

**DAR Reagent, Gold Electrolyte**

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

Product Name: DAR Reagent, Gold Electrolyte

Product number: R-300-500DAR-01 & R-300-500EAU-01, R-100-210EAU-01

company: Cogent Environmental Ltd  
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 UK

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**2. Composition/information on ingredients**

Product name: DAR Reagent, Gold Electrolyte

CAS number: none

EC number: none

<u>Hazardous Ingredients</u>	<u>Proportion</u>	<u>CAS-No</u>	<u>EC-No</u>
Hydrochloric acid Symbol: C R-phrases: R34,37 Causes burns. Irritating to respiratory system.	<2.0%	7647-01-0	231-595-7
Nitric acid Symbol: O, C R-phrases: R8-35 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.

	<p style="text-align: center;"><b>MSDS</b> Material Safety Data Sheet</p>	<p>Document No.: MSDS031 Version No.: 03 Effective Date: 25 Aug 2011</p>
<p><b>DAR Reagent, Gold Electrolyte</b></p>		

**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<sup>3</sup> Short term (5 ppm) & 2 mg/m<sup>3</sup> long-term (1 ppm) (IVL)

Nitric Acid: 10 mg/m<sup>3</sup> Short term (4 ppm) & 5.2 mg/m<sup>3</sup> long-term (2 ppm) (WEL)

Cadmium and its compounds (as Cd): 0.025 mg/m<sup>3</sup> 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 (°C):	100 (approx)
Vapour pressure (mmHg at 20°C):	25 (approx)
Specific Gravity (g/mL):	1.0
Flash Point (°C):	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

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**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**

Non – hazardous for air, road or sea transport.

**15. Regulatory information**

Not classified as dangerous according to EC directives.

**16. Other information**

None

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