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

SAFETY DATA SHEET

SIEMENS

DCA Systems HbA1c Controls

SDS # : 5068A

Section 1. Identification

Product identifier : DCA Systems HbA1c Controls

Product code : 5068A, 03714363, 10311161

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 :

Reconstitution Fluid	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910. 1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Hemoglobin A1c Normal Control	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Hemoglobin A1c Abnormal Control	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture :

Reconstitution Fluid	Not classified.
Hemoglobin A1c Normal Control	CARCINOGENICITY - Category 1B
Hemoglobin A1c Abnormal Control	CARCINOGENICITY - Category 1B

Additional information : Potentially biohazardous material.

Sodium azide may react with lead or copper plumbing to form highly explosive metal azides.

GHS label elements

Hazard pictograms :

Signal word :

Reconstitution Fluid	No signal word.
Hemoglobin A1c Normal Control	Danger
Hemoglobin A1c Abnormal Control	Danger

Hazard statements :

Reconstitution Fluid	No known significant effects or critical hazards.
Hemoglobin A1c Normal Control	H350 - May cause cancer.
Hemoglobin A1c Abnormal Control	H350 - May cause cancer.

Precautionary statements

Section 2. Hazards identification

Prevention	:	Reconstitution Fluid	Not applicable.
		Hemoglobin A1c Normal Control	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
		Hemoglobin A1c Abnormal Control	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
Response	:	Reconstitution Fluid	Not applicable.
		Hemoglobin A1c Normal Control	P308 + P313 - IF exposed or concerned: Get medical attention.
		Hemoglobin A1c Abnormal Control	P308 + P313 - IF exposed or concerned: Get medical attention.
Storage	:	Reconstitution Fluid	Not applicable.
		Hemoglobin A1c Normal Control	P405 - Store locked up.
		Hemoglobin A1c Abnormal Control	P405 - Store locked up.
Disposal	:	Reconstitution Fluid	Not applicable.
		Hemoglobin A1c Normal Control	P501 - Dispose of contents and container in accordance with all local, regional, and national regulations.
		Hemoglobin A1c Abnormal Control	P501 - Dispose of contents and container in accordance with all local, regional, and national regulations.
Supplemental label elements	:	Reconstitution Fluid	None known.
		Hemoglobin A1c Normal Control	None known.
		Hemoglobin A1c Abnormal Control	None known.
Hazards not otherwise classified	:	Reconstitution Fluid	None known.
		Hemoglobin A1c Normal Control	None known.
		Hemoglobin A1c Abnormal Control	None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	Reconstitution Fluid	Mixture
		Hemoglobin A1c Normal Control	Mixture
		Hemoglobin A1c Abnormal Control	Mixture

Ingredient name	%	CAS number
Reconstitution Fluid		
sodium azide	0.09	26628-22-8
Hemoglobin A1c Normal Control		
chloramphenicol	0.6	56-75-7
Hemoglobin A1c Abnormal Control		
chloramphenicol	0.6	56-75-7

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

Description of necessary first aid measures

Eye contact	:	Reconstitution Fluid	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.
		Hemoglobin A1c Normal Control	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.
		Hemoglobin A1c Abnormal Control	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.
Inhalation	:	Reconstitution Fluid	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Hemoglobin A1c Normal Control	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 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.
		Hemoglobin A1c Abnormal Control	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 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	:	Reconstitution Fluid	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Hemoglobin A1c Normal Control	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		Hemoglobin A1c Abnormal Control	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Section 4. First aid measures

Ingestion	:	Reconstitution Fluid	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.
		Hemoglobin A1c Normal Control	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. 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.
		Hemoglobin A1c Abnormal Control	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. 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	:	Reconstitution Fluid	No known significant effects or critical hazards.
		Hemoglobin A1c Normal Control	No known significant effects or critical hazards.
		Hemoglobin A1c Abnormal Control	No known significant effects or critical hazards.
Inhalation	:	Reconstitution Fluid	No known significant effects or critical hazards.
		Hemoglobin A1c Normal Control	No known significant effects or critical hazards.
		Hemoglobin A1c Abnormal Control	No known significant effects or critical hazards.

