



SAFETY DATA SHEET

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

1.1 Product identifiers

Product name Hydrochloric Acid 5% Solution In Denatured Alcohol

CAS number See Section 3.

Synonyms N/A

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 4)

Acute Toxicity - Inhalation (Category 4)

Skin Corrosion/Irritation (Category 1A)

Eye damage/Irritation (Category 1)
Respiratory Sensitizer (Category 1)
Germ Cell Mutagenicity (Category 1)
Reproductive Toxicity (Category 1)
STO - single exposure (Category 1)
STO - repeated exposure (Category 1)
Flammable Liquids (Category 2)
Corrosive to Metals (Category 1)
Hazardous to Aquatic Environment (Category 2)

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	Highly flammable liquid and vapor. May be corrosive to metals. Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. Harmful if inhaled. May cause genetic defects. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Toxic to aquatic life.

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 fumes, mist, vapors, or spray.
P261 Avoid breathing fumes, mist, vapors, or spray.
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.
P273 Avoid release to the environment.
P280 Wear protective gloves and eye protection.
P285 In case of inadequate ventilation wear respiratory protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
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.
P304+P341 IF INHALED: If breathing is difficult, 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.
P321 Specific treatment (Wash areas of contact with water).
P330 Rinse mouth.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or physician.
P363 Wash contaminated clothing before reuse.
P370+P378 In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.
P390 Absorb spillage to prevent material damage.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
Store in corrosive resistant container with a resistant inner liner.
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
Ethyl alcohol	-	64-17-5	88.29
Water	Aqua; H ₂ O	7732-18-5	4.60
Methyl alcohol	-	67-56-1	4.41
Hydrochloric acid	HCl	7647-01-0	2.70

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	IF INHALED: If breathing is difficult, 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 immediately with water or milk. Induce vomiting. Call a physician

4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause genetic defects. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Flammable liquid. Primarily toxic by ingestion. If ingested, give large quantity of water. Vomiting may occur spontaneously. Do not induce. 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. 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).

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 with full facepiece operated in the pressure demand or other positive pressure mode

5.4 Further information

Flash Point

No information available

Autoignition Temperature

No information available

Explosion limits

Upper No information available

Lower No information 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. In case of inadequate ventilation wear respiratory protection.

6.2 Environmental precautions

Take precautionary measures against static discharge

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

No information available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Store in corrosive resistant container with a resistant inner liner. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. 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.

Hygiene measures

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

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Protect from freezing and physical damage. Store in secure, flammable storage area away from all sources of ignition.

Incompatibilities

Store in secure, flammable storage area away from all sources of ignition.

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 TWA; 1900 mg/m ³ TWA
Methyl alcohol	TWA	200 ppm TWA; 260 mg/m ³
Hydrochloric acid	PEL-Ceiling	5 ppm Ceiling; 7 mg/m ³ Ceiling

US. ACGIH Threshold Limit Values

Component	Type	Value
Ethyl alcohol	TLV-STEL	1000 ppm STEL
Methyl alcohol	TLV-STEL	250 ppm STEL
	TLV-TWA	200 ppm TWA
Hydrochloric acid	TLV-Ceiling	2 ppm Ceiling

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 protection

Wear protective gloves and eye protection. Chemical resistant gloves.

Body Protection

Wear protective gloves and eye protection. Chemical resistant gloves.

Respiratory protection

In case of inadequate ventilation wear 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

In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate. If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn. Chemical resistant gloves. Safety glasses or goggles.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	No information available
Odor Threshold	No information available
pH	<1
Melting Point/Range	Approximately 82°C - Approximately 82°C
Boiling Point/Range	Approximately 23.5°C

Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	No information available
Upper	No information available
Lower	No information available
Vapor Pressure	No information available
Vapor Density	No information available
Density	0.8
Solubility	Miscible
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	No information available
Molecular Weight	No information available
VOC Content(%)	No information available
Oxidizing properties	No information 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

Data not available.

10.3 Possibility of hazardous reactions

Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Keep only in original container. Oxidizers, platinum, Sodium, Potassium Dioxide, Bromine Pentafluoride, Acetyl Bromide, Acetyl Chloride, heat, sparks, open flame.

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

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

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
Methanol	5628 mg/kg
Hydrochloric acid	900 mg/kg
Ethanol	7060 mg/kg

Harmful if inhaled. Avoid breathing fumes, mist, vapors, or spray. Use only outdoors or in a well-ventilated area. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

Harmful if swallowed. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. Dispose of contents in accordance with local, state, federal and international regulations

Skin corrosion/irritation

Causes severe 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 contaminated 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 POISON CENTER or physician. Specific treatment (Wash areas of contact with water). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact 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

Causes serious eye damage. 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. Immediately call a POISON CENTER or physician.

