

# Safety Data Sheet (SDS)

acc. to OSHA HCS 29 CFR 1910.1200(g) revised in 2012

Issued date: 05/20/2024

Revision date: 05/20/2024

Trade name: Nitric Acid 0.1N

## 1 Identification

### Product identifier

**Trade name:** Nitric Acid 0.1N

### Relevant identified uses of the substance or mixture and uses advised against

**Recommended uses:** Industrial, manufacturing or laboratory use.

**Uses advised against:** Food, drugs, pesticide, cosmetics, medical devices, human or animal application.

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

**Manufacturer/Supplier:** Alchemie Labs Inc.

**Address:** 53 Capital Dr  
Wallingford, CT 06492

**Telephone:** +1 (203) 208 8869

### Emergency telephone number

+1 (203) 208 8869

## 2 Hazard(s) identification

### Classification of the substance or mixture

### Classification in accordance with 29 CFR 1910.1200 (OSHA HCS):

Corrosive to metals, Category 1 H290 May be corrosive to metals.

Skin irritation, Category 2 H315 Causes skin irritation.

Eye irritation, Category 2 H319 Causes serious eye irritation.

### GHS Label elements, including precautionary statements

### Hazard pictograms:



GHS05

**Signal word:** Warning

**Hazardous components:** Nitric acid

### Hazard statements:

H290 May be corrosive to metals.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

### Precautionary statements:

P234 Keep only in original container.

P264 Wash thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P332 + P313 If skin irritation occurs: Get medical advice/attention.

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.

P362 Take off contaminated clothing and wash before reuse.

P390 Absorb spillage to prevent material damage.

P406 Store in corrosive resistant container with a resistant inner liner.

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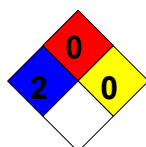
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**Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme.

**NFPA ratings (scale 0 - 4)**


Health = 2

Flammability = 0

Instability = 0

**HMIS-ratings (scale 0 - 4)**

|                     |   |
|---------------------|---|
| HEALTH              | 2 |
| FLAMMABILITY        | 0 |
| PHYSICAL HAZARD     | 1 |
| PERSONAL PROTECTION | X |

Health = 2

Flammability = 0

Physical hazard = 1

## Other hazards

The mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 3 Composition/information on ingredients

**Chemical characterization:** Mixtures.

**Components:**

| Chemical name | Common name and synonyms | CAS number | Weight %  |
|---------------|--------------------------|------------|-----------|
| Water         | -                        | 7732-18-5  | 99.2-99.4 |
| Nitric acid   | Hydrogen nitrate         | 7697-37-2  | 0.6-0.8   |

**Additional information:**

Any concentration shown as a range is due to batch-to-batch variability in the production of a mixture.

## 4 First-aid measures

### Description of first aid measures

#### Inhalation:

Move casualty to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

#### Eye contact:

Rinse immediately with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.

#### Ingestion:

Rinse mouth with water. Give a cupful of water.

#### Skin contact:

Wash off immediately with plenty of water. Remove contaminated clothing. Wash clothing before reuse. Get medical attention in event of irritation.

### Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in Section 2 and/or in Section 11.

### Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## 5 Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media:** CO<sub>2</sub>, extinguishing powder, alcohol-resistant foam or water spray.

**Unsuitable extinguishing media:** No information available.

### Special hazards arising from the substance or mixture

Non-combustible. Thermal decomposition can lead to release of nitrogen oxides (NO<sub>x</sub>).

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### Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

### Environmental precautions

Do not allow to enter sewers/ surface or ground water.

### Methods and material for containment and cleaning up

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

Use neutralizing agent.

Ensure adequate ventilation.

Clean surfaces thoroughly with water to remove residual contamination.

Dispose of all waste and cleanup materials in accordance with regulations.

### 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.

## 7 Handling and storage

### Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.

Wash hands after use.

### Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.

Do not store in metal containers.

Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials.

### Specific end use(s)

No additional information available.

## 8 Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits:

| Component   | CAS number | OSHA PEL                             | NIOSH REL                                                                       | ACGIH TLV               |
|-------------|------------|--------------------------------------|---------------------------------------------------------------------------------|-------------------------|
| Nitric acid | 7697-37-2  | 2 ppm TWA<br>5 mg/m <sup>3</sup> TWA | 2 ppm TWA<br>5 mg/m <sup>3</sup> TWA<br>4 ppm STEL<br>10 mg/m <sup>3</sup> STEL | 2 ppm TWA<br>4 ppm STEL |
| Water       | 7732-18-5  | Not listed                           | Not listed                                                                      | Not listed              |

### Exposure controls

#### Appropriate engineering controls:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

#### Personal protective equipment:

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### Eye/face protection:



Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133. Tight sealing safety goggles.

### Skin protection:



Wear protective gloves (nitrile rubber, butyl rubber, Viton), protective clothing and/or acid resistant apron.

### Respiratory protection:



Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved respirators if exposure limits are exceeded or if irritation or other symptoms are experienced.

