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

# SAFETY DATA SHEET

DCA Systems - Microalbumin/Creatinine Reagent Kit

SIEMENS

**MSDS no.** 10311480

## Section 1. Identification

**GHS product identifier** : DCA Systems - Microalbumin/Creatinine Reagent Kit

**Product code** : 6011A, 10311480

**Other means of identification** : Albumin Reagent
Creatinine Alkaline Reagent
Buffer Solution

**Product type** : Solid.

**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** :

| | |
|---|---|
| Albumin Reagent | This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). |
| Creatinine Alkaline Reagent | This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). |
| Buffer Solution | This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). |

**Classification of the substance or mixture** :

| | |
|---|---|
| Albumin Reagent | Not classified. |
| Creatinine Alkaline Reagent | ACUTE TOXICITY: ORAL - Category 4<br>SKIN CORROSION/IRRITATION - Category 1A<br>SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 |
| Buffer Solution | Not classified. |

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

**GHS label elements**

**Hazard pictograms** :

**Signal word** :

| | |
|---|---|
| Albumin Reagent | No signal word. |
| Creatinine Alkaline Reagent | Danger |
| Buffer Solution | No signal word. |

# Section 2. Hazards identification

| | | | |
|---|---|---|---|
| **Hazard statements** | : | Albumin Reagent | No known significant effects or critical hazards. |
| | | Creatinine Alkaline Reagent | H302 - Harmful if swallowed.<br>H314 - Causes severe skin burns and eye damage. |
| | | Buffer Solution | No known significant effects or critical hazards. |
| **Precautionary statements** | | | |
| **Prevention** | : | Albumin Reagent | Not applicable. |
| | | Creatinine Alkaline Reagent | P264 - Wash hands thoroughly after handling.<br>P270 - Do not eat, drink or smoke when using this product.<br>P280 - Wear protective gloves/protective clothing/eye protection/face protection. |
| | | Buffer Solution | Not applicable. |
| **Response** | : | Albumin Reagent | Not applicable. |
| | | Creatinine Alkaline Reagent | P304 + P340 + P310 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician.<br>P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.<br>P303 + P361 + P353 + P363 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician.<br>P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician. |
| | | Buffer Solution | Not applicable. |
| **Storage** | : | Albumin Reagent | Not applicable. |
| | | Creatinine Alkaline Reagent | Not applicable. |
| | | Buffer Solution | Not applicable. |
| **Disposal** | : | Albumin Reagent | Not applicable. |
| | | Creatinine Alkaline Reagent | P501 - Dispose of contents and container in accordance with all local, regional, and national regulations. |
| | | Buffer Solution | Not applicable. |
| **Supplemental label elements** | : | Albumin Reagent | None known. |
| | | Creatinine Alkaline Reagent | None known. |
| | | Buffer Solution | None known. |
| **Hazards not otherwise classified** | : | Albumin Reagent | None known. |
| | | Creatinine Alkaline Reagent | None known. |
| | | Buffer Solution | None known. |

# Section 3. Composition/information on ingredients

**Substance/mixture** : Albumin Reagent — Mixture
Creatinine Alkaline Reagent — Mixture
Buffer Solution — Mixture

| Ingredient name | % | CAS number |
|---|---|---|
| **Creatinine Alkaline Reagent**<br>potassium hydroxide | 89 | 1310-58-3 |

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**

: Albumin Reagent — 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.

Creatinine Alkaline Reagent — Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.

Buffer 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**

: Albumin Reagent — Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Creatinine Alkaline Reagent — Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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.

Buffer Solution — Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get

# Section 4. First aid measures

| | | | |
|---|---|---|---|
| | | | medical attention if symptoms occur. |
| **Skin contact** | : | Albumin Reagent | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | | Creatinine Alkaline Reagent | Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| | | Buffer Solution | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| **Ingestion** | : | Albumin Reagent | 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. |
| | | Creatinine Alkaline Reagent | Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. 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. |
| | | Buffer 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**

# Section 4. First aid measures

| | | | |
|---|---|---|---|
| **Eye contact** | : | Albumin Reagent | No known significant effects or critical hazards. |
| | | Creatinine Alkaline Reagent | Causes serious eye damage. |
| | | Buffer Solution | No known significant effects or critical hazards. |
| **Inhalation** | : | Albumin Reagent | Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. |
| | | Creatinine Alkaline Reagent | May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. |
| | | Buffer Solution | No known significant effects or critical hazards. |
| **Skin contact** | : | Albumin Reagent | No known significant effects or critical hazards. |
| | | Creatinine Alkaline Reagent | Causes severe burns. |
| | | Buffer Solution | No known significant effects or critical hazards. |
| **Ingestion** | : | Albumin Reagent | No known significant effects or critical hazards. |
| | | Creatinine Alkaline Reagent | Harmful if swallowed. May cause burns to mouth, throat and stomach. |
| | | Buffer Solution | No known significant effects or critical hazards. |

