary statements

Prevention	:	pCO2 Electrolyte Solution	Not applicable.
Response	:	pCO2 Electrolyte Solution	Not applicable.
Storage	:	pCO2 Electrolyte Solution	Not applicable.
Disposal	:	pCO2 Electrolyte Solution	Not applicable.
Supplemental label elements	:	pCO2 Electrolyte Solution	None known.
Hazards not otherwise classified	:	pCO2 Electrolyte Solution	None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	pCO2 Electrolyte Solution	Mixture

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

There are no 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

Description of necessary first aid measures

Eye contact	:	pCO2 Electrolyte Solution	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	:	pCO2 Electrolyte Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	:	pCO2 Electrolyte Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	:	pCO2 Electrolyte Solution	Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	:	pCO2 Electrolyte Solution	No known significant effects or critical hazards.
Inhalation	:	pCO2 Electrolyte Solution	No known significant effects or critical hazards.
Skin contact	:	pCO2 Electrolyte Solution	No known significant effects or critical hazards.
Ingestion	:	pCO2 Electrolyte Solution	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	pCO2 Electrolyte Solution	No specific data.
Inhalation	:	pCO2 Electrolyte Solution	No specific data.
Skin contact	:	pCO2 Electrolyte Solution	No specific data.
Ingestion	:	pCO2 Electrolyte Solution	No specific data.

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

Notes to physician	:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	No specific treatment.
Protection of first-aiders	:	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	:	In case of fire, use water spray (fog), foam or dry chemical.
Unsuitable extinguishing media	:	None known.

Section 5. Fire-fighting measures

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : 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 : 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

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : 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. Put on appropriate personal protective equipment.

For emergency responders : 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".

Environmental precautions : 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).

Methods and materials for containment and cleaning up

Small spill : 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.

Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8).

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.

Conditions for safe storage, including any incompatibilities : 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 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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: safety glasses with side-shields.

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.

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

Physical state	:	pCO2 Electrolyte Solution	Liquid.
Color	:	pCO2 Electrolyte Solution	Colorless.
Odor	:	pCO2 Electrolyte Solution	Odorless.
pH	:	pCO2 Electrolyte Solution	Not applicable.
Flash point	:	pCO2 Electrolyte Solution	Not available.
Flammability (solid, gas)	:	pCO2 Electrolyte Solution	Not available.
Relative density	:	pCO2 Electrolyte Solution	1.02
Solubility in water	:	pCO2 Electrolyte Solution	Not available.
Partition coefficient: n-octanol/water	:	pCO2 Electrolyte Solution	Not available.
Auto-ignition temperature	:	pCO2 Electrolyte Solution	Not available.
Viscosity	:	pCO2 Electrolyte Solution	Not available.

Section 10. Stability and reactivity

Reactivity : pCO2 Electrolyte Solution — No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : pCO2 Electrolyte Solution — The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Conclusion/Summary : pCO2 Electrolyte Solution — Not available.

Irritation/Corrosion

Not available.

Conclusion/Summary

Skin : pCO2 Electrolyte Solution — Not available.

Eyes : pCO2 Electrolyte Solution — Not available.

Respiratory : pCO2 Electrolyte Solution — Not available.

Sensitization

Not available.

Conclusion/Summary

Skin : pCO2 Electrolyte Solution — Not available.

Respiratory : pCO2 Electrolyte Solution — Not available.

Mutagenicity

Not available.

Conclusion/Summary : pCO2 Electrolyte Solution — Not available.

Carcinogenicity

Not available.

Conclusion/Summary : pCO2 Electrolyte Solution — Not available.

Reproductive toxicity

Not available.

Conclusion/Summary : pCO2 Electrolyte Solution — Not available.

Teratogenicity

Not available.

Conclusion/Summary : pCO2 Electrolyte Solution — Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Section 11. Toxicological information

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact	:	pCO2 Electrolyte Solution	No known significant effects or critical hazards.
Inhalation	:	pCO2 Electrolyte Solution	No known significant effects or critical hazards.
Skin contact	:	pCO2 Electrolyte Solution	No known significant effects or critical hazards.
Ingestion	:	pCO2 Electrolyte Solution	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	pCO2 Electrolyte Solution	No specific data.
Inhalation	:	pCO2 Electrolyte Solution	No specific data.
Skin contact	:	pCO2 Electrolyte Solution	No specific data.
Ingestion	:	pCO2 Electrolyte Solution	No specific data.

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

Short term exposure

Potential immediate effects	:	pCO2 Electrolyte Solution	Not available.
Potential delayed effects	:	pCO2 Electrolyte Solution	Not available.