Respiratory or skin sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Avoid breathing fumes, mist, vapors, or spray. In case of inadequate ventilation wear respiratory protection. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Dispose of contents in accordance with local, state, federal and international regulations.

Germ cell mutagenicity

May cause genetic defects. 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.

Carcinogenicity

Not applicable

Specific target organ toxicity - single exposure

Causes 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: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water). 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 fumes, mist, vapors, or spray. 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**

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

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. (Ethanol, Hydrochloric Acid)
Hazard Class	3
Packaging Group	II

IMDG

UN Number	UN2924
Proper Shipping name	Flammable Liquid, Corrosive, n.o.s. (Ethanol, Hydrochloric Acid)
Hazard Class	3
Packaging Group	II

IATA

UN Number	UN2924
Proper Shipping name	Flammable Liquid, Corrosive, n.o.s. (Ethanol, Hydrochloric Acid)
Hazard Class	3
Packaging Group	II

SECTION 15: Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Ethyl Alcohol (CAS # 64-17-5): Present
Methyl Alcohol (CAS # 67-56-1): Present
Hydrochloric Acid (CAS # 7647-01-0): Present [T]
Water (CAS # 7732-18-5): Present

CERCLA Hazardous Substance List (40 CFR 302.4)

Methyl Alcohol (CAS# 67-56-1)
Hydrochloric Acid (CAS # 7647-01-0)

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Hydrochloric Acid (CAS # 7647-01-0): 500 lb TPQ (gas only)
Hydrochloric Acid (CAS # 7647-01-0): 5000 lb EPCRA RQ (gas only)

SARA 311/312 Hazardous

Methyl Alcohol (CAS # 67-56-1): 5000 lb final RQ; 2270 kg final RQ
Hydrochloric Acid (CAS # 7647-01-0): 5000 lb final RQ; 2270 kg final RQ

SARA 313 (TRI reporting)

Methyl Alcohol (CAS # 67-56-1): 1.0 % de minimis concentration
Hydrochloric Acid (CAS # 7647-01-0): 1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

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.

Clean Water Act

Hydrochloric Acid (CAS # 7647-01-0)

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

Ethyl Alcohol (CAS 64-17-5)

US state regulations

US. Massachusetts RTK - Substance List

Ethyl Alcohol (CAS # 64-17-5): Teratogen
Methyl Alcohol (CAS # 67-56-1): Present
Hydrochloric Acid (CAS # 7647-01-0): Extraordinarily hazardous

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

Ethyl Alcohol (CAS # 64-17-5): carcinogen; flammable - third degree; mutagen; teratogen
Ethyl Alcohol (CAS # 64-17-5): sn 0844
Methyl Alcohol (CAS # 67-56-1): flammable - third degree; teratogen
Methyl Alcohol (CAS # 67-56-1): sn 1222
Methyl Alcohol (CAS # 67-56-1): SN 1222 500 lb TPQ
Hydrochloric Acid (CAS # 7647-01-0): corrosive
Hydrochloric Acid (CAS # 7647-01-0): sn 1012
Hydrochloric Acid (CAS # 7647-01-0): SN 1012 500 lb TPQ ($\geq 37\%$ concentration); SN 2909 500 lb TPQ (Hydrogen chloride gas only)

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

Ethyl Alcohol (CAS # 64-17-5): Present
Methyl Alcohol (CAS # 67-56-1): Environmental hazard
Methyl Alcohol (CAS # 67-56-1): Present
Hydrochloric Acid (CAS # 7647-01-0): Environmental hazard
Hydrochloric Acid (CAS # 7647-01-0): Present
Water (CAS # 7732-18-5): Present

California Proposition 65

Ethyl Alcohol (CAS # 64-17-5): carcinogen, 4/29/2011 (in alcoholic beverages)
Ethyl Alcohol (CAS # 64-17-5): carcinogen, 7/1/1988 (when associated with alcohol abuse)
Ethyl Alcohol (CAS # 64-17-5): developmental toxicity, 10/1/1987 (in alcoholic beverages)
Methyl Alcohol (CAS # 67-56-1): developmental toxicity, 3/16/2012

SECTION 16: Other information

Date of Issue: 6/20/2020
Revision Date: 8/5/2026

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.