**Over-exposure signs/symptoms**

| | | | |
|---|---|---|---|
| **Eye contact** | : | Albumin Reagent | No specific data. |
| | | Creatinine Alkaline Reagent | Adverse symptoms may include the following:<br>pain<br>watering<br>redness |
| | | Buffer Solution | No specific data. |
| **Inhalation** | : | Albumin Reagent | No specific data. |
| | | Creatinine Alkaline Reagent | No specific data. |
| | | Buffer Solution | No specific data. |
| **Skin contact** | : | Albumin Reagent | No specific data. |
| | | Creatinine Alkaline Reagent | Adverse symptoms may include the following:<br>pain or irritation<br>redness<br>blistering may occur |
| | | Buffer Solution | No specific data. |
| **Ingestion** | : | Albumin Reagent | No specific data. |
| | | Creatinine Alkaline Reagent | Adverse symptoms may include the following:<br>stomach pains |
| | | Buffer 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. 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** : No specific fire or explosion hazard.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

**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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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** : Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. 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). Do not get in eyes or on skin or clothing. Do not ingest. 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.

# Section 7. Handling and storage

**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

| Ingredient name | Exposure limits |
|---|---|
| **Creatinine Alkaline Reagent**<br>potassium hydroxide | **OSHA (United States, 1994).**<br>CEIL: 2 mg/m³<br>**NIOSH (United States, 1994).**<br>TWA: 2 mg/m³<br>**ACGIH TLV (United States, 6/2013).**<br>C: 2 mg/m³<br>**NIOSH REL (United States, 10/2013).**<br>TWA: 2 mg/m³ 10 hours.<br>**OSHA PEL 1989 (United States, 3/1989).**<br>CEIL: 2 mg/m³ |

**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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

### 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.

**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.

## Section 8. Exposure controls/personal protection

**Respiratory protection** : Use a properly fitted, particulate filter 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** | : | Albumin Reagent | Solid. |
| | | Creatinine Alkaline Reagent | Solid. |
| | | Buffer Solution | Liquid. |
| **Color** | : | Albumin Reagent | Not available. |
| | | Creatinine Alkaline Reagent | Colorless. |
| | | Buffer Solution | Colorless. |
| **Odor** | : | Albumin Reagent | Odorless. |
| | | Creatinine Alkaline Reagent | Odorless. |
| | | Buffer Solution | Odorless. |
| **pH** | : | Albumin Reagent | Not applicable. |
| | | Creatinine Alkaline Reagent | Not applicable. |
| | | Buffer Solution | Not available. |
| **Flash point** | : | Albumin Reagent | [Product does not sustain combustion.] |
| | | Creatinine Alkaline Reagent | [Product does not sustain combustion.] |
| | | Buffer Solution | [Product does not sustain combustion.] |
| **Flammability (solid, gas)** | : | Albumin Reagent | Not available. |
| | | Creatinine Alkaline Reagent | Not available. |
| | | Buffer Solution | Not available. |
| **Relative density** | : | Albumin Reagent | Not available. |
| | | Creatinine Alkaline Reagent | Not available. |
| | | Buffer Solution | Not available. |
| **Solubility in water** | : | Albumin Reagent | Not available. |
| | | Creatinine Alkaline Reagent | Not available. |
| | | Buffer Solution | Not available. |
| **Partition coefficient: n-octanol/water** | : | Albumin Reagent | Not available. |
| | | Creatinine Alkaline Reagent | Not available. |
| | | Buffer Solution | Not available. |
| **Auto-ignition temperature** | : | Albumin Reagent | Not available. |
| | | Creatinine Alkaline Reagent | Not available. |
| | | Buffer Solution | Not available. |
| **Viscosity** | : | Albumin Reagent | Not available. |
| | | Creatinine Alkaline Reagent | Not available. |
| | | Buffer Solution | Not available. |

## Section 10. Stability and reactivity

| | | | |
|---|---|---|---|
| **Reactivity** | : | Albumin Reagent | No specific test data related to reactivity available for this product or its ingredients. |
| | | Creatinine Alkaline Reagent | No specific test data related to reactivity available for this product or its ingredients. |
| | | Buffer Solution | No specific test data related to reactivity available for this product or its ingredients. |
| **Chemical stability** | : | Albumin Reagent | The product is stable. |
| | | Creatinine Alkaline Reagent | The product is stable. |
| | | Buffer 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.

