



# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/20/2020

Reviewed on 08/20/2020

## 1 Identification

### • Product identifier

- Trade name: C-NH4/1-2
- Article number: 827519Y
- Description: Cleaning solution
- Application of the substance / the preparation: Cleaning of analyzers

### • Details of the supplier of the safety data sheet

#### • Manufacturer/Supplier:

YSI  
1725 Brannum Lane  
Yellow Springs, OH 45387  
USA  
phone: +1 937-767-7241

- Information department: Email: [MSDSinfo@ysi.com](mailto:MSDSinfo@ysi.com)
- Emergency telephone number: Chemtrec: (USA & Canada) 800-424-9300 (International) 001 703-527-3887

## 2 Hazard(s) identification

### • Classification of the substance or mixture

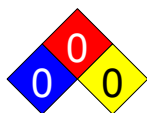
The product is not classified, according to the Globally Harmonized System (GHS).

### • Label elements:

- GHS label elements: Void
- Hazard pictograms: Void
- Signal word: Void
- Hazard statements: Void
- Additional information:  
EUH210 Safety data sheet available on request.

### • Classification system:

- NFPA ratings (scale 0 - 4)



Health = 0  
Fire = 0  
Reactivity = 0

- HMIS-ratings (scale 0 - 4)



HEALTH 0 Health = 0  
FIRE 0 Fire = 0  
REACTIVITY 0 Reactivity = 0

- **Other hazards** No further relevant information available.
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

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## 3 Composition/information on ingredients

- **Mixture**

- **Description:**

Mixture: consisting of the following components.

Water, citric acid

- **Dangerous components:**

77-92-9 citric acid

5 – &lt; 10%

## 4 First-aid measures

- **Description of first aid measures**

- After inhalation: Supply fresh air or oxygen; call for doctor.

- After skin contact:

Wash with plenty of water.

Take off immediately all contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

- After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- After swallowing:

Make victim drink water immediately (2 glasses at most).

Get medical advice/attention if you feel unwell.

- Information for doctor:

- Most important symptoms and effects, both acute and delayed No further relevant information available.

- Indication of any immediate medical attention and special treatment needed No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**

- Suitable extinguishing agents: The product is not flammable. Extinguishing agent to suit environment.

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

- **Advice for firefighters**

- Protective equipment: No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

No special measurements required when handled properly.

- **Environmental precautions:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Methods and material for containment and cleaning up:**

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

Wash off residuals with water.

- **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.

- **Protective Action Criteria for Chemicals**

- PAC-1:

None of the ingredients is listed.

- PAC-2:

None of the ingredients is listed.

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- PAC-3:

None of the ingredients is listed.

## 7 Handling and storage

- **Handling:**

- Precautions for safe handling No special precautions are necessary if used correctly.
- Information about protection against explosions and fires: No special measures required.

- **Conditions for safe storage, including any incompatibilities**

- Requirements to be met by storerooms and receptacles: Do not use light alloy receptacles.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Store tightly sealed at temperatures between 15 °C and 25 °C.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Control parameters**

- Components with limit values that require monitoring at the workplace:  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information: The lists that were valid during the creation were used as basis.

- **Exposure controls**

- Personal protective equipment:
- General protective and hygienic measures:  
Avoid contact with the eyes and skin.  
Do not inhale gases / fumes / aerosols.  
Take off contaminated clothing and wash it before reuse.  
Wash hands before breaks and at the end of work.
- Breathing equipment: Use suitable respiratory protective device only when aerosol or mist is formed.
- Recommended filter device for short term use: Combination filter A-P2
- Protection of hands: Protective gloves
- Material of gloves Nitrile rubber, NBR
- Eye protection: Safety glasses
- **Limitation and supervision of exposure into the environment**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- General Information

- Appearance:

Form:	Fluid
Color:	Colorless
Odor:	Odorless

- pH-value at 20 °C (68 °F): ca. 1.7

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• Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
• Flash point:	Not applicable.
• Ignition temperature:	1010 °C (1850 °F)
• Auto igniting:	Product is not selfigniting.
• Danger of explosion:	Product does not present an explosion hazard.
• Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)
• Density at 20 °C (68 °F):	1.05 g/cm <sup>3</sup> (8.76 lbs/gal)
• Solubility in / Miscibility with	
Water:	Fully miscible.
• Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
• <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- **Possibility of hazardous reactions** Formation of hydrogen possible with metals and alloys (risk of explosion).
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**
  - Strong oxidizing agents.
  - Alkalis
  - Metals

## 11 Toxicological information

- **Information on toxicological effects**
- Acute toxicity:

• LD/LC50 values that are relevant for classification:
<b>77-92-9 citric acid</b>
Oral   LD50   3000 mg/kg (Rat) (RTECS)

- Primary irritant effect:
  - on the skin: Local irritation possible.
  - on the eye: Irritation possible.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
- Carcinogenic categories

• IARC (International Agency for Research on Cancer)
None of the ingredients is listed.

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• NTP (National Toxicology Program)
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None of the ingredients is listed.

• OSHA-Ca (Occupational Safety & Health Administration)
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None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**

- Aquatic toxicity:

<b>77-92-9 citric acid</b>
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EC50	120 mg/l, 72 h (Daphnia magna) (IUCLID)
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LC50	440 – 760 mg/l, 96 h (Leuciscus idus) (IUCLID)
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- **Persistence and degradability** biodegradable

- **Behavior in environmental systems:**

- Bioaccumulative potential No further relevant information available.

- Mobility in soil No further relevant information available.

- **Results of PBT and vPvB assessment** Not applicable.

- PBT: Not applicable.

- vPvB: Not applicable.

- **Other adverse effects**

- General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## 13 Disposal considerations

- **Waste treatment methods**

- Recommendation:

Disposal must comply with the relevant local regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose the special waste.

- **Uncleaned packagings:**

- Recommendation:

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

- Recommended cleansing agent: Water, if necessary with cleansing agents.

## 14 Transport information

• <b>UN-Number</b>	
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• DOT, ADR/RID, ADN, IMDG, IATA	Void
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• <b>UN proper shipping name</b>	
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• DOT, ADN, IMDG, IATA	Void
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• ADR/RID	Void
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	Void
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• <b>Transport hazard class(es)</b>	
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• DOT, ADR/RID, ADN, IMDG, IATA	
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• Class	Void
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• <b>Packing group</b>	Void
• DOT, ADR/RID, IMDG, IATA	Void
• <b>Environmental hazards:</b>	Not applicable.
• <b>Special precautions for user</b>	Not applicable.
• <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
• <b>UN "Model Regulation":</b>	Void

## 15 Regulatory information

### • Safety, health and environmental regulations/legislation specific for the substance or mixture

#### • Sara

#### • Section 355 (extremely hazardous substances):

None of the ingredients is listed.

#### • Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

#### • TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.

#### • Hazardous Air Pollutants

None of the ingredients is listed.

#### • Proposition 65

#### • Chemicals known to cause cancer:

None of the ingredients is listed.

#### • Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

#### • Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

#### • Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

#### • Cancerogenity categories

#### • EPA (Environmental Protection Agency)

None of the ingredients is listed.

#### • TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

#### • NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

#### • **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

#### • Date of preparation / last revision 08/20/2020 / -

#### • 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)

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IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety &amp; Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

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