## 9 Physical and chemical properties

### Information on basic physical and chemical properties

|                                         |                                         |
|-----------------------------------------|-----------------------------------------|
| Physical state:                         | Liquid                                  |
| Color:                                  | Colorless                               |
| Odor:                                   | Pungent                                 |
| pH-value at 20°C (68°F):                | <2                                      |
| Melting point/freezing point:           | Not determined                          |
| Boiling point/boiling range:            | Not determined                          |
| Flash point:                            | Not applicable                          |
| Evaporation rate:                       | Not determined                          |
| Flammability (solid, gas):              | Non-combustible                         |
| Lower explosion limit:                  | Not determined                          |
| Upper explosion limit:                  | Not determined                          |
| Vapor pressure at 20°C (68°F):          | Not determined                          |
| Vapor density:                          | Not determined                          |
| Density at 20°C (68°F):                 | 1.00 g/cm <sup>3</sup> (8.3454 lbs/gal) |
| Relative density:                       | Not determined                          |
| Solubility:                             | Soluble in water                        |
| Partition coefficient: n-octanol/water: | Not determined                          |
| Auto-ignition temperature:              | Product is not self-igniting            |
| Decomposition temperature:              | Not determined                          |
| Kinematic viscosity:                    | Not determined                          |
| Dynamic viscosity:                      | Not determined                          |

### Other information

No additional information available.

## 10 Stability and reactivity

### Reactivity

Corrosive to metals.

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## Chemical stability

Product is stable under normal conditions.

## Possibility of hazardous reactions

No information available.

## Conditions to avoid

Direct sunlight. Excess heat.

## Incompatible materials

Strong bases, reducing agents, metals, powdered metals.

## Hazardous decomposition products

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

## 11 Toxicological information

### Information on toxicological effects

#### Acute toxicity:

#### Product information:

#### Acute toxicity estimate (ATE):

| Exposure route     | Value    | Exposure time | Method      |
|--------------------|----------|---------------|-------------|
| Inhalation (vapor) | 331 mg/l | 4 h           | Calculation |

#### Components information:

| Component   | CAS number | LD50 Oral           | LD50 Dermal | LC50 Inhalation    |
|-------------|------------|---------------------|-------------|--------------------|
| Nitric acid | 7697-37-2  | -                   | -           | 2500 ppm (Rat) 1 h |
| Water       | 7732-18-5  | > 90000 mg/kg (Rat) | -           | -                  |

#### Acute toxicity estimate (ATE):

| Component   | CAS number | Exposure route     | Value     | Exposure time |
|-------------|------------|--------------------|-----------|---------------|
| Nitric acid | 7697-37-2  | Inhalation (vapor) | 2.65 mg/l | 4 h           |

**Skin corrosion/irritation:** Causes skin irritation.

**Serious eye damage/eye irritation:** Causes serious eye irritation.

**Respiratory or skin sensitization:** Not classified.

**Germ cell mutagenicity:** Not classified.

#### Carcinogenicity:

| Component   | CAS number | IARC       | NTP        | OSHA       | ACGIH      |
|-------------|------------|------------|------------|------------|------------|
| Nitric acid | 7697-37-2  | Not listed | Not listed | Not listed | Not listed |
| Water       | 7732-18-5  | Not listed | Not listed | Not listed | Not listed |

**Reproductive toxicity:** Not classified.

**STOT—single exposure:** Not classified.

**STOT—repeated exposure:** Not classified.

**Aspiration hazard:** Not classified.

## 12 Ecological information

### Toxicity

| Component   | CAS number | Test type | Value   | Species          | Exposure time |
|-------------|------------|-----------|---------|------------------|---------------|
| Nitric acid | 7697-37-2  | LC50      | 72 mg/l | Gambusia affinis | 96h           |

### Persistence and degradability

No information available.

### Bioaccumulative potential

| Component   | CAS number | Test type | Value          | Exposure time |
|-------------|------------|-----------|----------------|---------------|
| Nitric acid | 7697-37-2  | Log Pow   | -2.3 (at 25°C) | -             |

### Mobility in soil

No information available.

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## Results of PBT and vPvB assessment

The mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## Other adverse effects

No additional information available.

## 13 Disposal considerations

### Waste treatment methods

Dispose of in accordance with all applicable federal, state, and/or local laws and regulations. Do not allow product to reach sewage system.

### Contaminated packaging:

Dispose of in accordance with all applicable federal, state, and local regulations. Dispose of as unused product.

## 14 Transport information

### In Accordance with DOT:

**UN number or ID number**

UN2031

**UN proper shipping name**

Nitric acid other than red fuming with not more than 20 percent nitric acid

**Transport hazard class(es)**

8

**Packing group**

II

**Hazard label(s)**

8



### In Accordance with IMDG:

**UN number or ID number**

2031

**UN proper shipping name**

NITRIC ACID other than red fuming, with less than 65% nitric acid

**Transport hazard class(es)**

8

**Packing group**

II

**Hazard label(s)**

8


**EmS code**

F-A, S-B

### In Accordance with IATA:

**UN number or ID number**

2031

**UN proper shipping name**

Nitric acid other than red fuming, with 20% or less nitric acid

**Transport hazard class(es)**

8

**Packing group**

II

**Hazard label(s)**

8



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**Environmental hazards**

Not classified as a Marine Pollutant.