# Section 10. Stability and reactivity

**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

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| **Creatinine Alkaline Reagent** potassium hydroxide | LD50 Oral | Rat | 273 mg/kg | - |

**Conclusion/Summary** :
Albumin Reagent — Not available.
Creatinine Alkaline Reagent — Not available.
Buffer Solution — Not available.

### Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| **Creatinine Alkaline Reagent** potassium hydroxide | Eyes - Moderate irritant | Rabbit | - | 24 hours 1 milligrams | - |
| | Skin - Severe irritant | Guinea pig | - | 24 hours 50 milligrams | - |
| | Skin - Severe irritant | Human | - | 24 hours 50 milligrams | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 50 milligrams | - |

### Conclusion/Summary

**Skin** :
Albumin Reagent — Not available.
Creatinine Alkaline Reagent — Not available.
Buffer Solution — Not available.

**Eyes** :
Albumin Reagent — Not available.
Creatinine Alkaline Reagent — Not available.
Buffer Solution — Not available.

**Respiratory** :
Albumin Reagent — Not available.
Creatinine Alkaline Reagent — Not available.
Buffer Solution — Not available.

### Sensitization

Not available.

### Conclusion/Summary

**Skin** :
Albumin Reagent — Not available.
Creatinine Alkaline Reagent — Not available.
Buffer Solution — Not available.

**Respiratory** :
Albumin Reagent — Not available.
Creatinine Alkaline Reagent — Not available.
Buffer Solution — Not available.

### Mutagenicity

Not available.

**Conclusion/Summary** :
Albumin Reagent — Not available.
Creatinine Alkaline Reagent — Not available.
Buffer Solution — Not available.

### Carcinogenicity

Not available.

**Conclusion/Summary** :
Albumin Reagent — Not available.
Creatinine Alkaline Reagent — Not available.
Buffer Solution — Not available.

# Section 11. Toxicological information

## Reproductive toxicity

Not available.

| | | | |
|---|---|---|---|
| **Conclusion/Summary** | : | Albumin Reagent | Not available. |
| | | Creatinine Alkaline Reagent | Not available. |
| | | Buffer Solution | Not available. |

## Teratogenicity

Not available.

| | | | |
|---|---|---|---|
| **Conclusion/Summary** | : | Albumin Reagent | Not available. |
| | | Creatinine Alkaline Reagent | Not available. |
| | | Buffer Solution | 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** : Not available.

## Potential acute health effects

| | | | |
|---|---|---|---|
| **Eye contact** | : | Albumin Reagent | No known significant effects or critical hazards. |
| | | Creatinine Alkaline Reagent | Causes serious eye damage. |
| | | Buffer Solution | No known significant effects or critical hazards. |
| **Inhalation** | : | Albumin Reagent | Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. |
| | | Creatinine Alkaline Reagent | May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. |
| | | Buffer Solution | No known significant effects or critical hazards. |
| **Skin contact** | : | Albumin Reagent | No known significant effects or critical hazards. |
| | | Creatinine Alkaline Reagent | Causes severe burns. |
| | | Buffer Solution | No known significant effects or critical hazards. |
| **Ingestion** | : | Albumin Reagent | No known significant effects or critical hazards. |
| | | Creatinine Alkaline Reagent | Harmful if swallowed. May cause burns to mouth, throat and stomach. |
| | | Buffer Solution | No known significant effects or critical hazards. |

## Symptoms related to the physical, chemical and toxicological characteristics

| | | | |
|---|---|---|---|
| **Eye contact** | : | Albumin Reagent | No specific data. |
| | | Creatinine Alkaline Reagent | Adverse symptoms may include the following:<br>pain<br>watering<br>redness |
| | | Buffer Solution | No specific data. |
| **Inhalation** | : | Albumin Reagent | No specific data. |
| | | Creatinine Alkaline Reagent | No specific data. |
| | | Buffer Solution | No specific data. |

# Section 11. Toxicological information

**Skin contact** :
- Albumin Reagent: No specific data.
- Creatinine Alkaline Reagent: Adverse symptoms may include the following: pain or irritation, redness, blistering may occur
- Buffer Solution: No specific data.

**Ingestion** :
- Albumin Reagent: No specific data.
- Creatinine Alkaline Reagent: Adverse symptoms may include the following: stomach pains
- Buffer Solution: No specific data.

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

### Short term exposure

**Potential immediate effects** :
- Albumin Reagent: Not available.
- Creatinine Alkaline Reagent: Not available.
- Buffer Solution: Not available.