Section 4. First aid measures

Skin contact	:	Reconstitution Fluid	No known significant effects or critical hazards.
		Hemoglobin A1c Normal Control	No known significant effects or critical hazards.
		Hemoglobin A1c Abnormal Control	No known significant effects or critical hazards.
Ingestion	:	Reconstitution Fluid	No known significant effects or critical hazards.
		Hemoglobin A1c Normal Control	No known significant effects or critical hazards.
		Hemoglobin A1c Abnormal Control	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	Reconstitution Fluid	No specific data.
		Hemoglobin A1c Normal Control	No specific data.
		Hemoglobin A1c Abnormal Control	No specific data.
Inhalation	:	Reconstitution Fluid	No specific data.
		Hemoglobin A1c Normal Control	No specific data.
		Hemoglobin A1c Abnormal Control	No specific data.
Skin contact	:	Reconstitution Fluid	No specific data.
		Hemoglobin A1c Normal Control	No specific data.
		Hemoglobin A1c Abnormal Control	No specific data.
Ingestion	:	Reconstitution Fluid	No specific data.
		Hemoglobin A1c Normal Control	No specific data.
		Hemoglobin A1c Abnormal Control	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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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.
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	:	No specific data.
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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized 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. Approach release from upwind. 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. Contaminated absorbent material may pose the same hazard as the spilled product. 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). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.

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. Store locked up. 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

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Reconstitution Fluid sodium azide	**ACGIH TLV (United States, 3/2015). Notes: as hydrazoic acid vapor** C: 0.11 ppm, (as Hydrazoic acid vapor) Form: as Hydrazoic acid vapor **ACGIH TLV (United States, 3/2015).** C: 0.29 mg/m³, (as Sodium azide) Form: as Sodium azide **NIOSH REL (United States, 10/2013). Absorbed through skin. Notes: NAN3** CEIL: 0.3 mg/m³, (NAN3) **NIOSH REL (United States, 10/2013). Absorbed through skin. Notes: as HN3** CEIL: 0.1 ppm, (as HN3) **OSHA PEL 1989 (United States, 3/1989). Absorbed through skin. Notes: as HN3** CEIL: 0.1 ppm, (as HN3) **OSHA PEL 1989 (United States, 3/1989). Absorbed through skin. Notes: as NaN3** CEIL: 0.3 mg/m³, (as NaN3)
Hemoglobin A1c Normal Control chloramphenicol	**AIHA WEEL (United States, 10/2011).** TWA: 0.5 mg/m³ 8 hours.
Hemoglobin A1c Abnormal Control chloramphenicol	**AIHA WEEL (United States, 10/2011).** TWA: 0.5 mg/m³ 8 hours.

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: 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. 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.

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.

Section 8. Exposure controls/personal protection

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 : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Physical state	:	Reconstitution Fluid	Liquid.
		Hemoglobin A1c Normal Control	Solid.
		Hemoglobin A1c Abnormal Control	Solid.
Color	:	Reconstitution Fluid	Colorless.
		Hemoglobin A1c Normal Control	Brownish-red.
		Hemoglobin A1c Abnormal Control	Brownish-red.
Odor	:	Reconstitution Fluid	Odorless.
		Hemoglobin A1c Normal Control	Bland.
		Hemoglobin A1c Abnormal Control	Bland.
pH	:	Reconstitution Fluid	Not applicable.
		Hemoglobin A1c Normal Control	Not applicable.
		Hemoglobin A1c Abnormal Control	Not applicable.
Flash point	:	Reconstitution Fluid	Not available.
		Hemoglobin A1c Normal Control	Not available.
		Hemoglobin A1c Abnormal Control	Not available.
Flammability (solid, gas)	:	Reconstitution Fluid	Not relevant/applicable due to nature of the product.
		Hemoglobin A1c Normal Control	Not relevant/applicable due to nature of the product.
		Hemoglobin A1c Abnormal Control	Not relevant/applicable due to nature of the product.
Relative density	:	Reconstitution Fluid	1
		Hemoglobin A1c Normal Control	Not relevant/applicable due to nature of the product.
		Hemoglobin A1c Abnormal Control	Not relevant/applicable due to nature of the product.
Solubility in water	:	Reconstitution Fluid	Not relevant/applicable due to nature of the product.
		Hemoglobin A1c Normal Control	Not relevant/applicable due to nature of the product.
		Hemoglobin A1c Abnormal Control	Not relevant/applicable due to nature of the product.
Partition coefficient: n-octanol/water	:	Reconstitution Fluid	Not available.
		Hemoglobin A1c Normal Control	Not available.
		Hemoglobin A1c Abnormal Control	Not available.
Auto-ignition temperature	:	Reconstitution Fluid	Not available.
		Hemoglobin A1c Normal Control	Not available.
		Hemoglobin A1c Abnormal Control	Not available.
Viscosity	:	Reconstitution Fluid	Not available.
		Hemoglobin A1c Normal Control	Not available.
		Hemoglobin A1c Abnormal Control	Not available.

