

SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Nitric Acid, 5% in Denatured Ethanol
CAS number	7697-37-2
Synonyms	Hydrogen nitrate, Aqua fortis, Azotic acid

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

Identified uses	General Laboratory reagent
-----------------	----------------------------

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)

Acute Toxicity -Inhalation	Category 3
Skin Corrosion/ Irritation	Category 1
Eye Damage / Irritation	Category 2
Reproductive Toxicity	Category 1
Specific Target Organs/Systemic Toxicity Following Single Exposure	Category 2
Flammable Liquids	Category 2
Hazardous to the Aquatic Environment (Acute)	Category 3

2.2 GHS Label elements, including precautionary statements

Pictogram	#VALUE!
Signal Word	Danger
Hazard statements	Highly flammable liquid and vapor. Causes severe skin burns and eye damage. Cause serious eye irritation. Toxic if inhaled. May damage fertility or the unborn child. May cause damage to organs. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.
Precautionary Statements:	Obtain speical instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Ground container tightly closed. Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe fumes, mist, vapors, or spray. Avoid breathing fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lense, if present and easy to do. Continue rinsing. IF exposed or concerned: Call a POISON CENTER or physician. IF exposed or concerned: Get medical attention. Immediately call a POISON CENTER or physician. Specific treatment (wash areas of contact with water immediately). If eye irritation persists: Get medical attention. Wash contaminated clothing before reuse. In case of fire: Use dry chemical, foam or carbon dioxide to extinguish. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

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

Data not available.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Ethyl Alcohol	CH ₃ CH ₂ OH	64-17-5	91.87
Methyl Alcohol	CH ₃ OH	67-56-1	4.59
Nitric Acid	HNO ₃ , Aqua fortis	7697-37-2	2.47
Water	H ₂ O	7732-18-5	1.06

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
In case of skin contact	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Results in drying and cracking which can lead to secondary infections and dermatitis. Dermal absorption causes many of the symptoms of inhalation.
In case of eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva.
If swallowed	IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Dilute with water or milk. Vomiting may occur spontaneously but do not induce. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage. Causes serious eye irritation. Toxic if inhaled. May damage fertility or the unborn child. May cause damage to organs. Flammable liquid. Mildly corrosive. Primarily toxic by ingestion. If ingested, give large quantity of water. Vomiting may occur spontaneously. Do not induce vomiting. Call a physician. Contact may cause dryness and cracking of the skin. May cause irritation to the eyes. Wash areas of contact with plenty of water. May cause irritation of the respiratory system. EYE CONTACT: May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva. SKIN CONTACT: Results in drying and cracking which can lead to secondary infections and dermatitis. Dermal absorption causes many of the symptoms of inhalation.

4.3 Indication of any immediate medical attention and special treatment needed

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately)

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

In case of fire: Use dry chemical, foam or carbon dioxide to extinguish. Use water spray, dry chemical, alcohol foam, or carbon dioxide for extinguishing the surrounding fire. Water spray can be used to dilute spills to non-flammable mixtures.

Unsuitable extinguishing media

No information available.

5.2 Specific hazards arising from the substance or mixture

Highly flammable liquid and vapor. Vapors can flow along surfaces to distant ignition source and flashback. Use water spray to blanket fire, cool fire exposed containers, and to flush non-ignited spills or vapors away from fire.

5.3 Special protective equipment and precautions for firefighters

Wear full protective clothing and NIOSH-approved self-contained breathing apparatus and full facepiece operated in the pressure demand or other positive pressure mode.

5.4 Further information

Flash Point

12.5 °C

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
1	3	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static-discharge. Wear protective gloves and eye protection.

6.2 Environmental precautions

No information available.

6.3 Methods and materials for containment and cleaning up

Remove all sources of ignition. Contain spill. Do not flush to sewer. Absorb with suitable inert material (vermiculite, dry sand, etc) and place in a chemical waste container for proper disposal in an approved waste disposal facility. Ventilate area of spill. Have extinguishing agent available in case of fire. Use non-sparking tools and equipment. Dispose of in accordance with local regulations.

6.4 Reference to other sections

See section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Store locked up. As with all chemical, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

Hygiene measures

No information available.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store in secure, flammable storage area away from all sources of ignition. Empty containers may be hazardous since they retain product residues.

Incompatibilities

No information available.

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	
Ethyl Alcohol	TWA	1000 ppm	1900 mg/m ³
Methyl Alcohol	TWA	200 ppm	260 mg/m ³
Nitric Acid	TWA	2 ppm	5 mg/m ³

US. ACGIH Threshold Limit Values

Component	Type	Value
Ethyl Alcohol	STEL	1000 ppm
Methyl Alcohol	STEL	250 ppm
Methyl Alcohol	TWA	200 ppm
Nitric Acid	STEL	4 ppm
Nitric Acid	TWA	2 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

No information available.

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**

Wear protective gloves and eye protection. Safety glasses or goggles.

Skin and body protection

Wear protective gloves and eye protection. Chemical resistant gloves.

Respiratory protection

Normal room ventilation is adequate. If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn.

Control of environmental exposure

No information available.

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

Physical State	Liquid
Appearance	Colorless liquid
Odor	Alcohol
Odor Threshold	Data not available.
pH	<2
Melting Point/Range	Data not available.
Boiling Point/Range	Approximately 76 °C
Evaporation Rate	Data not available.
Flammability (solid)	Data not available.
Flammability or explosive limit	
Upper	Data not available
Lower	Data not available
Vapor Pressure	Data not available
Vapor Density	Data not available

Density	0.8
Solubility	Data not available
Partition coefficient; n-octanol/water	Data not available
Autoignition Temp	Data not available
Decomposition Temp	Data not available
Viscosity	Data not available
Molecular Formula	C9H7NO
Molecular Weight	145.16
VOC Content(%)	Data not available
Oxidizing properties	Data not available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under normal conditions of use and storage.

10.2 Chemical stability

No information available.

10.3 Possibility of hazardous reactions

Data not available.

10.4 Conditions to avoid

Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Oxidizer, strong bases, Platinum, Sodium, Potassium Dioxide, Bromine Pentafluoride, Acetyl Chloride.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

Will not occur.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LDLo Oral	LD50 Dermal	LD50 Inhalation
Methyl Alcohol	5628 mg/kg (rat)	-	-	-
Ethyl Alcohol	7060 mg/kg (rat)	-	-	-
Nitric Acid	-	430 mg/kg (Human)	-	-

Skin corrosion/irritation

Cause sever skin burns and eye damage. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all cotaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POSION CENTER or physician. Specific lenses, if present and easy to do. Continue rinsing. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Serious eye damage/eye irritation

Cause serious eye irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irriation persists: Get medical attention.

Respiratory or skin sensitization

Not applicable.

Germ cell mutagenicity

Not applicable.

Carcinogenicity

Not applicable.

Specific target organ toxicity - single exposure

May cause damage to organs. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed or concerned: Call a POISON CENTER or physician. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific target organ toxicity - repeated exposure

No information available.

Reproductive toxicity

May damage fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or conerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Chronic effects

No information available.

11.2 Additional Information

No information available.

SECTION 12: Ecological information

12.1 Toxicity

Harmful to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations. Harmful to aquatic life with long lasting effects. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

12.2 Persistence and degradability

Data not available.

12.3 Bio accumulative potential

Data not available.

12.4 Mobility in soil

Data not available.

12.5 Results of PBT and vPvB assessment

Data not available.

12.6 Endocrine disrupting properties

Data not available.

12.7 Other adverse effects

Data not 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	UN1987
Proper Shipping Name	ALCOHOLS, N.O.S (Ethanol, Methanol)
Hazard Class	3
Packing Group	II

IMDG

UN-No	UN1987
-------	--------

Proper Shipping Name ALCOHOLS, N.O.S (Ethanol, Methanol)
Hazard Class 3
Packing Group II

IATA

UN-No UN1987
Proper Shipping Name ALCOHOLS, N.O.S (Ethanol, Methanol)
Hazard Class 3
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)

Listed: (Ethyl Alcohol (64-17-5))
(Methyl Alcohol (67-56-1))
(Nitric Acid (7697-37-2))
(Water (7732-18-5))

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed

SARA 304 Emergency release notification

Not regulated

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 (7697-37-2): 1000lb EPCRA RQ)
(Nitric Acid (7697-37-2): 1000lb TPQ)

SARA 311/312 Hazardous

Listed: (Methyl Alcohol (67-56-1): 5000 lb final RQ; 2270 kg final RQ)
(Nitric Acid (7697-37-2): 1000 lb final RQ; 454 kg final RQ)

SARA 313 (TRI reporting)

Listed: (Methyl Alcohol (67-56-1): 1.0% de minimis concentration)
(Nitric Acid (7697-37-2): 1.0% de minimis concentration)

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.

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: (Ethyl Alcohol (64-17-5))
(Methyl Alcohol (67-56-1))
(Nitric Acid (7697-37-2))
(Water (7732-18-5))

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

Listed: (Ethyl Alcohol (64-17-5))
(Methyl Alcohol (67-56-1))
(Nitric Acid (7697-37-2))
(Water (7732-18-5))

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

Listed: (Ethyl Alcohol (64-17-5))
(Methyl Alcohol (67-56-1))
(Nitric Acid (7697-37-2))
(Water (7732-18-5))

California Proposition 65

Listed: (Ethyl Alcohol (64-17-5))
(Methyl Alcohol (67-56-1))
(Nitric Acid (7697-37-2))
(Water (7732-18-5))

SECTION 16: Other information

Issue date: 07/17/2024

Revision: 0

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.