

**Safety data sheet**  
according to Regulation (EC) No 1907/2006, Article 31

Printing 22.11.2024

version number 26 (replaces version 25)

Revision: 22.11.2024

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**\*1.1 Product identifier**

**\*Trade name:** COPPER AAS STANDARD SOLUTION  
1000mg/L Cu in 0.5M HNO<sub>3</sub>

**\*Article number:** AACUH

**\*Registration number**

A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

**\*UFI:** 4MN0-C01T-600A-KJ94

**\*1.2 Relevant identified uses of the substance or mixture and uses advised against**

**\*Product category** For experiments, research, or testing purposes only. Prohibited of use for other purposes.

**\*Application of the substance / the mixture** Laboratory Chemicals

**\*1.3 Details of the supplier of the safety data sheet**

**\*Manufacturer/Supplier:**

Reagecon Diagnostics Ltd.  
Shannon Free Zone,  
Shannon,  
Co. Clare,  
Ireland.  
Tel +353 61 472622  
Fax +353 61 472642

**\*Further information obtainable by contacting:** [sds@reagecon.ie](mailto:sds@reagecon.ie)

**\*1.4 Emergency telephone number:**

National Poisons Information Centre: +353 (1) 809 2166 (8.00 a.m. to 10.00 p.m. 7 days a week)  
Healthcare Professionals: +353 (1) 809 2566 (24 hour service)

For Hazardous Materials [or Dangerous Goods] Incident

Spill, Leak, Fire, Exposure, or Accident

Call CHEMTREC

For Ireland call +(353)-19014670

For Outside Ireland call +1 703-741-5970 / 1-800-424-9300 CCN849800

**SECTION 2: Hazards identification**

**\*2.1 Classification of the substance or mixture**

**\*Classification according to Regulation (EC) No 1272/2008**



GHS06 skull and crossbones

Acute Tox. 2 H330 Fatal if inhaled.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

**\*2.2 Label elements**

**\*Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)

**Safety data sheet**  
according to Regulation (EC) No 1907/2006, Article 31

Printing 22.11.2024

version number 26 (replaces version 25)

Revision: 22.11.2024

**Trade name: COPPER AAS STANDARD SOLUTION**  
**1000mg/L Cu in 0.5M HNO<sub>3</sub>**

(Contd. of page 1)

**\*Hazard pictograms**

GHS05 GHS06

**\*Signal word** Danger**\*Hazard-determining components of labelling:**

nitric acid

**\*Hazard statements**

H330 Fatal if inhaled.

H315 Causes skin irritation.

H318 Causes serious eye damage.

**\*Precautionary statements**

P305+P351+P338 **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P320 Specific treatment is urgent (see on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**\*Additional information:**

Product contains: Restricted explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 5 (1) and (3).

**\*2.3 Other hazards****\*Results of PBT and vPvB assessment****\*PBT:** Not applicable.**\*vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

**\*3.2 Mixtures****\*Description:** Mixture of substances listed below with nonhazardous additions.**\*Dangerous components:**

CAS: 7697-37-2 EINECS: 231-714-2	nitric acid Ox. Liq. 2, H272; Acute Tox. 1, H330; Skin Corr. 1A, H314, EUH071 Specific concentration limits: Ox. Liq. 2; H272: C ≥ 99 % Ox. Liq. 3; H272: 70 % ≤ C < 99 %	≥2.5- <5%
-------------------------------------	--	-----------

**\*Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

**\*4.1 Description of first aid measures****\*After inhalation:** In case of unconsciousness place patient stably in side position for transportation.**\*After skin contact:**

Remove contaminated clothing and rinse skin thoroughly with water. Get medical attention if any discomfort continues.

**\*After eye contact:**

Promptly wash eyes with plenty of water for up to 15 minutes. Open eyes wide apart and rinse well to remove any contact lenses. Do not remove contact lenses by hand. Continue to rinse. If symptoms persist, consult a doctor.

