SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Nital Etch, 3% (v/v) Nitric Acid in Methanol
CAS number	See section 3
Synonyms	3% Nitric Acid in Methanol

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)

Acute Toxicity - Oral Category 3
Acute Toxicity - Dermal Category 3
Acute Toxicity - Inhalation Category 2
Skin Corrosion / Irritation Category 1
Eye Damage / Irritation Category 1
Reproductive Toxicity Category 1
Specific Target Organs/Systemic Toxicity Following Single Exposure Category 1
Specific Target Organs/Systemic Toxicity Following Repeated Exposure Category 1
Flammable Liquids Category 2
Corrosive to Metals Category 1

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word: Danger

Hazard statements:
H225 Highly flammable liquid and vapor.
H290 May be corrosive to metals.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H360 May damage fertility or the unborn child.
H370 Causes damage to organs.
H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary statements	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P210 Keep away from heat, sparks and open flame. No smoking. P233 Keep container tightly closed. P234 Keep only in original container. P240 Ground container and receiving equipment. P241 Use explosion-proof equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P260 Do not breathe dust, fumes or mist. P264 Wash arms, hands and face thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves and eye protection. P285 In case of inadequate ventilation wear respiratory protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or physician. P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P307+P311 IF exposed: Call a POISON CENTER or physician. P308+P313 IF exposed or concerned: Get medical attention. P310 Immediately call a POISON CENTER or physician. P312 Call a POISON CENTER or physician if you feel unwell. P314 Get medical attention if you feel unwell. P320 Specific treatment is urgent (Wash areas of contact with water immediately). P321 Specific treatment (Wash areas of contact with water immediately). P330 Rinse mouth. P361 Take off immediately all contaminated clothing and wash it before reuse. P363 Wash contaminated clothing before reuse. P390 Absorb spillage to prevent material damage. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P406 Store in corrosive resistant container with a resistant inner liner. P501 Dispose of contents in accordance with local, state, federal and international regulations.

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
Methyl Alcohol	-	67-56-1	94.43%
Nitric Acid	-	7697-37-2	3.90%
Water	-	7732-18-5	1.67%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice Show this sheet to a doctor if medical advice is needed.

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. Eye contact causes tissue damage and blindness.

If swallowed rinse mouth. Do NOT induce vomiting. Do not induce vomiting. Give large quantity of water. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Flammable and Corrosive liquid. Keep away from heat, sparks, and open flames. Keep container closed. Use with adequate ventilation. Avoid prolonged breathing of vapor or contact with skin. Do not pipet by mouth. If ingested, vomiting may occur spontaneously but do not induce. Dilute with large quantity of water and call a physician. Wash areas of contact with plenty of water for 15 minutes. For eyes, get medical attention. EYE CONTACT: Eye contact causes tissue damage and blindness. 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 is urgent (Wash areas of contact with water immediately).

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Dry chemical, foam, or carbon dioxide.

Unsuitable extinguishing media Reacts with water producing heat and toxic fumes.

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. Sensitive to static discharge. Contact with most metals causes formation of flammable and explosive hydrogen gas.

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 16°C.

Autoignition Temperature No data available.

Explosion limits

Upper No data available.

Lower No data available.

Sensitivity to Mechanical Impact No data available.

Sensitivity to Static Discharge No data 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. In case of inadequate ventilation wear respiratory protection.

6.2 Environmental precautions

Do not allow product to enter the environment.

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

Refer to protective measures listed in Sections 7 and 8. See section 13 for proper disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Do not mix with bases. Empty containers may be hazardous since they retain product residues.

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. Do not mix with bases. Store in secure, flammable storage area away from all sources of ignition.

Incompatibilities

Strong oxidizers, strong bases, most metals, heat, sparks, open flame. Will attack some forms of plastics, rubber and coatings. May react with metallic aluminum and generate hydrogen gas.

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
Methyl Alcohol	TWA	200 ppm 260 mg/m³
Nitric Acid	TWA	2 ppm 5 mg/m³

US. ACGIH Threshold Limit Values

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

US. NIOSH: Pocket Guide to Chemical Hazards

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

Biological occupational exposure limits

No additional information.

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 protection

Wear protective gloves and eye protection. Chemical resistant gloves.

Body Protection

Appropriate protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved atmosphere supplied respirator must be worn.

Control of environmental exposure

Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Alcoholic
Odor Threshold	No data available
pH	< 1
Melting Point/Range	No data available
Boiling Point/Range	Approximately 71°C - Approximately 71°C
Evaporation Rate	No data available
Flammability (solid)	No data available
Flammability or explosive limit	
Upper	No data available
Lower	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Density	0.81

Solubility	Miscible
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No data available
Decomposition Temp	No data available
Viscosity	No data available
Molecular Formula	Mixture
Molecular Weight	Mixture
VOC Content(%)	No data available
Oxidizing properties	No data 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

Stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions

Will not occur.

10.4 Conditions to avoid

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

10.5 Incompatible materials

Strong oxidizers, strong bases, most metals, heat, sparks, open flame. Will attack some forms of plastics, rubber and coatings. May react with metallic aluminum and generate hydrogen gas.

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
Methanol	Rat: 5628 mg/kg	-	-
Nitric Acid	Human: 430 mg/kg	-	-

Skin corrosion/irritation

Causes severe skin burns. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection.

Serious eye damage/eye irritation

Causes serious eye damage. Wear protective gloves and eye protection.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Specific target organ toxicity - single exposure

Causes damage to organs. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

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 concerned: 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

No information available.

12.2 Persistence and degradability

No information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

No information available.

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	UN2924
Proper Shipping name	Flammable liquid, corrosive, n.o.s.
Hazard Class	3 (8)
Packaging Group	II
Technical name	Methanol, Nitric Acid

IMDG

UN Number	UN2924
Proper Shipping name	Flammable liquid, corrosive, n.o.s.

Hazard Class	3 (8)
Packaging Group	II
Technical name	Methanol, Nitric Acid

IATA

UN Number	UN2924
Proper Shipping name	Flammable liquid, corrosive, n.o.s.
Hazard Class	3 (8)
Packaging Group	II
Technical name	Methanol, Nitric Acid

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)

Methyl Alcohol (CAS # 67-56-1): 5,000 lb RQ

SARA 304 Emergency release notification

Nitric Acid (CAS # 7697-37-2): 1,000 lb RQ

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Nitric Acid (CAS # 7697-37-2): 1000 lb TPQ

SARA 311/312 Hazardous

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

SARA 313 (TRI reporting)

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

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not listed/applicable.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not listed.

Safe Drinking Water Act

Nitric Acid (CAS # 7697-37-2): 1,000,000 lb RQ

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Methyl Alcohol (CAS # 67-56-1): Present
Nitric Acid (CAS # 7697-37-2): Extraordinarily hazardous

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

Methyl Alcohol (CAS # 67-56-1): flammable - third degree; teratogen
Methyl Alcohol (CAS # 67-56-1): SN 1222 500 lb TPQ
Nitric Acid (CAS # 7697-37-2): corrosive; reactive - second degree
Nitric Acid (CAS # 7697-37-2): SN 1356 500 lb TPQ
Nitric Acid (CAS # 7697-37-2): SN 3722 500 lb TPQ (water dissociable, Category Code N511)

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

Methyl Alcohol (CAS # 67-56-1): Environmental hazard
Nitric Acid (CAS # 7697-37-2): Environmental hazard
Water (CAS # 7732-18-5): Present

California Proposition 65

Methyl Alcohol (CAS # 67-56-1): developmental toxicity, 3/16/2012

SECTION 16: Other information

Date of Issue: 6/16/2025

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.