



**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Custom ICP-ICP/MS Standard (SCAQ0-262-930)**

Revision: 26.03.2024

Product code: AC18.09944

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**SECTION 2: Hazards identification**

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

**Regulation (EC) No 1272/2008**

Met. Corr. 1; H290  
 Skin Irrit. 2; H315  
 Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

**2.2. Label elements**

**Regulation (EC) No 1272/2008**

**Signal word:** Warning

**Pictograms:**



**Hazard statements**

H290 May be corrosive to metals.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.

**Precautionary statements**

P280 Wear protective gloves/protective clothing and eye protection/face protection.  
 P302+P352 IF ON SKIN: Wash with plenty of water.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337+P313 If eye irritation persists: Get medical advice/attention.  
 P390 Absorb spillage to prevent material damage.

**2.3. Other hazards**

No data available

**SECTION 3: Composition/information on ingredients**

**3.2. Mixtures**

**Chemical characterization**

Mixtures in aqueous solution

**Relevant ingredients**

| CAS No    | Chemical name   |              |                  | Quantity  |
|-----------|---|--------------|------------------|-----------|
|           | EC No   | Index No     | REACH No         |           |
|           | Classification (Regulation (EC) No 1272/2008)   |              |                  |           |
| 7697-37-2 | nitric acid   |              |                  | 1 - < 5 % |
|           | 231-714-2   | 007-030-00-3 | 01-2119487297-23 |           |
|           | Ox. Liq. 3, Met. Corr. 1, Acute Tox. 3, Skin Corr. 1A, Eye Dam. 1; H272 H290 H331 H314 H318<br>EUH071 |              |                  |           |

Full text of H and EUH statements: see section 16.

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**Specific Conc. Limits, M-factors and ATE**

| CAS No    | EC No     | Chemical name   | Quantity  |
|-----------|-----------|---|-----------|
|           |           | Specific Conc. Limits, M-factors and ATE  |           |
| 7697-37-2 | 231-714-2 | nitric acid   | 1 - < 5 % |
|           |           | inhalation: ATE 2,65 mg/l (vapours) Ox. Liq. 3; H272: >= 65 - 100 Skin Corr. 1A; H314: >= 20 - 100 Skin Corr. 1B; H314: >= 5 - < 20 |           |

**Further Information**

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

**SECTION 4: First aid measures**
**4.1. Description of first aid measures**
**General information**

No data available

**After inhalation**

Provide fresh air.  
Call a doctor if you feel unwell.

**After contact with skin**

Wash immediately with: Water  
Take off immediately all contaminated clothing and wash it before reuse.  
Call a physician immediately.

**After contact with eyes**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
Protect uninjured eye.

**After ingestion**

Rinse mouth immediately and drink plenty of water.  
Do NOT induce vomiting. Do not allow a neutralisation agent to be drunk.  
Call a physician immediately.

**4.2. Most important symptoms and effects, both acute and delayed**

Irritant  
Cough  
Dyspnoea  
Vomiting  
Methaemoglobinaemia  
Risk of serious damage to eyes.

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

No data available

**SECTION 5: Firefighting measures**
**5.1. Extinguishing media**
**Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

**Unsuitable extinguishing media**

no restriction

**5.2. Special hazards arising from the substance or mixture**

Non-combustible liquids

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Hazardous combustion products

In case of fire may be liberated:

Nitrogen oxides (NO<sub>x</sub>)

#### **5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

In case of fire and/or explosion do not breathe fumes.

Avoid contact with skin, eyes and clothes.

#### **Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Move undamaged containers from immediate hazard area if it can be done safely.

Use water spray jet to protect personnel and to cool endangered containers.

## SECTION 6: Accidental release measures

### **6.1. Personal precautions, protective equipment and emergency procedures**

#### **General advice**

Corrosive to metals.

#### **For non-emergency personnel**

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Consult an expert

Do not breathe dust/fume/gas/mist/vapours/spray.