Aerosol product

Type of aerosol	:	Reconstitution Fluid	Not applicable.
		Hemoglobin A1c Normal Control	Not applicable.
		Hemoglobin A1c Abnormal Control	Not applicable.

Section 10. Stability and reactivity

Reactivity :
- Reconstitution Fluid: No specific test data related to reactivity available for this product or its ingredients.
- Hemoglobin A1c Normal Control: No specific test data related to reactivity available for this product or its ingredients.
- Hemoglobin A1c Abnormal Control: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability :
- Reconstitution Fluid: The product is stable.
- Hemoglobin A1c Normal Control: The product is stable.
- Hemoglobin A1c Abnormal Control: The product is stable.

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

Conditions to avoid :
- Reconstitution Fluid: No specific data.
- Hemoglobin A1c Normal Control: No specific data.
- Hemoglobin A1c Abnormal Control: No specific data.

Incompatible materials :
- Reconstitution Fluid: No specific data.
- Hemoglobin A1c Normal Control: No specific data.
- Hemoglobin A1c Abnormal Control: No specific data.

Hazardous decomposition products :
- Reconstitution Fluid: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Hemoglobin A1c Normal Control: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Hemoglobin A1c Abnormal Control: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Reconstitution Fluid				
sodium azide	LD50 Dermal	Rabbit	20 mg/kg	-
	LD50 Dermal	Rat	50 mg/kg	-
	LD50 Oral	Rat	27 mg/kg	-
Hemoglobin A1c Normal Control				
chloramphenicol	LD50 Oral	Rat	2500 mg/kg	-
Hemoglobin A1c Abnormal Control				
chloramphenicol	LD50 Oral	Rat	2500 mg/kg	-

Conclusion/Summary :
- Reconstitution Fluid: Not available.
- Hemoglobin A1c Normal Control: Not available.
- Hemoglobin A1c Abnormal Control: Not available.

Irritation/Corrosion

Not available.

Conclusion/Summary

Skin :
- Reconstitution Fluid: Not available.
- Hemoglobin A1c Normal Control: Not available.
- Hemoglobin A1c Abnormal Control: Not available.

Section 11. Toxicological information

Eyes :
Reconstitution Fluid — Not available.
Hemoglobin A1c Normal Control — Not available.
Hemoglobin A1c Abnormal Control — Not available.

Respiratory :
Reconstitution Fluid — Not available.
Hemoglobin A1c Normal Control — Not available.
Hemoglobin A1c Abnormal Control — Not available.

Sensitization

Not available.

Conclusion/Summary

Skin :
Reconstitution Fluid — Not available.
Hemoglobin A1c Normal Control — Not available.
Hemoglobin A1c Abnormal Control — Not available.

Respiratory :
Reconstitution Fluid — Not available.
Hemoglobin A1c Normal Control — Not available.
Hemoglobin A1c Abnormal Control — Not available.

Mutagenicity

Not available.

