

SAFETY DATA SHEET

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

1.1 Product identifiers

| | |
|--------------|--|
| Product name | Nitric Acid 1N Solution |
| CAS number | 7697-37-2 |
| Synonyms | Hydrogen nitrate; Aqua fortis; Azotic acid; Salpetersaeure |

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

| | |
|-----------------|-----------------------|
| Identified uses | Laboratory chemicals. |
|-----------------|-----------------------|

1.3 Details of the supplier of the safety data sheet

| | |
|-----------|--|
| Company | Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A. |
| Telephone | 512-668-9918 |
| Fax | 512-886-4008 |

1.4 Emergency telephone

| | | |
|-------------------|------------------------------|----------|
| Emergency Phone # | US & Canada: 1-800-535-5053 | INFOTRAC |
| | International 1-352-323-3500 | INFOTRAC |

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

| | |
|---------------------|-------------|
| Corrosive to Metals | Category 1 |
| Skin Corrosion | Category 1B |
| Serious Eye Damage | Category 1 |

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

May be corrosive to metals.
Causes severe skin burns and eye damage.

Precautionary statements

Prevention: Keep only in original container. Wear protective gloves/protective clothing/eye protection/face protection. Wash skin thoroughly after handling.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN/HAIR: Remove/Take off all contaminated clothing immediately. Rinse skin with water/shower. Wash contaminated clothing before reuse.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Spills: Absorb spillage to prevent material damage.

Storage: Store locked up. Store in corrosive-resistant container with a resistant inner liner.

Disposal: Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

| Chemical name | Common name and synonyms | CAS number | Concentration |
|---------------|--|------------|---------------|
| Nitric Acid | Hydrogen nitrate; Aqua fortis; Azotic acid; Salpetersaeure | 7697-37-2 | 5-10% |
| Water | Aqua; H ₂ O | 7732-18-5 | 90-95% |

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

| | |
|--------------------------------|--|
| If inhaled | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician. |
| In case of skin contact | Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician. |
| In case of eye contact | Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician. |
| If swallowed | Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician. |

4.2 Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage. Possible inflammation of the respiratory tract if inhaled. Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

| | |
|---------------------------------------|---|
| Suitable extinguishing media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | For this substance/mixture, no limitations of extinguishing agents are given. |

5.2 Specific hazards arising from the substance or mixture

Not combustible. Ambient fire may liberate hazardous vapours. Nitrogen oxides (NO_x).

5.3 Special protective equipment and precautions for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Flash Point No information available.

Autoignition Temperature No information available.

Explosion limits

Upper No data available.

Lower No data available.

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

| Health | Flammability | Instability | Physical hazards |
|--------|--------------|-------------|------------------|
| 3 | 0 | 1 | OX |

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

6.2 Environmental precautions

Prevent from reaching drains, sewers, and waterways.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Take up with liquid-absorbent and neutralising material. Dispose of properly. Clean up affected area.

6.4 Reference to other sections

See section 2 for full list of hazard and precaution statements. For disposal, see Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe mist, vapors, spray.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep only in the original container in a cool, well-ventilated place away from incompatible materials. Keep container closed when not in use.

Incompatibilities

Strong bases. Halogens. Metals. Aluminum. Strong reducing agents.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Component | Type | Value | |
|---------------------|----------------|-------|----------------------|
| Nitric acid [C≤70%] | (Vacated) TWA | 2 ppm | 5 mg/m ³ |
| | (Vacated) STEL | 4 ppm | 10 mg/m ³ |
| | TWA | 2 ppm | 5 mg/m ³ |

US. ACGIH Threshold Limit Values

| Component | Type | Value |
|---------------------|------|-------|
| Nitric acid [C≤70%] | TWA | 2 ppm |
| | STEL | 4 ppm |

US. NIOSH: Pocket Guide to Chemical Hazards

| Component | Type | Value | |
|---------------------|------|--------|----------------------|
| Nitric acid [C≤70%] | IDLH | 25 ppm | |
| | TWA | 2 ppm | 5 mg/m ³ |
| | STEL | 4 ppm | 10 mg/m ³ |

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits indicated above.

