## 1. Identification of the substance or preparation and the company / undertaking

Product Name: Gold Electrolyte

Product number: R-300-500EAU-01

company: Cogent Environmental Ltd
184 Science Park
Cambridge
CB4 0GA
UK
Telephone: +44 (0) 1223 395450
Fax: +44 (0) 1223 395451

## 2. Composition / information on ingredients

Product name: Gold Electrolyte (DAR)

CAS number: none EC number: none

| Hazardous Ingredients | Proportion | CAS-No | EC-No |
|---|---|---|---|
| Hydrochloric acid<br>Symbol: C<br>R-phrases: R34,37<br>Causes burns. Irritating to respiratory system. | <2.0% | 7647-01-0 | 231-595-7 |
| Nitric acid<br>Symbol: O, C<br>R-phrases: R8-35<br>Contact with combustible material may cause fire. Causes severe burns. | <1.0% | 7697-37-2 | 231-714-2 |

## 3. Hazards identification

Not classified as dangerous according to EC Directives

## 4. First aid measures

If swallowed: Wash out mouth thoroughly providing person is conscious. Do not induce vomiting. Seek medical advice.

After eye contact: Irrigate thoroughly with water for at least 15 minutes. If discomfort persists obtain medical attention.

After skin contact: Remove contaminated clothing. Wash skin thoroughly with water and mild soap. Seek medical advice if irritation persists. Launder clothing before reuse.

If inhaled: Remove individual from contaminated air, rest and keep warm. If breathing is difficult give oxygen and seek medical assistance.

## 5. Fire-fighting measures

Not combustible. May evolve toxic fumes in fire.
Fire fighters should wear self contained breathing apparatus if exposure to fumes is likely.
Use water spray, foam or dry chemical to control fire situation if compatible with other chemical products in the vicinity.

## 6. Accidental release measures

Wear protective clothing when dealing with spills. Absorb spills with sand or vermiculite. Neutralise with sodium bicarbonate. Dispose of in accordance with local regulations.

## 7. Handling and storage

Handling: Do not breathe vapour. Do not get in eyes, on skin or clothing. Change contaminated clothing. Wash hands after working with substance. Avoid prolonged or repeated exposure. Do not empty into drains.

Storage: Store sealed in original container in a cool well ventilated situation away from foods and other chemicals. Do not store in direct sunlight. Observe good hygiene and housekeeping practices. Solution is acidic and may corrode metals. Do not mix with cyanides or sulphides.

## 8. Exposure controls and personal protection

UK Exposure Limits:
Hydrogen chloride: 8 mg/$m^3$ Short term (5 ppm) & 2 mg/$m^3$ long-term (1 ppm) (IVL)

Nitric Acid: 10 mg/$m^3$ Short term (4 ppm) & 5.2 mg/$m^3$ long-term (2 ppm) (WEL)
Cadmium and its compounds (as Cd): 0.025 mg/$m^3$ Long term. (MEL)

Engineering Controls:
Always use this product with good general ventilation (10-15 changes of air in the room per hour) or preferably in a chemical fume hood. Maintain atmospheric concentrations as low as possible.

Personal Protection:
Avoid all skin and eye contact. Wear protective clothing including safety glasses and rubber or PVC gloves. Never pipette by mouth.

## 9. Physical and chemical properties

| | |
|---|---|
| Appearance: | Clear Yellow Liquid |
| Boiling point (ºC): | 100 (approx) |
| Vapour pressure (mmHg at 20ºC): | 25 (approx) |
| Specific Gravity (g/mL): | 1.0 |
| Flash Point (ºC): | Not flammable |
| Flammability limits (%): | Not flammable |
| Solubility in water (g/L): | Completely miscible |

Other Properties: pH approx 1. Acidic solution. Will corrode metals. Will produce toxic gases on contact with cyanides, sulphides etc.

## 10. Stability and reactivity

Substances to be avoided: Metals, bases

Hazardous decomposition products: Nitrous gases

## 11. Toxicological information

After ingestion: May cause irritation of mucous membranes in mouth, pharynx, oesophagus and gastrointestinal tract.
After skin contact: May cause irritation.
After eye contact: May cause irritation.
After inhalation of vapours: May cause irritation to the respiratory tract.

## 12. Ecological information

Do not allow to enter drinking water supplies, waste water or soil.

## 13. Disposal considerations

Contact a licensed professional waste disposal service to dispose of this material. Observe local and national environmental regulations.

## 14. Transport information

This product contains less than 10% of the following ingredient.
HYDROCHLORIC ACID, C (corrosive)
UN no: 1789, Class 8

This product contains less than 5% of the following ingredient
NITRIC ACID, C (corrosive)
UN no: 2031, Class 8

Non – hazardous for air, road or sea transport.

## 15. Regulatory information

Not classified as dangerous according to EC directives.

## 16. Other information

None