Conclusion/Summary :
Reconstitution Fluid — Not available.
Hemoglobin A1c Normal Control — Not available.
Hemoglobin A1c Abnormal Control — Not available.

Carcinogenicity

Not available.

Conclusion/Summary :
Reconstitution Fluid — Not available.
Hemoglobin A1c Normal Control — Not available.
Hemoglobin A1c Abnormal Control — Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Hemoglobin A1c Normal Control			
chloramphenicol	-	2A	Reasonably anticipated to be a human carcinogen.
Hemoglobin A1c Abnormal Control			
chloramphenicol	-	2A	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Not available.

Conclusion/Summary :
Reconstitution Fluid — Not available.
Hemoglobin A1c Normal Control — Not available.
Hemoglobin A1c Abnormal Control — Not available.

Teratogenicity

Not available.

Conclusion/Summary :
Reconstitution Fluid — Not available.
Hemoglobin A1c Normal Control — Not available.
Hemoglobin A1c Abnormal Control — Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure :
Reconstitution Fluid — Not available.
Hemoglobin A1c Normal Control — Not available.
Hemoglobin A1c Abnormal Control — Not available.

Potential acute health effects

Section 11. Toxicological information

Eye contact	:	Reconstitution Fluid	No known significant effects or critical hazards.
		Hemoglobin A1c Normal Control	No known significant effects or critical hazards.
		Hemoglobin A1c Abnormal Control	No known significant effects or critical hazards.
Inhalation	:	Reconstitution Fluid	No known significant effects or critical hazards.
		Hemoglobin A1c Normal Control	No known significant effects or critical hazards.
		Hemoglobin A1c Abnormal Control	No known significant effects or critical hazards.
Skin contact	:	Reconstitution Fluid	No known significant effects or critical hazards.
		Hemoglobin A1c Normal Control	No known significant effects or critical hazards.
		Hemoglobin A1c Abnormal Control	No known significant effects or critical hazards.
Ingestion	:	Reconstitution Fluid	No known significant effects or critical hazards.
		Hemoglobin A1c Normal Control	No known significant effects or critical hazards.
		Hemoglobin A1c Abnormal Control	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	Reconstitution Fluid	No specific data.
		Hemoglobin A1c Normal Control	No specific data.
		Hemoglobin A1c Abnormal Control	No specific data.
Inhalation	:	Reconstitution Fluid	No specific data.
		Hemoglobin A1c Normal Control	No specific data.
		Hemoglobin A1c Abnormal Control	No specific data.
Skin contact	:	Reconstitution Fluid	No specific data.
		Hemoglobin A1c Normal Control	No specific data.
		Hemoglobin A1c Abnormal Control	No specific data.
Ingestion	:	Reconstitution Fluid	No specific data.
		Hemoglobin A1c Normal Control	No specific data.
		Hemoglobin A1c Abnormal Control	No specific data.

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

Short term exposure

Potential immediate effects	:	Reconstitution Fluid	Not available.
		Hemoglobin A1c Normal Control	Not available.
		Hemoglobin A1c Abnormal Control	Not available.
Potential delayed effects	:	Reconstitution Fluid	Not available.
		Hemoglobin A1c Normal Control	Not available.
		Hemoglobin A1c Abnormal Control	Not available.

Long term exposure

Potential immediate effects	:	Reconstitution Fluid	Not available.
		Hemoglobin A1c Normal Control	Not available.
		Hemoglobin A1c Abnormal Control	Not available.
Potential delayed effects	:	Reconstitution Fluid	Not available.
		Hemoglobin A1c Normal Control	Not available.
		Hemoglobin A1c Abnormal Control	Not available.

Potential chronic health effects

Not available.

Conclusion/Summary	:	Not available.	Reconstitution Fluid
		Not available.	Hemoglobin A1c Normal Control
		Not available.	Hemoglobin A1c Abnormal Control
General	:	No known significant effects or critical hazards.	
Carcinogenicity	:	May cause cancer. Risk of cancer depends on duration and level of exposure.	

Section 11. Toxicological information

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

Not available.