(Contd. on page 3)

**Safety data sheet**  
according to Regulation (EC) No 1907/2006, Article 31

Printing 22.11.2024

version number 26 (replaces version 25)

Revision: 22.11.2024

**Trade name: COPPER AAS STANDARD SOLUTION**  
**1000mg/L Cu in 0.5M HNO<sub>3</sub>**

(Contd. of page 2)

**\*After swallowing:**

*Do not induce vomiting; call for medical help immediately. Rinse mouth thoroughly with water and give large amounts of water to drink. Never give anything by mouth to an unconscious person.*

**\*4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

**\*4.3 Indication of any immediate medical attention and special treatment needed**

*No further relevant information available.*

### SECTION 5: Firefighting measures

**\*5.1 Extinguishing media****\*Suitable extinguishing agents:**

*Indications shall be given whether any extinguishing media are inappropriate for a particular situation involving the substance or mixture*

*Use fire extinguishing methods suitable to surrounding conditions.*

**\*5.2 Special hazards arising from the substance or mixture** No further relevant information available.

**\*5.3 Advice for firefighters****\*Protective equipment:**

*Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers*

### SECTION 6: Accidental release measures

**\*6.1 Personal precautions, protective equipment and emergency procedures**

*Wear protective equipment as described in Section 8 below. Keep unprotected persons away.*

**\*6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

**\*6.3 Methods and material for containment and cleaning up:**

*Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.*

**\*6.4 Reference to other sections**

*See Section 7 for information on safe handling.*

*See Section 8 for information on personal protection equipment.*

*See Section 13 for disposal information.*

### SECTION 7: Handling and storage

**\*7.1 Precautions for safe handling**

*Ensure good ventilation/exhaustion at the workplace.*

*Prevent formation of aerosols.*

**\*Information about fire - and explosion protection:** No special measures required.

**\*7.2 Conditions for safe storage, including any incompatibilities****\*Storage:**

**\*Requirements to be met by storerooms and receptacles:** No special requirements.

**\*Information about storage in one common storage facility:** Not required.

**\*Further information about storage conditions:** Keep receptacle tightly sealed.

**\*7.3 Specific end use(s)** No further relevant information available.

(Contd. on page 4)

**Safety data sheet**  
according to Regulation (EC) No 1907/2006, Article 31

Printing 22.11.2024

version number 26 (replaces version 25)

Revision: 22.11.2024

**Trade name: COPPER AAS STANDARD SOLUTION**  
**1000mg/L Cu in 0.5M HNO<sub>3</sub>**

(Contd. of page 3)

## SECTION 8: Exposure controls/personal protection

### \*8.1 Control parameters

#### \*Ingredients with limit values that require monitoring at the workplace:

**CAS: 7697-37-2 nitric acid**

OEL (Ireland)	Short-term value: 2.6 mg/m <sup>3</sup> , 1 ppm IOELV
PEL (USA)	Long-term value: 5 mg/m <sup>3</sup> , 2 ppm
REL (USA)	Short-term value: 10 mg/m <sup>3</sup> , 4 ppm Long-term value: 5 mg/m <sup>3</sup> , 2 ppm
TLV (USA)	Short-term value: (4) NIC-0.025 ppm Long-term value: (2) ppm NIC-A4
IOELV (European Union)	Short-term value: 2.6 mg/m <sup>3</sup> , 1 ppm

\*Additional information: The lists valid during the making were used as basis.

### \*8.2 Exposure controls

\*Appropriate engineering controls No further data; see section 7.

\*Individual protection measures, such as personal protective equipment

\*General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

\*Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Where risk assessment shows air-purifying respirators are appropriate use a respirator with multi-purpose combination (US) or type ABEK (EN14387) respirator cartridges as back up to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

\*Hand protection



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Always ensure that gloves are inspected before use.

Selection of protective gloves must include consideration of the penetration times along with rates of diffusion and degradation. The selected glove should comply with the specifications of EU Directive 89/686/EEC and the standard EN374 derived from it.

\*Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

(Contd. on page 5)

## Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing 22.11.2024

version number 26 (replaces version 25)

Revision: 22.11.2024

**Trade name: COPPER AAS STANDARD SOLUTION**  
**1000mg/L Cu in 0.5M HNO<sub>3</sub>**

(Contd. of page 4)

Splash contact  
 Material: Nitrile rubber  
 Minimum layer thickness: 0.11 mm  
 Break through time: 480 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**\*Penetration time of glove material**

In the absence of data above, the exact break through time has to be sourced from the manufacturer of the protective gloves and has to be observed.