Long term exposure

Potential immediate effects	:	pCO2 Electrolyte Solution	Not available.
Potential delayed effects	:	pCO2 Electrolyte Solution	Not available.

Potential chronic health effects

Not available.

Conclusion/Summary	:	Not available.	pCO2 Electrolyte Solution
General	:	No known significant effects or critical hazards.	
Carcinogenicity	:	No known significant effects or critical hazards.	
Mutagenicity	:	No known significant effects or critical hazards.	
Teratogenicity	:	No known significant effects or critical hazards.	
Developmental effects	:	No known significant effects or critical hazards.	
Fertility effects	:	No known significant effects or critical hazards.	

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
pCO2 Electrolyte Solution Oral	46382.2 mg/kg

Interactive effects : pCO2 Electrolyte Solution — Not available.

Other information : pCO2 Electrolyte Solution — Not available.

Section 12. Ecological information

Toxicity

Not available.

Conclusion/Summary	:	pCO2 Electrolyte Solution	Not available.

Persistence and degradability

Conclusion/Summary	:	pCO2 Electrolyte Solution	Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC})	:	pCO2 Electrolyte Solution	Not available.
Mobility	:	pCO2 Electrolyte Solution	Not available.

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

Section 13. Disposal considerations

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. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

DOT Classification

UN number	pCO2 Electrolyte Solution	Not regulated.
UN proper shipping name	pCO2 Electrolyte Solution	-
Transport hazard class(es)	pCO2 Electrolyte Solution	-
Packing group	pCO2 Electrolyte Solution	-
Environmental hazards	pCO2 Electrolyte Solution	No.
Additional information	pCO2 Electrolyte Solution	-

TDG Classification

UN number	pCO2 Electrolyte Solution	Not regulated.
UN proper shipping name	pCO2 Electrolyte Solution	-

Section 14. Transport information

Transport hazard class(es)	pCO2 Electrolyte Solution	-
Packing group	pCO2 Electrolyte Solution	-
Environmental hazards	pCO2 Electrolyte Solution	No.
Additional information	pCO2 Electrolyte Solution	-

Mexico Classification

UN number	pCO2 Electrolyte Solution	Not regulated.
UN proper shipping name	pCO2 Electrolyte Solution	-
Transport hazard class(es)	pCO2 Electrolyte Solution	-
Packing group	pCO2 Electrolyte Solution	-
Environmental hazards	pCO2 Electrolyte Solution	No.
Additional information	pCO2 Electrolyte Solution	-

ADR/RID

UN number	pCO2 Electrolyte Solution	Not regulated.
UN proper shipping name	pCO2 Electrolyte Solution	-
Transport hazard class(es)	pCO2 Electrolyte Solution	-
Packing group	pCO2 Electrolyte Solution	-
Environmental hazards	pCO2 Electrolyte Solution	No.
Additional information	pCO2 Electrolyte Solution	-

IMDG

UN number	pCO2 Electrolyte Solution	Not regulated.
UN proper shipping name	pCO2 Electrolyte Solution	-
Transport hazard class(es)	pCO2 Electrolyte Solution	-

Section 14. Transport information

Packing group	pCO2 Electrolyte Solution	-
Environmental hazards	pCO2 Electrolyte Solution	No.
Additional information	pCO2 Electrolyte Solution	-

IATA

UN number	pCO2 Electrolyte Solution	Not regulated.
UN proper shipping name	pCO2 Electrolyte Solution	-
Transport hazard class(es)	pCO2 Electrolyte Solution	-
Packing group	pCO2 Electrolyte Solution	-
Environmental hazards	pCO2 Electrolyte Solution	No.
Additional information	pCO2 Electrolyte Solution	-

Special precautions for user : pCO2 Electrolyte Solution

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 311: potassium hydroxide

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

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

Section 15. Regulatory information

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

No products were found.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	**pCO2 Electrolyte Solution** ethanediol	107-21-1	1.078
Supplier notification	**pCO2 Electrolyte Solution** ethanediol	107-21-1	1.078

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: ETHYLENE GLYCOL

New York : The following components are listed: Ethylene glycol

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

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

International regulations

Chemical Weapons Convention List Schedule I Chemicals :	pCO2 Electrolyte Solution	Not listed
Chemical Weapons Convention List Schedule II Chemicals :	pCO2 Electrolyte Solution	Not listed
Chemical Weapons Convention List Schedule III Chemicals :	pCO2 Electrolyte Solution	Not listed

Section 16. Other information

History

Date of issue/Date of revision : 1/22/2016.

Version : 1.04

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

Allergen : **Not available.**