Interactive effects :

Reconstitution Fluid	Not available.
Hemoglobin A1c Normal Control	Not available.
Hemoglobin A1c Abnormal Control	Not available.

Other information :

Reconstitution Fluid	Not available.
Hemoglobin A1c Normal Control	Not available.
Hemoglobin A1c Abnormal Control	Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Reconstitution Fluid			
sodium azide	Acute EC50 0.348 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 4.2 to 6.2 mg/l Fresh water	Daphnia - Daphnia pulex - Larvae	48 hours
	Acute LC50 9000 µg/l Fresh water	Crustaceans - Gammarus lacustris	48 hours
	Acute LC50 0.68 mg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 5600 µg/l Marine water	Algae - Macrocystis pyrifera	96 hours
Hemoglobin A1c Normal Control			
chloramphenicol	Acute EC50 53.7 ug/ml Marine water	Crustaceans - Penaeus stylirostris	48 hours
	Acute EC50 345000 µg/l	Daphnia - Daphnia magna	48 hours
	Acute IC50 0.1 mg/l Fresh water	Algae - Scenedesmus intermedius - Exponential growth phase	72 hours
	Chronic NOEC 10 mg/l Marine water	Algae - Tetraselmis suecica - Exponential growth phase	96 hours
Hemoglobin A1c Abnormal Control			
chloramphenicol	Acute EC50 53.7 ug/ml Marine water	Crustaceans - Penaeus stylirostris	48 hours
	Acute EC50 345000 µg/l	Daphnia - Daphnia magna	48 hours
	Acute IC50 0.1 mg/l Fresh water	Algae - Scenedesmus intermedius - Exponential growth phase	72 hours
	Chronic NOEC 10 mg/l Marine water	Algae - Tetraselmis suecica - Exponential growth phase	96 hours

Conclusion/Summary :

Reconstitution Fluid	Not available.
Hemoglobin A1c Normal Control	Not available.
Hemoglobin A1c Abnormal Control	Not available.

Persistence and degradability

Conclusion/Summary :

Reconstitution Fluid	Not available.
Hemoglobin A1c Normal Control	Not available.
Hemoglobin A1c Abnormal Control	Not available.

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Hemoglobin A1c Normal Control			
chloramphenicol	1.14	-	low
Hemoglobin A1c Abnormal Control			
chloramphenicol	1.14	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC})	:	Reconstitution Fluid	Not available.
		Hemoglobin A1c Normal Control	Not available.
		Hemoglobin A1c Abnormal Control	Not available.
Mobility	:	Reconstitution Fluid	Not available.
		Hemoglobin A1c Normal Control	Not available.
		Hemoglobin A1c Abnormal Control	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. 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.

Sodium azide may react with lead or copper plumbing to form highly explosive metal azides.

Section 14. Transport information

DOT Classification

UN number	Reconstitution Fluid	Not regulated.
	Hemoglobin A1c Normal Control	Not regulated.
	Hemoglobin A1c Abnormal Control	Not regulated.
UN proper shipping name	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-
Transport hazard class(es)	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-
Packing group	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-
Environmental hazards	Reconstitution Fluid	No.
	Hemoglobin A1c Normal Control	No.
	Hemoglobin A1c Abnormal Control	No.
Additional information	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-

Section 14. Transport information

TDG Classification

UN number	Reconstitution Fluid	Not regulated.
	Hemoglobin A1c Normal Control	Not regulated.
	Hemoglobin A1c Abnormal Control	Not regulated.
UN proper shipping name	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-
Transport hazard class(es)	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-
Packing group	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-
Environmental hazards	Reconstitution Fluid	No.
	Hemoglobin A1c Normal Control	No.
	Hemoglobin A1c Abnormal Control	No.
Additional information	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-

ADR/RID

UN number	Reconstitution Fluid	Not regulated.
	Hemoglobin A1c Normal Control	Not regulated.
	Hemoglobin A1c Abnormal Control	Not regulated.
UN proper shipping name	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-
Transport hazard class(es)	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-
Packing group	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-
Environmental hazards	Reconstitution Fluid	No.
	Hemoglobin A1c Normal Control	No.
	Hemoglobin A1c Abnormal Control	No.
Additional information	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-