**\*Eye/face protection**



Tightly sealed goggles: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

### SECTION 9: Physical and chemical properties

**\*9.1 Information on basic physical and chemical properties**

**\*General Information**

<b>*Physical state</b>	Liquid
<b>*Colour:</b>	According to product specification
<b>*Odour:</b>	Characteristic
<b>*Odour threshold:</b>	Not determined.
<b>*Melting point/freezing point:</b>	0 °C
<b>*Boiling point or initial boiling point and boiling range</b>	85 °C
<b>*Flammability</b>	Not applicable.
<b>*Lower and upper explosion limit</b>	
<b>*Lower:</b>	Not determined.
<b>*Upper:</b>	Not determined.
<b>*Flash point:</b>	Not applicable.
<b>*Decomposition temperature:</b>	Not determined.
<b>*pH</b>	Not determined.
<b>*Viscosity:</b>	
<b>*Kinematic viscosity</b>	Not determined.
<b>*Dynamic:</b>	Not determined.
<b>*Solubility</b>	
<b>*water:</b>	Not miscible or difficult to mix.
<b>*Partition coefficient n-octanol/water (log value)</b>	Not determined.
<b>*Vapour pressure at 20 °C:</b>	23 hPa
<b>*Density and/or relative density</b>	
<b>*Density:</b>	Not determined.
<b>*Relative density</b>	Not determined.
<b>*Vapour density</b>	Not determined.
<b>*Particle characteristics</b>	Not applicable.

**\*9.2 Other information**

<b>*Appearance:</b>	
<b>*Form:</b>	Liquid
<b>*Important information on protection of health and environment, and on safety.</b>	
<b>*Ignition temperature:</b>	Product is not selfigniting.

(Contd. on page 6)

**Safety data sheet**  
according to Regulation (EC) No 1907/2006, Article 31

Printing 22.11.2024

version number 26 (replaces version 25)

Revision: 22.11.2024

**Trade name: COPPER AAS STANDARD SOLUTION**  
**1000mg/L Cu in 0.5M HNO<sub>3</sub>**

(Contd. of page 5)

*Explosive properties:	Product does not present an explosion hazard.
*Change in condition	
*Evaporation rate	Not determined.

<b>*Information with regard to physical hazard classes</b>	
*Explosives	Void
*Flammable gases	Void
*Aerosols	Void
*Oxidising gases	Void
*Gases under pressure	Void
*Flammable liquids	Void
*Flammable solids	Void
*Self-reactive substances and mixtures	Void
*Pyrophoric liquids	Void
*Pyrophoric solids	Void
*Self-heating substances and mixtures	Void
*Substances and mixtures, which emit flammable gases in contact with water	Void
*Oxidising liquids	Void
*Oxidising solids	Void
*Organic peroxides	Void
*Corrosive to metals	Void
*Desensitised explosives	Void

### SECTION 10: Stability and reactivity

- \*10.1 Reactivity No further relevant information available.
- \*10.2 Chemical stability
- \*Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- \*10.3 Possibility of hazardous reactions No dangerous reactions known.
- \*10.4 Conditions to avoid No further relevant information available.
- \*10.5 Incompatible materials: No further relevant information available.
- \*10.6 Hazardous decomposition products: No dangerous decomposition products known.

### SECTION 11: Toxicological information

- \*11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- \*Acute toxicity Fatal if inhaled.
- \*Primary irritant effect:
- \*Skin corrosion/irritation Causes skin irritation.
- \*Serious eye damage/irritation Causes serious eye damage.
- \*Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- \*Germ cell mutagenicity Based on available data, the classification criteria are not met.
- \*Carcinogenicity Based on available data, the classification criteria are not met.
- \*Reproductive toxicity Based on available data, the classification criteria are not met.
- \*STOT-single exposure Based on available data, the classification criteria are not met.
- \*STOT-repeated exposure Based on available data, the classification criteria are not met.
- \*Aspiration hazard Based on available data, the classification criteria are not met.
- \*11.2 Information on other hazards

\*Endocrine disrupting properties

None of the ingredients is listed.