**Potential delayed effects** :
- Albumin Reagent: Not available.
- Creatinine Alkaline Reagent: Not available.
- Buffer Solution: Not available.

### Long term exposure

**Potential immediate effects** :
- Albumin Reagent: Not available.
- Creatinine Alkaline Reagent: Not available.
- Buffer Solution: Not available.

**Potential delayed effects** :
- Albumin Reagent: Not available.
- Creatinine Alkaline Reagent: Not available.
- Buffer Solution: Not available.

### Potential chronic health effects

Not available.

**Conclusion/Summary** :
- Not available. (Albumin Reagent)
- Not available. (Creatinine Alkaline Reagent)
- Not available. (Buffer 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 |
|---|---|
| **Albumin Reagent** | |
| Oral | 131578.9 mg/kg |
| **Creatinine Alkaline Reagent** | |
| Oral | 306.7 mg/kg |
| **Buffer Solution** | |
| Oral | 174496.6 mg/kg |

**Interactive effects** :
- Albumin Reagent: Not available.
- Creatinine Alkaline Reagent: Not available.
- Buffer Solution: Not available.

# Section 11. Toxicological information

**Other information** :

| | |
|---|---|
| Albumin Reagent | Not available. |
| Creatinine Alkaline Reagent | Not available. |
| Buffer Solution | Not available. |

# Section 12. Ecological information

## Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| **Creatinine Alkaline Reagent** potassium hydroxide | Acute LC50 80 ppm Fresh water | Fish - Gambusia affinis - Adult | 96 hours |

**Conclusion/Summary** :

| | |
|---|---|
| Albumin Reagent | Not available. |
| Creatinine Alkaline Reagent | Not available. |
| Buffer Solution | Not available. |

## Persistence and degradability

**Conclusion/Summary** :

| | |
|---|---|
| Albumin Reagent | Not available. |
| Creatinine Alkaline Reagent | Not available. |
| Buffer Solution | Not available. |

## Bioaccumulative potential

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| **Creatinine Alkaline Reagent** potassium hydroxide | 0.65 to 0.83 | - | low |

## Mobility in soil

**Soil/water partition coefficient ($K_{OC}$)** :

| | |
|---|---|
| Albumin Reagent | Not available. |
| Creatinine Alkaline Reagent | Not available. |
| Buffer Solution | Not available. |

**Mobility** :

| | |
|---|---|
| Albumin Reagent | Not available. |
| Creatinine Alkaline Reagent | Not available. |
| Buffer 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. 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** | Albumin Reagent | Not regulated. |
| | Creatinine Alkaline Reagent | UN1813 |
| | Buffer Solution | Not regulated. |
| **UN proper shipping name** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | Potassium hydroxide, solid |
| | Buffer Solution | - |
| **Transport hazard class(es)** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | 8 |
| | Buffer Solution | - |

| | | |
|---|---|---|
| **Packing group** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | II |
| | Buffer Solution | - |
| **Environmental hazards** | Albumin Reagent | No. |
| | Creatinine Alkaline Reagent | No. |
| | Buffer Solution | No. |
| **Additional information** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | **Reportable quantity**<br>1123.6 lbs / 510.11 kg<br>Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements. |
| | Buffer Solution | - |

## TDG Classification

| | | |
|---|---|---|
| **UN number** | Albumin Reagent | Not regulated. |
| | Creatinine Alkaline Reagent | UN1813 |
| | Buffer Solution | Not regulated. |
| **UN proper shipping name** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | Potassium hydroxide, solid |
| | Buffer Solution | - |
| **Transport hazard class(es)** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | 8 |
| | Buffer Solution | - |
| **Packing group** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | II |
| | Buffer Solution | - |
| **Environmental hazards** | Albumin Reagent | No. |
| | Creatinine Alkaline Reagent | No. |
| | Buffer Solution | No. |
| **Additional information** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | - |
| | Buffer Solution | - |

## Mexico Classification

# Section 14. Transport information

| | | |
|---|---|---|
| **UN number** | Albumin Reagent | Not regulated. |
| | Creatinine Alkaline Reagent | UN1813 |
| | Buffer Solution | Not regulated. |
| **UN proper shipping name** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | Potassium hydroxide, solid |
| | Buffer Solution | - |
| **Transport hazard class(es)** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | 8 |
| | Buffer Solution | - |
| **Packing group** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | II |
| | Buffer Solution | - |
| **Environmental hazards** | Albumin Reagent | No. |
| | Creatinine Alkaline Reagent | No. |
| | Buffer Solution | No. |
| **Additional information** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | - |
| | Buffer Solution | - |