#### **For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

### **6.3. Methods and material for containment and cleaning up**

#### **For containment**

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

#### **For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

#### **Other information**

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

### **6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

## SECTION 7: Handling and storage

### **7.1. Precautions for safe handling**

#### **Advice on safe handling**

Read label before use. Handle and open container with care.

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When using do not eat, drink, smoke, sniff. Use personal protection equipment.  
Provide adequate ventilation. Avoid contact with skin, eyes and clothes.  
Do not breathe vapour/aerosol.

#### Advice on protection against fire and explosion

Usual measures for fire prevention.

#### Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs. Remove contaminated, saturated clothing immediately.  
Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Avoid: aerosol or mist formation Do not breathe vapour/aerosol.

#### Further information on handling

Draw up and observe skin protection programme.  
Wash hands and face before breaks and after work and take a shower if necessary.  
Take off immediately all contaminated clothing and wash it before reuse.

#### 7.2. Conditions for safe storage, including any incompatibilities

##### Requirements for storage rooms and vessels

Corrosive to metals.  
Unsuitable container/equipment material: Metal  
The product develops hydrogen in an aqueous solution in contact with metals.

##### Hints on joint storage

Take national regulations into account.

##### Further information on storage conditions

Keep container tightly closed.

#### 7.3. Specific end use(s)

Laboratory chemicals

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

| CAS No    | Substance   | ppm | mg/m <sup>3</sup> | fib/cm <sup>3</sup> | Category      | Origin |
|-----------|-------------|-----|-------------------|---------------------|---------------|--------|
| 7697-37-2 | Nitric acid | 1   | 2.6               |                     | STEL (15 min) |        |

#### 8.2. Exposure controls

##### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

##### Individual protection measures, such as personal protective equipment

##### Eye/face protection

goggles  
Wear eye/face protection.

##### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

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#### Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing.

Wash hands before breaks and after work.

The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

#### Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

#### Thermal hazards

No data available

#### Environmental exposure controls

Do not allow to enter into surface water or drains.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |                   |                     |
|---|-------------------|---------------------|
| Physical state:   | Liquid            |                     |
| Colour:   | clear             |                     |
| Odour:  | like: Nitric acid |                     |
| Odour threshold:  | No data available |                     |
| Melting point/freezing point:                             |                   | No data available   |
| Boiling point or initial boiling point and boiling range: |                   | No data available   |
| Flammability:   |                   | No data available   |
| Lower explosion limits:                                   |                   | No data available   |
| Upper explosion limits:                                   |                   | No data available   |
| Flash point:  |                   | No data available   |
| Auto-ignition temperature:                                |                   | No data available   |
| Decomposition temperature:                                |                   | No data available   |
| pH-Value (at 20 °C):                                      |                   | <3                  |
| Viscosity / kinematic:                                    |                   | No data available   |
| Water solubility:   |                   | completely miscible |
| Solubility in other solvents                              |                   |                     |
| No data available   |                   |                     |
| Dissolution rate:   |                   | No data available   |
| Partition coefficient n-octanol/water:                    |                   | No data available   |
| Dispersion stability:                                     |                   | No data available   |
| Vapour pressure:  |                   | No data available   |
| Vapour pressure:  |                   | No data available   |
| Density:  |                   | No data available   |
| Relative density:   |                   | No data available   |
| Bulk density:   |                   | No data available   |
| Relative vapour density:                                  |                   | No data available   |
| Particle characteristics:                                 |                   | No data available   |

### 9.2. Other information

#### Information with regard to physical hazard classes

Explosive properties

No data available

Sustained combustibility:

No data available

Self-ignition temperature

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|                                     |                   |
|-------------------------------------|-------------------|
| Solid:                              | No data available |
| Gas:                                | No data available |
| Oxidizing properties                |                   |
| Oxidizing                           |                   |
| <b>Other safety characteristics</b> |                   |
| Evaporation rate:                   | No data available |
| Solvent separation test:            | No data available |
| Solvent content:                    | 0                 |
| Solid content:                      | 0                 |
| Sublimation point:                  | No data available |
| Softening point:                    | No data available |
| Pour point:                         | No data available |
| No data available:                  |                   |
| Viscosity / dynamic:                | No data available |
| Flow time:                          | No data available |

#### Further Information

Corrosive to metals.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Corrosive to metals.

