SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	: Nitric Acid 70%
CAS number	: 7697-37-2
Synonyms	: Aqua Fortis, Azotic Acid

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

Identified uses : Process chemical, Laboratory and scientific research and development.

1.3 Details of the supplier of the safety data sheet

Company : Lab Alley, LLC
22111 Highway 71 West, Suite 601
Spicewood, Texas 78669
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 1)
Skin corrosion/irritation (Category 1A)
Serious eye damage/eye irritation (Category 1)
Specific target organ toxicity, single exposure (Category 1 - respiratory system)
Specific target organ toxicity, repeated exposure (Category 1 - respiratory system, tooth)

2.2 GHS Label elements, including precautionary statements

Pictogram:

Signal Word: **Danger**

Hazard statement(s): May cause fire or explosion; strong oxidizer. Causes severe skin burns and eye damage. Causes serious eye damage. Causes damage to organs (respiratory system). Causes damage to organs (respiratory system, tooth) through prolonged or repeated exposure.

Precautionary statement(s): **Prevention:** Take any precaution to avoid mixing with combustibles, Keep away from heat, Keep/Store away from clothing and other combustible materials. Do not breathe mist or vapor, Wash thoroqghly after handling, Do not eat, drink or smoke when using this product. Wear. protective gloves/protective clothing/eye protection/face protection. **Response:** In case of fire, use water/water spray/ water jet/carbon dioxide/sand/foam/alcohol resistant foam/chemical powder for extinction. If swallowed.: Rinse mouth. Do NOT induce vomiting, If on skin (or hair): Take off immediately all c.ontaminated clothing. Rinse skin with water/ shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes, Remove contact lenses, if present and easy to do, Continue rinsing. If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Immediately call a POISON CENTER or doctor/physician, In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of Store lockeq. up. Store in corrosive resistant container with a resistant inner liner explosion. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazards not otherwise classified

No data available.

SECTION 3: Composition/information on ingredients

3.1 Components

Ingredient	CAS Number	Percent	Hazardous Chemical
Nitric Acid	7697-37-2	65-70%	Yes
Water	7732-18-5	30-35%	No

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice: Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

If inhaled: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give Oxygen. Call a physician.

In case of eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.
In case of skin contact:	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes, Wash clothing before reuse. Call a physician.
In case of ingestion:	DO NOT INDUCE VOMITING! Give large quantities of water or milk if available, Never give anything by mouth to an unconscious person. Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2)

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable (and unsuitable) extinguishing media	Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Specific hazards arising from the substance or mixture

May cause fire or explosion; strong oxidizer. Strong oxidizer - contact with other material may cause fire. Special p rotective equipment and precautions for firefighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

5.3 Special protective equipment and precautions for firefighters

In case of fire: Stop leak if safe to do so. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion, Move containers from fire area if you can do so without risk. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

5.4 Further information

Not available.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area, Keep unnecessary and unprotected personnel from entering.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Contain and recover liquid when possible. Do not let product enter drains. Neutralize wif'h alkaline material (soda ash, lime,) then absorb with an inert material (e, g., vermiculite, dry sand, earth,) and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities, The toll free number for the US Coast Guard National Response Center is (800) 424.:8802.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Take any precaution to avoid mixing with combustibles. Keep away from heat. Do not breathe mist or vapor. Do not get this material in contact with eyes, Do not get this material in contact with skin, Do not get this material on clothing. Avoid prolonged exposure. Wash hands thoroughly after handling. Avoid release to the environment.

Hygiene measures

When using, do not eat, drink or smoke. Avoid contact with eyes. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store locked up. Keep away from heat. Keep container tightly closed. Do not store near combustible materials. Keep out of the reach of children, Store in a cool, dry place out of direct sunlight.

SECTION 8. Exposure controls/personal protection

8.1 Occupational exposure limits

For Nitric Acid: OSHA Permissible Exposure Limit (PEL): 2 ppm (TWA), 4 ppm (STEL) ACGIH Threshold Limit Value (TLV): 2 ppm (TWA); 4 ppm (STEL).

8.2 Exposure controls

Appropriate engineering controls

A system of local and/ or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Personal protective equipment

Eye/face protection

Use chemical safety goggles and/ or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area,

Skin protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Body Protection

Acid-resistant protective clothing

Respiratory protection

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded and engineering controls are not feasible, wear a supplied air, full face piece respirator, air-lined hood, or full face piece self-contained breathing apparatus. Breathing air quality must meet the requirements of the OSHA respiratory protection standard (29CFR1910.134). Nitric Acid is an oxidizer and should not come in contact with cartridges and canisters that contain oxidizable materials, such as activated charcoal. Canister-type respirators using sorbents are ineffective.

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 solution.
Odor	Suffocating, acrid.
Odor Thresh	Not determined.
pH	0.1 (1.0N solution)
Melting Point/Range	ca. -3C (ca. 27F)
Boiling Point/Range	ca. lOIC (ca. 214F)
Flash Point	Not applicable.
Evaporation Rate	No information found.
Flammability (solid, gas)	Not flammable.
Flammability or explosive limit	
Upper	: NA
Lower	: NA
Vapor Pressure	48 @20C (68F)
Vapor Density	2-3
Density	1.419 g/cc for 69 - 70% Nitric Acid solution
Solubility	Infinitely soluble
Partition coefficient; n-octanol/water	Not available.
Autoignition Temp	Not available.
Decomposition Temp	Not available.
Viscosity	2.0 cPs
Molecular Formula	HNO3
Molecular Weight	63.013
VOC Content(%)	Not available.
Oxidizing properties	Not available.

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under ordinary conditions of use and storage.

10.2 Chemical stability

Stable under ordinary conditions of use and storage.

10.3 Possibility of hazardous reactions

Heat and incompatibilities.

10.4 Conditions to avoid

Heat and incompatibilities.

10.5 Incompatible materials

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

10.6 Hazardous decomposition products

When heated to decomposition, emits toxic Nitrogen oxides fumes and Hydrogen Nitrate.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute Toxicity

For Nitric Acid:

Oral (human) LDLo: 430 mg/kg
Inhalation,rat, LCS0: 67 ppm (NO_2)/4H Investigated as a mutagen, reproductive effecter.

Skin corrosion/irritation

Corrosive! Can cause redness, pain, and severe burns.

Serious eye damage/eye irritation

Corrosive! Vapors are irritating and may cause severe damage to the eyes. Splashes may cause severe burns and permanent eye damage.

Respiratory or skin sensitization

Corrosive! 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 data available.

Carcinogenicity

Ingredient	Known	Anticipated	IARC Category
Nitric Acid (7697-37-2)	No	No	None
Water (7732-18-5)	No	No	None

Reproductive toxicity

No data available.

Specific target organ toxicity - single exposure

No data available.

Specific target organ toxicity - repeated exposure

No data available.

Aspiration hazard

No data available.

Chronic effects

Long-term exposure to concentrated vapors may cause erosion of teeth. Long-term exposures seldom occur due to the corrosive properties of the acid.

11.2 Additional information

None.

SECTION 12. Ecological information

12.1 Toxicity

Ecotoxicity: The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms. LC50 - Asterias rubens - 100 - 330 mg/l - 48 h.

12.2 Persistence and Degradability

No data available.

12.3 Bioaccumulative Potential

No bioaccumulation expected.

12.4 Mobility in Soil

No data available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

SECTION 13. Disposal considerations

13.1 Waste Disposal Methods

Neutralize with soda ash/slaked lime and discharge to sewer. with lots of water. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste, Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations. Hazardous waste code D001: Waste Flammable material with a flash point <140 F D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel] Waste from residues/unused products. Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

SECTION 14: Transport information

DOT
UN2031
NITRIC ACID, other than red fuming, with at least 65% but not more than 70%, Nitric Acid
8
II

IATA
UN2031
NITRIC ACID, other than red fuming, with at least 65% but not more than 70%, Nitric Acid
8
II

IMDG
UN2031
NITRIC ACID, other than red fuming, with at least 65% but not more than 70%, Nitric Acid
8
II

Land Transport ADRiRID and GGVS/GGVE (Cross Border / Domestic) Transport Hazard Class(es): 8, 5.1

Maritime Transport IMDG/GGVSea
Transport Hazard Class(es): 8, 5,1
Marine Pollutant: No

Air Transport ICAO-TI and IATA-DGR
Transport Hazard Class(es): 8, 5,1

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Special Precautions for User: No additional information

SECTION 15: Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List. TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not on regulatory list.
CERCLA Hazardous Subst_ance List (40 CFR 302.4)
NITRIC ACID (CAS 7697-37-2) LISTED
Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories Immediate Hazard - Yes Delayed
Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No
SARA 302 Extremely hazardous substance
No
SARA 311/312 Hazardous chemical
No
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)
NITRIC ACID (CAS 7697-37-2)
Safe Drinking Water Act (SDWA)
Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) ...

Not regulated.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

Food and Drug Administration (FDA)

Not regulated.

US state regulations California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US. Massachusetts RTK - Substance List

NITRIC ACID (CAS 7697-37-2)

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

NITRIC ACID (CAS 7697-37-2) 500 LBS

US, Pennsylvania RTK - Hazardous Substances

NITRIC ACID (CAS 7697-37-2)

US. Rhode Island RTK

NITRIC ACID (CAS 7697-37-2)

US • California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

***A "Yes" indicates this product complies with the inventory requirements administered by-the governing country(s).**

SECTION 16: Other information

Issue Date	08/01/2014
Revision Date	09/21/2023

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.