

SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Nitric Acid 2.8% 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.
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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 2
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 skin irritation.
Causes serious eye damage.

Precautionary statements

Prevention: Keep only in original container. Wear protective gloves/protective clothing/eye protection/face protection.

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.

Spills: Absorb spillage to prevent material damage.

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

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

Corrosive to the respiratory tract.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Nitric Acid	Aqua fortis; Azotic acid	7697-37-2	2-3%
Water	Aqua; H ₂ O	7732-18-5	97-98%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

In case of skin contact

Wash with plenty of soap and water.

In case of eye contact Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

If swallowed Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO₂).

Unsuitable extinguishing media Water jet.

5.2 Specific hazards arising from the substance or mixture

Nitrogen oxides (NO_x). Substance or mixture corrosive to metals.

5.3 Special protective equipment and precautions for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

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
2	0	0	-

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Remove persons to safety. Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

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. Ventilate 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

Use local and general ventilation. Use only in well-ventilated areas.

Hygiene measures

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feeding stuffs.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep only in the original container in a cool, well-ventilated place away. Store in corrosive-resistant container with a resistant inner liner. Keep container closed when not in use. Protect from freezing and physical damage. Keep out of direct sunlight and away from heat, water, and incompatible materials.

Incompatibilities

Strong bases, metallic powders, carbides, Hydrogen Sulfide, turpentine, and combustible organics.

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%]	TWA	2 ppm	5 mg/m ³
	STEL	4 ppm	10 mg/m ³
	IDLH	25 ppm	

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Use only outdoors or in a well-ventilated area. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit.

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

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. If the TLV is exceeded, a full-face chemical cartridge respirator may be worn up to 50 times the TLV or the maximum use concentration specified by the respirator supplier, whichever is less.

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	> 100 °C
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	No information available
Upper	
Lower	
Vapor Pressure	< 23.7 mmHg at 25 °C
Vapor Density	No information available
Density	No information available
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	No information available
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

Corrosive to metals.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

Strong bases, metallic powders, carbides, Hydrogen Sulfide, turpentine, and combustible organics.

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%]	430 mg/kg (Human)	-	67 ppm (Rat) 4h

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

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

No information available.

Specific target organ toxicity - repeated exposure

No information available.

Reproductive toxicity
No information available.

Chronic effects
No information available.

11.2 Additional Information
Corrosive to the respiratory tract.

SECTION 12: Ecological information

- 12.1 Toxicity**
The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.
- 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

UN3264

Proper Shipping Name Corrosive Liquid, Acidic, Inorganic, n.o.s., (Nitric Acid)
Hazard Class 8
Packing Group III

IMDG

UN-No UN3264
Proper Shipping Name Corrosive Liquid, Acidic, Inorganic, n.o.s., (Nitric Acid)
Hazard Class 8
Packing Group III

IATA

UN-No UN3264
Proper Shipping Name Corrosive Liquid, Acidic, Inorganic, n.o.s., (Nitric Acid)
Hazard Class 8
Packing Group III

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

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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.