**Special precautions for user**

See Section 7 and 10.

**Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)**

Not applicable.

### 15 Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture****U.S. Federal Regulations****TSCA Status:**

All components of this product are listed as Active on the TSCA Inventory.

**OSHA Hazard Communication Standard:**

This product contains "Hazardous Chemicals" as defined by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**CERCLA Hazardous Substance List (40 CFR 302.4):**

Nitric acid (CAS No. 7697-37-2): 1000 lbs RQ.

**SARA Title III Section 302 (40 CFR 355):**

Nitric acid (CAS No. 7697-37-2): 1000 lbs TPQ.

**SARA Title III Section 304 (40 CFR 355):**

Nitric acid (CAS No. 7697-37-2): 1000 lbs EPCRA RQ.

**SARA Title III Section 313 (40 CFR 372):**

Nitric acid (CAS No. 7697-37-2): 1.0 % de minimis concentration.

**SARA Title III Section 311/312 Hazard Categories (40 CFR 370):**

Nitric acid (CAS No. 7697-37-2): Oxidizer, Corrosive to metal, Acute toxicity, Serious eye damage, Skin corrosion.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):**

Nitric acid (CAS No. 7697-37-2): 1000 lbs RQ.

**Clean Air Act:**

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

**U.S. State Regulations****California Proposition 65:**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**Massachusetts Right to Know Substance List:**

Nitric acid (CAS No. 7697-37-2): Extraordinarily hazardous.

**Pennsylvania Right to Know Hazardous Substances:**

Nitric acid (CAS No. 7697-37-2): Environmental hazard.

**New Jersey Worker and Community Right to Know Components:**

Nitric acid (CAS No. 7697-37-2): SN 1356 500 lbs TPQ.

**Chemical safety assessment**

No information available.

### 16 Other information

**Prepared by:****Issued date:** 05/20/2024**Revision date:** 05/20/2024**Revision number:** 1.0

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**Abbreviations and acronyms:**

|        |                                                                   |
|--------|-------------------------------------------------------------------|
| ACGIH  | American Conference of Governmental Industrial Hygienists         |
| ATE    | Acute Toxicity Estimate                                           |
| CAS    | Chemical Abstract Service                                         |
| CERCLA | Comprehensive Emergency Response, Compensation, and Liability Act |
| DOT    | U.S. Department of Transportation                                 |
| EmS    | Emergency Schedule                                                |
| EPA    | U.S. Environmental Protection Agency                              |
| EPCRA  | Emergency Planning and Community Right-To-Know Act                |
| GHS    | Globally Harmonized System                                        |
| HMIS   | Hazardous Materials Information System                            |
| IARC   | International Agency for Research on Cancer                       |
| IATA   | International Air Transport Association                           |
| IMDG   | International Maritime Code for Dangerous Goods                   |
| LC50   | Lethal Concentration, 50%                                         |
| LD50   | Lethal Dose, 50%                                                  |
| MSHA   | Mine Safety and Health Administration                             |
| NFPA   | National Fire Protection Agency                                   |
| NIOSH  | National Institute for Occupational Safety & Health               |
| NTP    | National Toxicology Program                                       |
| OSHA   | Occupational Safety & Health Administration                       |
| PBT    | Persistent, Bioaccumulative and Toxic                             |
| PEL    | Permissible Exposure Limit                                        |
| REL    | Recommended Exposure Limit                                        |
| RQ     | Reportable Quantity                                               |
| SARA   | Superfund Amendments and Reauthorization Act of 1986 Title III    |
| SCBA   | Self-Contained Breathing Apparatus                                |
| STEL   | Short-Term Exposure Limit                                         |
| STOT   | Specific Target Organ Toxicity                                    |
| TLV    | Threshold Limit Value                                             |
| TPQ    | Threshold Planning Quantity                                       |
| TSCA   | Toxic Substances Control Act                                      |
| TWA    | Time Weighted Average                                             |
| vPvB   | Very Persistent and Very Bioaccumulative                          |

**Disclaimer**

The information provided in this Safety Data Sheet is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Alchemie Labs Inc. specifies that this product is intended for use in industrial, manufacturing, or laboratory settings only. It is explicitly advised against using this product in food, drugs, or as a pesticide. Furthermore, it cannot be utilized for human or animal applications (excluding specific laboratory-bred species), in cosmetics, medical devices, or in any products that may contravene the Federal Food, Drug, and Cosmetic Act, the Federal Insecticide, Fungicide, and Rodenticide Act, or the Toxic Substances Control Act. Since conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this product. Buyers and users are responsible for ensuring regulatory compliance, safety, efficacy, and appropriate hazard communication for all applications.