Oxidising agent

#### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

#### 10.3. Possibility of hazardous reactions

Alkali (lye)

The product develops hydrogen in an aqueous solution in contact with metals.

Amines, Ammonia, Alcohols, Alkali metals, Hydrogen peroxide

Copper, Combustible solids, Solvent, Alkaline earth metal, mercury (Hg).

#### 10.4. Conditions to avoid

No data available

#### 10.5. Incompatible materials

Cellulose

Metal

The product develops hydrogen in an aqueous solution in contact with metals.

#### 10.6. Hazardous decomposition products

In case of fire may be liberated:

SECTION 5: Firefighting measures

#### Further information

No data available

### SECTION 11: Toxicological information

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

##### Toxicokinetics, metabolism and distribution

There are no data available on the mixture itself.

##### Acute toxicity

Based on available data, the classification criteria are not met.

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**ATEmix calculated**

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 50 mg/l; ATE (inhalation dust/mist) > 5 mg/l

| CAS No    | Chemical name     |               |         |        |        |
|-----------|-------------------|---------------|---------|--------|--------|
|           | Exposure route    | Dose          | Species | Source | Method |
| 7697-37-2 | nitric acid       |               |         |        |        |
|           | inhalation vapour | ATE 2,65 mg/l |         |        |        |

**Irritation and corrosivity**

Skin corrosion/irritation: Causes skin irritation.  
 Serious eye damage/eye irritation: Causes serious eye irritation.  
 Following ingestion Gastric perforation  
 Irritating to respiratory system.  
 Pulmonary oedema  
 Mucous membrane irritation in the mouth, throat, esophagus and gastrointestinal tract.  
 see also Section 4

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

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.

**Information on likely routes of exposure**

There are no data available on the mixture itself.

**Specific effects in experiment on an animal**

There are no data available on the mixture itself.

**Additional information on tests**

There are no data available on the mixture itself.

**Practical experience**

There are no data available on the mixture itself.

**11.2. Information on other hazards**
**Endocrine disrupting properties**

There are no data available on the mixture itself.

**Other information**

There are no data available on the mixture itself.

**Further information**

There are no data available on the mixture itself.

**SECTION 12: Ecological information**
**12.1. Toxicity**

Based on available data, the classification criteria are not met.

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| CAS No    | Chemical name           |              |                 |         |  |  |
|-----------|-------------------------|--------------|-----------------|---------|--|--|
|           | Aquatic toxicity        | Dose         | [h]   [d]       | Species | Source   | Method   |
| 7697-37-2 | nitric acid             |              |                 |         |  |  |
|           | Acute fish toxicity     | LC50<br>mg/l | 1559            | 96 h    | Topeka shiner                                      | Environmental Toxicology and Chemistry, other: ASTM E729-26                  |
|           | Fish toxicity           | NOEC         | 268 mg/l        | 30 d    | juvenile Topeka shiner and with juvenile Fathead m | Study report (2009)<br>Growth tests estimated the test chemical              |
|           | Algae toxicity          | NOEC         | > 419 mg/l      | 10 d    | several benthic diatoms; see results               | Marine Biology 43:307-315 (1977)<br>Ten cultures of benthic diatoms were iso |
|           | Acute bacteria toxicity | EC50         | > 1000 mg/l ( ) | 3 h     | Activated sludge                                   | Study report (2008)<br>OECD Guideline 209                                    |

**12.2. Persistence and degradability**

The methods for determining the biological degradability are not applicable to inorganic substances.

**12.3. Bioaccumulative potential**

There are no data available on the mixture itself.

**12.4. Mobility in soil**

There are no data available on the mixture itself.

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

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. Other adverse effects**

Discharge into the environment must be avoided.  
Harmful effect due to pH shift.  
Forms corrosive mixtures with water even if diluted.

**Further information**

Do not allow to enter into surface water or drains.

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**
**Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.  
Send to a physico-chemical treatment facility under observation of official regulations.  
Do not empty into drains.

**Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.  
Waste codes/waste designations according to EWC/AVV

**SECTION 14: Transport information**
**Land transport (ADR/RID)**

- 14.1. UN number or ID number:** UN 3264  
**14.2. UN proper shipping name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid)  
**14.3. Transport hazard class(es):** 8

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|                                    |     |
|------------------------------------|-----|
| <b><u>14.4. Packing group:</u></b> | III |
| Hazard label:                      | 8   |
| Classification code:               | C1  |
| Special Provisions:                | 274 |
| Limited quantity:                  | 5 L |
| Excepted quantity:                 | E1  |
| Transport category:                | 3   |
| Hazard No:                         | 80  |
| Tunnel restriction code:           | E   |

**Inland waterways transport (ADN)**

|   |   |
|---|---|
| <b><u>14.1. UN number or ID number:</u></b>     | UN 3264   |
| <b><u>14.2. UN proper shipping name:</u></b>    | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid) |
| <b><u>14.3. Transport hazard class(es):</u></b> | 8   |
| <b><u>14.4. Packing group:</u></b>              | III   |
| Hazard label:                                   | 8   |
| Classification code:                            | C1  |
| Special Provisions:                             | 274   |
| Limited quantity:                               | 5 L   |
| Excepted quantity:                              | E1  |

**Marine transport (IMDG)**

|   |   |
|---|---|
| <b><u>14.1. UN number or ID number:</u></b>     | UN 3264   |
| <b><u>14.2. UN proper shipping name:</u></b>    | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid) |
| <b><u>14.3. Transport hazard class(es):</u></b> | 8   |
| <b><u>14.4. Packing group:</u></b>              | III   |
| Hazard label:                                   | 8   |
| Special Provisions:                             | 223 274   |
| Limited quantity:                               | 5 L   |
| Excepted quantity:                              | E1  |
| EmS:  | F-A, S-B  |
| Segregation group:                              | 1 - acids   |

**Air transport (ICAO-TI/IATA-DGR)**

|   |   |
|---|---|
| <b><u>14.1. UN number or ID number:</u></b>     | UN 3264   |
| <b><u>14.2. UN proper shipping name:</u></b>    | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid) |
| <b><u>14.3. Transport hazard class(es):</u></b> | 8   |
| <b><u>14.4. Packing group:</u></b>              | III   |
| Hazard label:                                   | 8   |
| Special Provisions:                             | A3 A803   |
| Limited quantity Passenger:                     | 1 L   |
| Passenger LQ:                                   | Y841  |
| Excepted quantity:                              | E1  |
| IATA-packing instructions - Passenger:          | 852   |
| IATA-max. quantity - Passenger:                 | 5 L   |
| IATA-packing instructions - Cargo:              | 856   |
| IATA-max. quantity - Cargo:                     | 60 L  |

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**SECTION 15: Regulatory information**
**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
**EU regulatory information**

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Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

Marketing and use of explosives precursors (Regulation (EU) 2019/1148):

This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

#### National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D):

1 - slightly hazardous to water

### SECTION 16: Other information

#### Abbreviations and acronyms

- Ox. Liq. 3: Oxidising liquids, hazard category 3
- Met. Corr. 1: Corrosive to metals, hazard category 1
- Acute Tox. 3: Acute toxicity, hazard category 3
- Skin Corr. 1A: Skin corrosion, sub-category 1A
- Skin Irrit. 2: Skin irritation, hazard category 2
- Eye Dam. 1: Serious eye damage, hazard category 1
- Eye Irrit. 2: Eye irritation, hazard category 2

#### Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

| Classification      | Classification procedure |
|---------------------|--------------------------|
| Met. Corr. 1; H290  | On basis of test data    |
| Skin Irrit. 2; H315 | Calculation method       |
| Eye Irrit. 2; H319  | Calculation method       |

#### Relevant H and EUH statements (number and full text)

- H272 May intensify fire; oxidiser.
- H290 May be corrosive to metals.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- EUH071 Corrosive to the respiratory tract.

#### Further Information

Provide appropriate information, instructions and training to users

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

*(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*