Personal protective equipment

Eye/face protection

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

Skin protection

The glove material has to be impermeable and resistant to the product being handled. Selection of glove material on consideration of penetration times, rates of diffusion, and degradation.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

Required when vapors/aerosols are generated. Gas mask with filter type A at conc. in air > 5 ppm.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

| | |
|---|----------------------------|
| Physical State | Liquid |
| Appearance | Colorless to a pale yellow |
| Odor | Strong acrid |
| Odor Threshold | No information available |
| pH | No information available |
| Melting Point/Range | No information available |
| Boiling Point/Range | No information available |
| Evaporation Rate | No information available |
| Flammability (solid) | No information available |
| Flammability or explosive limit | No information available |
| Upper | |
| Lower | |
| Vapor Pressure | No information available |
| Vapor Density | No information available |
| Density | 1.03 g/mL |
| Solubility | Soluble in water |
| Partition coefficient; n-octanol/water | No information available |
| Autoignition Temp | No information available |
| Decomposition Temp | No information available |
| Viscosity | 0.99 mm ² /s |
| Molecular Formula | HNO ₃ |
| Molecular Weight | 63.013 g/mol |
| VOC Content(%) | No information available |
| Oxidizing properties | No information available |

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Thermal decomposition generates: Corrosive vapors.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Reacts with combustible materials.

10.4 Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5 Incompatible materials

Strong reducing agents. Strong bases. Metals. Aluminum. Ammonia. Combustible materials. Halogens.

10.6 Hazardous decomposition products

Nitrogen oxides (NO_x).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---------------------|-----------|-------------|-------------------|
| Nitric acid [C≤70%] | - | - | 2500 ppm (Rat) 1h |

Skin corrosion/irritation

Causes severe skin burns.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

| Component | CAS | IARC | NTP | ACGIH | OSHA | Mexico |
|-----------|-----|------|-----|-------|------|--------|
|-----------|-----|------|-----|-------|------|--------|

| | | | | | | |
|-------------|-----------|------------|------------|------------|------------|------------|
| Nitric acid | 7697-37-2 | Not listed | Not listed | Not listed | Not listed | Not listed |
|-------------|-----------|------------|------------|------------|------------|------------|

Specific target organ toxicity - single exposure

None known.

Specific target organ toxicity - repeated exposure

None known.

Reproductive toxicity

No information available.

Chronic effects

No information available.

11.2 Additional Information

No information available.

SECTION 12: Ecological information

12.1 Toxicity

No information available.

12.2 Persistence and degradability

Readily degradable in the environment.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Aqueous solution has high mobility in soil.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

| | |
|----------------------|-------------|
| UN-No | UN2031 |
| Proper Shipping Name | Nitric acid |
| Hazard Class | 8 |
| Packing Group | II |

IMDG

| | |
|----------------------|-------------|
| UN-No | UN2031 |
| Proper Shipping Name | Nitric acid |
| Hazard Class | 8 |
| Packing Group | II |

IATA

| | |
|----------------------|-------------|
| UN-No | UN2031 |
| Proper Shipping Name | Nitric acid |
| Hazard Class | 8 |
| Packing Group | II |

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)
Listed, Nitric acid (CAS #7697-37-2), RQ: 1000 lb.

SARA 304 Emergency release notification
Listed, Nitric acid (CAS #7697-37-2), RQ: 1000 lb.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance
Listed, Nitric acid (CAS #7697-37-2), RQ: 1000 lb.

SARA 311/312 Hazardous
See Section 2 for more information.

SARA 313 (TRI reporting)

Listed, Nitric acid (CAS #7697-37-2).

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA - Hazardous Substances)

Listed, Nitric acid (CAS #7697-37-2), RQ: 1000 lb.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations**US. Massachusetts RTK - Substance List**

Listed, Nitric acid (CAS #7697-37-2).

US. New Jersey Worker and Community Right-to-Know Act

Listed, Nitric acid (CAS #7697-37-2).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, Nitric acid (CAS #7697-37-2).

California Proposition 65

Not listed.

SECTION 16: Other information

Issue date: 10/23/2020

Revision 1: 10/15/2024

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.