(Contd. on page 7)

**Safety data sheet**  
according to Regulation (EC) No 1907/2006, Article 31

Printing 22.11.2024

version number 26 (replaces version 25)

Revision: 22.11.2024

**Trade name: COPPER AAS STANDARD SOLUTION**  
**1000mg/L Cu in 0.5M HNO<sub>3</sub>**

(Contd. of page 6)

### SECTION 12: Ecological information

**\*12.1 Toxicity**

**\*Aquatic toxicity:** No further relevant information available.

**\*12.2 Persistence and degradability** No further relevant information available.

**\*12.3 Bioaccumulative potential** No further relevant information available.

**\*12.4 Mobility in soil** No further relevant information available.

**\*12.5 Results of PBT and vPvB assessment**

**\*PBT:** Not applicable.

**\*vPvB:** Not applicable.

**\*12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

**\*12.7 Other adverse effects**

**\*Additional ecological information:**

**\*General notes:**

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

### SECTION 13: Disposal considerations

**\*13.1 Waste treatment methods**

**\*Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

**\*European waste catalogue**

HP4 Irritant - skin irritation and eye damage

**\*Uncleaned packaging:**

**\*Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

**\*14.1 UN number or ID number**

**\*ADR, IMDG, IATA**

UN1760

**\*14.2 UN proper shipping name**

**\*ADR**

1760 CORROSIVE LIQUID, N.O.S. (NITRIC ACID)

1760 CORROSIVE LIQUID, N.O.S. (NITRIC ACID)

**\*IMDG, IATA**

CORROSIVE LIQUID, N.O.S. (NITRIC ACID)

**\*14.3 Transport hazard class(es)**

**\*ADR, IMDG, IATA**



**\*Class**

8 Corrosive substances.

**\*Label**

8

**\*14.4 Packing group**

**\*ADR, IMDG, IATA**

III

**\*14.5 Environmental hazards:**

**\*Marine pollutant:**

No

(Contd. on page 8)

**Safety data sheet**  
according to Regulation (EC) No 1907/2006, Article 31

Printing 22.11.2024

version number 26 (replaces version 25)

Revision: 22.11.2024

**Trade name: COPPER AAS STANDARD SOLUTION**  
**1000mg/L Cu in 0.5M HNO<sub>3</sub>**

(Contd. of page 7)

*14.6 Special precautions for user	Warning: Corrosive substances.
*Hazard identification number (Kemler code):	80
*EMS Number:	F-A,S-B
*Segregation groups	(SGG1) Acids
*Stowage Category	A
*Stowage Code	SW2 Clear of living quarters.
*14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
<b>*Transport/Additional information:</b>	
<b>*ADR</b>	
*Limited quantities (LQ)	5L
*Transport category	3
*Tunnel restriction code	E
*UN "Model Regulation":	UN 1760 CORROSIVE LIQUID, N.O.S. (NITRIC ACID), 8, III

### SECTION 15: Regulatory information

\*15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

\*Directive 2012/18/EU

\*Named dangerous substances - ANNEX I None of the ingredients is listed.

\*Seveso category H2 ACUTE TOXIC

\*Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t

\*Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

\*REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

**\*DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

\*REGULATION (EU) 2019/1148

**\*Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

CAS: 7697-37-2	nitric acid	Limit value: >3-≤10 %	≥2.5-<5%
----------------	-------------	-----------------------	----------

**\*Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

\*Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

**\*Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

\*National regulations:

\*Breakdown regulations:

Class	Share in %
Wasser	96.4
III	0.4

\*Waterhazard class: Water hazard class 3 (Self-assessment): extremely hazardous for water.

(Contd. on page 9)

IE



**Safety data sheet**  
according to Regulation (EC) No 1907/2006, Article 31

Printing 22.11.2024

version number 26 (replaces version 25)

Revision: 22.11.2024

**Trade name: COPPER AAS STANDARD SOLUTION**  
**1000mg/L Cu in 0.5M HNO<sub>3</sub>**

(Contd. of page 8)

**\*15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

*This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.*

**\*Relevant Phrases:**

H272 May intensify fire; oxidiser.

H314 Causes severe skin burns and eye damage.

H330 Fatal if inhaled.

EUH071 Corrosive to the respiratory tract.

**\*Department issuing SDS:** Health and Safety

**\*Contact:** sds@reagecon.ie

**\*Date of previous version:** 09.10.2023

**\*Version number of previous version:** 25

**\*Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

REACH (Registration, Evaluation, Authorisation and restriction of Chemicals)

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ox. Liq. 2: Oxidizing liquids – Category 2

Acute Tox. 1: Acute toxicity – Category 1

Acute Tox. 2: Acute toxicity – Category 2

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

**\*NO**