## ADR/RID

| | | |
|---|---|---|
| **UN number** | Albumin Reagent | Not regulated. |
| | Creatinine Alkaline Reagent | UN1813 |
| | Buffer Solution | Not regulated. |
| **UN proper shipping name** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | Potassium hydroxide, solid |
| | Buffer Solution | - |
| **Transport hazard class(es)** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | 8 |
| | Buffer Solution | - |
| **Packing group** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | II |
| | Buffer Solution | - |
| **Environmental hazards** | Albumin Reagent | No. |
| | Creatinine Alkaline Reagent | No. |
| | Buffer Solution | No. |
| **Additional information** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | - |
| | Buffer Solution | - |

## IMDG

| | | |
|---|---|---|
| **UN number** | Albumin Reagent | Not regulated. |
| | Creatinine Alkaline Reagent | UN1813 |
| | Buffer Solution | Not regulated. |
| **UN proper shipping name** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | Potassium hydroxide, solid |
| | Buffer Solution | - |

# Section 14. Transport information

| | | |
|---|---|---|
| **Transport hazard class(es)** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | 8 |
| | Buffer Solution | - |
| **Packing group** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | II |
| | Buffer Solution | - |
| **Environmental hazards** | Albumin Reagent | No. |
| | Creatinine Alkaline Reagent | No. |
| | Buffer Solution | No. |
| **Additional information** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | - |
| | Buffer Solution | - |

## IATA

| | | |
|---|---|---|
| **UN number** | Albumin Reagent | Not regulated. |
| | Creatinine Alkaline Reagent | UN1813 |
| | Buffer Solution | Not regulated. |
| **UN proper shipping name** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | Potassium hydroxide, solid |
| | Buffer Solution | - |
| **Transport hazard class(es)** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | 8 |
| | Buffer Solution | - |
| **Packing group** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | II |
| | Buffer Solution | - |
| **Environmental hazards** | Albumin Reagent | No. |
| | Creatinine Alkaline Reagent | No. |
| | Buffer Solution | No. |
| **Additional information** | Albumin Reagent | - |
| | Creatinine Alkaline Reagent | - |
| | Buffer Solution | - |

| | | |
|---|---|---|
| **Special precautions for user** : | Albumin Reagent | **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. |
| | Creatinine Alkaline Reagent | **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. |
| | Buffer 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. |

# Section 14. Transport information

**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)**: Not determined.

**Clean Water Act (CWA) 311**: edetic acid; potassium hydroxide

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not 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 | | SARA 304 RQ | |
|---|---|---|---|---|---|---|
| | | | (lbs) | (gallons) | (lbs) | (gallons) |
| **Albumin Reagent**<br>sodium azide | 0.18 | Yes. | 500 | - | 1000 | - |

**SARA 304 RQ** : 1666666.7 lbs / 756666.7 kg

## SARA 311/312

**Classification** : Immediate (acute) health hazard

### Composition/information on ingredients

| Name | % | Fire hazard | Sudden release of pressure | Reactive | Immediate (acute) health hazard | Delayed (chronic) health hazard |
|---|---|---|---|---|---|---|
| **Creatinine Alkaline Reagent**<br>potassium hydroxide | 89 | No. | No. | No. | Yes. | No. |

## State regulations

**Massachusetts** : The following components are listed: SUCROSE DUST; POTASSIUM HYDROXIDE

**New York** : The following components are listed: Potassium hydroxide

**New Jersey** : The following components are listed: POTASSIUM HYDROXIDE; CAUSTIC POTASH

**Pennsylvania** : The following components are listed: .ALPHA.-D-GLUCOPYRANOSIDE, .BETA.-D-FRUCTOFURANOSYL; POTASSIUM HYDROXIDE (K(OH))

## International regulations

| | | | |
|---|---|---|---|
| **Chemical Weapons Convention List Schedule I Chemicals** | : | Albumin Reagent | Not listed |
| | | Creatinine Alkaline Reagent | Not listed |
| | | Buffer Solution | Not listed |
| **Chemical Weapons Convention List Schedule II Chemicals** | : | Albumin Reagent | Not listed |
| | | Creatinine Alkaline Reagent | Not listed |
| | | Buffer Solution | Not listed |

# Section 15. Regulatory information

| | | | |
|---|---|---|---|
| **Chemical Weapons** | : | Albumin Reagent | Not listed |
| **Convention List Schedule** | | Creatinine Alkaline Reagent | Not listed |
| **III Chemicals** | | Buffer 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.**