SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Nitric Acid 70% Solution
CAS number	7697-37-2
Synonyms	Azotic acid; Engraver's acid; Aqua fortis

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)

Oxidizing liquids	Category 3
Corrosive to Metals	Category 1
Acute Inhalation Toxicity -	Category 3
Skin Corrosion/Irritation	Category 1A
Serious Eye Damage/Irritation	Category 1

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word: Danger

Hazard statements:
May intensify fire; oxidizer.
May be corrosive to metals.
Causes severe skin burns and eye damage.
Toxic if inhaled.
Corrosive to the respiratory tract

Precautionary statements:
Prevention: Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands, and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep/Store away from clothing/ other combustible materials. Take any precaution to avoid mixing with combustibles. Keep only in original container. Wear respiratory protection.
Response: Immediately call a POISON CENTER or doctor/physician.
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 ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.
Fire: In case of fire, use CO2, dry chemical, or foam for extinction.
Spills: Absorb spillage to prevent material damage.
Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Store in a dry place.
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	Azotic acid; Aqua fortis	7697-37-2	65-70%
Water	Aqua; H2O	7732-18-5	30-35%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Remove from exposure, lie down. Call a physician immediately.
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before reuse. Call a physician immediately
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required
If swallowed	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Clean mouth with water. Call a physician immediately

4.2 Most important symptoms and effects, both acute and delayed

Causes burns by all exposure routes. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated.

4.3 Indication of any immediate medical attention and special treatment needed

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	CO2, dry chemical, dry sand, alcohol-resistant foam.
Unsuitable extinguishing media	No information available.

5.2 Specific hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin, and mucous membranes. Oxidizer; Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.).
Hazardous Combustion Products: Nitrogen oxides (NOx).

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

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
4	0	0	OX

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment as required.

6.2 Environmental precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Wear self-contained breathing apparatus and protective suit.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements. See Section 12 for additional Ecological Information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed, seek immediate medical assistance. Do not breathe mist/vapors/spray. Keep away from clothing and other combustible materials.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool, and well-ventilated place. Do not store near combustible materials. Do not store in metal containers. Keep in properly labeled containers. Corrosives area.

Incompatibilities

Combustible material. Strong bases. Reducing Agent. Metals. Finely powdered metals. Organic materials. Aldehydes. Alcohols. Cyanides. Ammonia. 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/m3
	(Vacated) STEL	4 ppm	10 mg/m3
	TWA	2 ppm	5 mg/m3

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/m3
	STEL	4 ppm	10 mg/m3
	IDLH	25 ppm	

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

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 or European Standard EN166. Tight sealing safety goggles. Face protection shield.

Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

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	Clear to pale yellow
Odor	Strong acid
Odor Threshold	No information available
pH	0.1 (1.0N solution)
Melting Point/Range	-41°C
Boiling Point/Range	120.5°C
Evaporation Rate	No information available
Flammability (solid)	Not flammable
Flammability or explosive limit	No data available.
Upper	
Lower	
Vapor Pressure	No information available
Vapor Density	No information available
Density	No information available
Solubility	Soluble
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	2.0 cPs

Molecular Formula	HNO3
Molecular Weight	63.013 g/mol
VOC Content(%)	No information available
Oxidizing properties	Oxidizer

9.2 Other safety information No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity
Known reactive hazard.

10.2 Chemical stability
Oxidizer; contact with combustible/organic material may cause fire.

10.3 Possibility of hazardous reactions
None under normal processing.

10.4 Conditions to avoid
Incompatible products. Combustible material. Excess heat. Exposure to air or moisture over prolonged periods.

10.5 Incompatible materials
Combustible material, Strong bases, Reducing Agent, Metals, Finely powdered metals, Organic materials, Aldehydes, Alcohols, Cyanides, Ammonia, Strong reducing agents.

10.6 Hazardous decomposition products
Nitrogen oxides (NOx).

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/1h (Rat)

Skin corrosion/irritation
Causes severe burns by all exposure routes. Can cause redness, pain, and severe burns.

Serious eye damage/eye irritation

Causes severe burns by all exposure routes. Vapors are irritating and may cause severe damage to the eyes. Splashes may cause severe burns and permanent eye damage.

Respiratory or skin sensitization

Causes severe burns by all exposure routes. May cause irritation of the nose, throat, and respiratory tract including coughing and choking. Higher concentrations or prolonged exposure to vapors of nitric acid may lead to pneumonia or pulmonary edema.

Germ cell mutagenicity

No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Nitric acid [C≤70%]	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

Ingestion causes severe swelling, severe damage to the delicate tissue, and danger of perforation. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated.

11.2 Additional Information

The toxicological properties have not been fully investigated.

SECTION 12: Ecological information

12.1 Toxicity

Do not empty into drains. Large amounts will affect pH and harm aquatic organisms.

12.2 Persistence and degradability

Miscible with water. Persistence is unlikely based on information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility.

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 Number	UN2031
Proper Shipping name	NITRIC ACID
Hazard Class	8 (5.1)
Packaging Group	II

IMDG

UN Number	UN2031
Proper Shipping name	NITRIC ACID
Hazard Class	8 (5.1)
Packaging Group	II

IATA

UN Number	UN2031
Proper Shipping name	NITRIC ACID
Hazard Class	8 (5.1)
Packaging Group	II

SECTION 15: Regulatory information

US federal regulations

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

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
Chronic Health Hazard

SARA 313 (TRI reporting)
Listed, Nitric acid (CAS #7697-37-2), RQ: 1000 lb.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not applicable.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act
Not regulated.

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), RQ: 1000 lb.

US. New Jersey Worker and Community Right-to-Know Act
Listed, Nitric acid (CAS #7697-37-2), RQ: 1000 lb.

US. Pennsylvania Worker and Community Right-to-Know Law
Listed, Nitric acid (CAS #7697-37-2), RQ: 1000 lb.

California Proposition 65
Not listed.

SECTION 16: Other information

Date of Issue: 12/04/2012
Revised on 05/28/2026

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.