IMDG

UN number	Reconstitution Fluid	Not regulated.
	Hemoglobin A1c Normal Control	Not regulated.
	Hemoglobin A1c Abnormal Control	Not regulated.
UN proper shipping name	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-
	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-

Section 14. Transport information

Transport hazard class(es)

Packing group	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-
Environmental hazards	Reconstitution Fluid	No.
	Hemoglobin A1c Normal Control	No.
	Hemoglobin A1c Abnormal Control	No.
Additional information	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-

IATA

UN number	Reconstitution Fluid	Not regulated.
	Hemoglobin A1c Normal Control	Not regulated.
	Hemoglobin A1c Abnormal Control	Not regulated.
UN proper shipping name	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-
Transport hazard class(es)	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-

Packing group	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-
Environmental hazards	Reconstitution Fluid	No.
	Hemoglobin A1c Normal Control	No.
	Hemoglobin A1c Abnormal Control	No.
Additional information	Reconstitution Fluid	-
	Hemoglobin A1c Normal Control	-
	Hemoglobin A1c Abnormal Control	-

Special precautions for user :	Reconstitution Fluid	**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.
	Hemoglobin A1c Normal Control	**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.
	Hemoglobin A1c Abnormal Control	**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.

Section 14. Transport information

Transport in bulk according to Annex II of MARPOL and the IBC Code Not applicable.

Section 15. Regulatory information

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

Commerce control list precursor: potassium cyanide

United States inventory (TSCA 8b): Not determined.

Clean Water Act (CWA) 307: potassium cyanide

Clean Water Act (CWA) 311: potassium cyanide

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

Name	%	EHS	SARA 302 TPQ (lbs)	SARA 302 TPQ (gallons)	SARA 304 RQ (lbs)	SARA 304 RQ (gallons)
Reconstitution Fluid sodium azide	0.09	Yes.	500	-	1000	-
Hemoglobin A1c Normal Control hydrogen cyanide, salts of with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this database	0.03	Yes.	100	-	10	-
Hemoglobin A1c Abnormal Control hydrogen cyanide, salts of with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this database	0.03	Yes.	100	-	10	-

SARA 304 RQ : 50000 lbs / 22700 kg

SARA 311/312

Classification : Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Reconstitution Fluid sodium azide	0.09	No.	No.	No.	Yes.	No.
Hemoglobin A1c Normal Control chloramphenicol	0.6	No.	No.	No.	No.	Yes.
Hemoglobin A1c Abnormal Control chloramphenicol	0.6	No.	No.	No.	No.	Yes.

Section 15. Regulatory information

State regulations

Massachusetts : None of the components are listed.

New York : The following components are listed: Chloramphenicol

New Jersey : None of the components are listed.

Pennsylvania : The following components are listed: ACETAMIDE, 2,2-DICHLORO-N-[2-HYDROXY-1-(HYDROXYMETHYL)-2-(4-NITROPHENYL)ETHYL], [R-(R*,R*)]-

California Prop. 65

WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Hemoglobin A1c Normal Control potassium cyanide	No.	Yes.	No.	25 µg/day (ingestion)
Hemoglobin A1c Abnormal Control potassium cyanide	No.	Yes.	No.	25 µg/day (ingestion)

International regulations

Chemical Weapons Convention List Schedule I Chemicals	:	Reconstitution Fluid Hemoglobin A1c Normal Control Hemoglobin A1c Abnormal Control	Not listed Not listed Not listed
Chemical Weapons Convention List Schedule II Chemicals	:	Reconstitution Fluid Hemoglobin A1c Normal Control Hemoglobin A1c Abnormal Control	Not listed Not listed Not listed
Chemical Weapons Convention List Schedule III Chemicals	:	Reconstitution Fluid Hemoglobin A1c Normal Control Hemoglobin A1c Abnormal Control	Not listed Not listed Not listed

Section 16. Other information

History

Date of issue/Date of revision : 11/7/2019

Version : 1.08

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 = 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.