SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Ethanol 140 Proof
CAS number	64-17-5
Synonyms	Ethyl alcohol; EtOH

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)

Flammable Liquids	Category 2
Eye Irritation	Category 2A

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	Highly flammable liquid and vapor. Causes serious eye irritation.
Precautionary statements	Prevention: Keep away from heat, open flames, sparks. No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Use explosion-proof electrical, lighting, ventilating equipment. Use only non-sparking tools. Wash hands, forearms, and exposed areas thoroughly after handling. Wear eye protection, protective gloves, protective clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Keep cool. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention. Fire: In case of fire, use CO2, dry chemical, or foam for extinction. Storage:Store locked up. Store in a well-ventilated place. Keep container tightly closed. Disposal: Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

2.3 Hazardsnototherwise 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
Ethanol	Ethyl alcohol; EtOH	64-17-5	68-72%
Water	Aqua; H2O	7732-18-5	28-32%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled Move to fresh air. Call a physician if symptoms develop or persist.

In case of skin contact Take off immediately all contaminated clothing. Rinse skin with water/shower. If irritation is experienced, flush with water. Get medical attention if irritation develops and persists.

In case of eye contact Immediately flush eyes with water for at least 15 minutes while holding. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms persist.

If swallowed Rinse mouth. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

Severe eyeirritation. Symptoms mayinclude stinging,tearing,redness, swelling, and blurred vision. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea, and vomiting.

4.3 Indication of any immediate medical attention and special treatment needed

Noinformation available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Water spray, alcohol-resistant foam, BC-powder, Carbon dioxide (CO2).

Unsuitable extinguishing media Water jet.

5.2 Specific hazards arising from the substance or mixture

Flammable. Risk of ignition. Vapors mayform explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.
Hazardous Combustion Products: Carbon monoxide (CO), Carbon dioxide (CO2).

5.3 Special protective equipment and precautions for firefighters

Incase of fire and/or explosion,do not breathe fumes. Wear self-contained breathing apparatus. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

5.4 Further information

Flash Point 13-17 °C / 55.4 - 62.6 °F

Autoignition Temperature 363°C / 685.4 °F

Explosion limits

Upper 19 vol %

Lower 3.3 vol %

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

Usepersonal protectiveequipment as required. Donot breathevapors, aerosols.Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

6.2 Environmental precautions

Donotletproductenterdrains.Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Incase of aspill, coverdrains. Wipeup with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder. Use of absorbent materials. Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

SeeSection2forfulllistofhazard and precaution statements. For disposal, see Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Donot handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid contact with eyes. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Hygiene measures
Changecontaminated clothing. Wash hands after working with substance. For precautions see Section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Keepcontainer tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Keep in an area equipped with sprinklers. Store away from incompatible materials.

Incompatibilities
Strongoxidizing agents.

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	PEL-TWA	1000 ppm 1900 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
Ethanol	STEL	1000ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Ethanol	IDLH	3300ppm
	TWA	1000 ppm 1900 mg/m3

Biological occupational exposure limits
No information available.

8.2 Exposure controls

Appropriate engineering controls
Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Control ofenvironmentalexposure
Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid Colorless Sweet,
Appearance	Alcohol-like No
Odor	information available No
Odor Threshold	information available
pH	-114°C (-173°F) 172.4-
Melting Point/Range	176°F (78-80 °C) No
Boiling Point/Range	information available
Evaporation Rate	Not applicable
Flammability (solid)	
Flammability or explosive limit	
Upper	19%
Lower	3.30%
Vapor Pressure	59.5 hPa (68 °F (20 °C))
Vapor Density	No information available
Density	0.855-0.973 g/mL at 25 °C
Solubility	Soluble
Partition coefficient; n-octanol/water	No data available 363 °C /
Autoignition Temp	685.4 °F
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	C2H6O
Molecular Weight	46.069 g/mol
VOC Content(%)	Not oxidizing

Oxidizing properties	Not oxidizing

9.2 Other safety information
Noinformation available.

SECTION 10: Stability and reactivity

10.1 Reactivity
Vaporsmayform explosive mixture with air.

10.2Chemical stability
Stableunder normal conditions.

10.3 Possibility of hazardous reactions
Riskofexplosion with oxidizing agents.

10.4 Conditions to avoid
Keepawayfromheat,hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Incompatible products.

10.5 Incompatible materials
Oxidizers.Magnesium,rubber, oils, zinc alloys.

10.6Hazardous decomposition products
Carbonmonoxide (CO), