

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	See Section 3
Synonyms	N/A

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

Identified uses	General Laboratory Reagent.
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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
Flammable Liquids	Category 2
Skin Corrosion / Irritation	Category 1
Eye Damage / Irritation	Category 1
Reproductive Toxicity	Category 1
Specific Target Organ Toxicity (single exposure)	Category 2

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

May be corrosive to metals.
Highly flammable liquid and vapor.
Causes severe skin burns and eye damage.
Causes serious eye damage.
May damage fertility or the unborn child.
May cause damage to organs.

Precautionary statements

Prevention: Obtain special 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. Keep only in original container. 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. Wash arms, hands, and face thoroughly after handling. Do not eat, drink, or smoke when using this product. Wear protective gloves and eye protection.

Response: IF exposed, immediately call a POISON CENTER or physician. Get medical attention. Specific treatment (Wash areas of contact with water immediately).

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse.

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.

Fire: In case of fire, use dry chemical, foam, or Carbon dioxide to extinguish.

Spills: Absorb spillage to prevent material damage.

Storage: Store in a well-ventilated place. Keep cool. Store locked up. Store in corrosive resistant container with a resistant inner liner.

Disposal: 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
Ethanol	Ethyl alcohol; EtOH	64-17-5	87.04%
Nitric acid	Hydrogen nitrate; Aqua fortis	7697-37-2	6.03%
Methanol	Methyl alcohol; MeOH	67-56-1	4.35%
Water	Aqua; H ₂ O	7732-18-5	2.58%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled Remove person to fresh air and keep comfortable for breathing.

In case of skin contact 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 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 Rinse mouth. Do NOT induce vomiting. Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage. Causes serious eye damage. May damage fertility or the unborn child. May cause damage to organs. Flammable liquid. Primarily toxic by ingestion. If ingested, give large quantity of water and 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 water. May cause irritation of the respiratory system. Mildly corrosive. 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). Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops. Dilute immediately with water or milk. Induce vomiting. Call a physician.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media 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. Moderate explosion hazard and dangerous fire hazard when exposed to heat, sparks, and open flames. Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Sensitive to static discharge.

5.3 Special protective equipment and precautions for firefighters

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

5.4 Further information

Flash Point Approximately 23.5°C

Autoignition Temperature No data 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	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

Do not flush to sewer.

6.3 Methods and materials for containment and cleaning up

Remove all sources of ignition. 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

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store in corrosive resistant container with a resistant inner liner. Protect from freezing and physical damage. Store in secure, flammable storage area away from all sources of ignition. Empty containers may be hazardous since they retain product residues.

Incompatibilities

Oxidizers, strong bases, metallic powders, platinum, Sodium, Potassium Dioxide, Bromine Pentafluoride, Acetyl Bromide, Acetyl Chloride, heat, sparks, open flame.

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	
Ethanol	TWA	1000 ppm	1900 mg/m ³
Methanol	TWA	200 ppm	260 mg/m ³

Nitric acid	TWA	2 ppm	5 mg/m ³
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US. ACGIH Threshold Limit Values

Component	Type	Value
Ethanol	STEL	1000 ppm
Methanol	STEL	250 ppm
	TWA	200 ppm
Nitric acid	STEL	4 ppm
	TWA	2 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Ethanol	IDLH	3300 ppm
	TWA	1000 ppm 1900 mg/m ³
Methanol	IDLH	6000 ppm
	TWA	200 ppm 260 mg/m ³
	STEL	250 ppm 325 mg/m ³
Nitric acid	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

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 eye protection. Safety glasses or goggles.

Skin protection

Wear protective gloves. Chemical resistant gloves.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

Work with adequate ventilation or wear respirator with acid gas/organic vapor cartridge.

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
Odor	Data not available
Odor Threshold	Data not available
pH	<1
Melting Point/Range	Data not available
Boiling Point/Range	Approximately 82°C
Evaporation Rate	Data not available
Flammability (solid)	Data not available
Flammability or explosive limit	Data not available
Upper	
Lower	
Vapor Pressure	Data not available
Vapor Density	Data not available
Density	0.84
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	N/A
Molecular Weight	N/A
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

No information available.

10.2 Chemical stability

Stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions

No information available.

10.4 Conditions to avoid

Keep away from heat, sparks, and open flame. No smoking. Keep container tightly closed. Keep only in original container. Incompatible materials.

10.5 Incompatible materials

Oxidizers, strong bases, metallic powders, platinum, Sodium, Potassium Dioxide, Bromine Pentafluoride, Acetyl Bromide, Acetyl Chloride.

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	LD50 Dermal	LC50 Inhalation
Ethanol	10470 mg/kg (Rat)	-	117-125 mg/L (Rat) 4h
Methanol	1187-2769 mg/kg (Rat)	17100 mg/kg (Rabbit)	128.2 mg/L (Rat) 4h
Nitric acid	-	-	2500 ppm (Rat) 1h

Skin corrosion/irritation

Causes severe skin burns.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Not applicable.

Germ cell mutagenicity

Not applicable.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Ethanol	64-17-5	Not listed	Known	A3	Not listed	A3
Methanol	67-56-1	Not listed	Not listed	Not listed	Not listed	Not listed
Nitric acid	7697-37-2	Not listed	Not listed	Not listed	Not listed	Not listed
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

May cause damage to organs.

Specific target organ toxicity - repeated exposure

Not applicable.

Reproductive toxicity

May damage fertility or the unborn child.

Chronic effects

No information available.

11.2 Additional Information

The toxicological properties have not been fully investigated.

SECTION 12: Ecological information**12.1 Toxicity**

Not applicable.

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

UN2924

Proper Shipping Name

Flammable liquid, corrosive, n.o.s. (Ethanol, Nitric Acid)

Hazard Class

3 (8)

Packing Group II

IMDG

UN-No UN2924
Proper Shipping Name Flammable liquid, corrosive, n.o.s. (Ethanol, Nitric Acid)
Hazard Class 3 (8)
Packing Group II

IATA

UN-No UN2924
Proper Shipping Name Flammable liquid, corrosive, n.o.s. (Ethanol, Nitric Acid)
Hazard Class 3 (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, Methanol (CAS # 67-56-1), RQ: 5000 lb.
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), TPQ: 1000 lb.

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

SARA 313 (TRI reporting)
Listed, Methanol (CAS # 67-56-1).
Listed, Nitric acid (CAS # 7697-37-2).

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Listed, Methanol (CAS # 67-56-1).

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

Listed, Ethanol (CAS # 64-17-5).

US state regulations

US. Massachusetts RTK - Substance List

Listed, Ethanol (CAS # 64-17-5).

Listed, Methanol (CAS # 67-56-1).

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

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

Listed, Ethanol (CAS # 64-17-5).

Listed, Methanol (CAS # 67-56-1).

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

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

Listed, Ethanol (CAS # 64-17-5).

Listed, Methanol (CAS # 67-56-1).

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

California Proposition 65

Listed, Ethanol (CAS # 64-17-5).

Listed, Methanol (CAS # 67-56-1).

SECTION 16: Other information

Issue date: 07/17/2024

Revision 1: 01/23/2025

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.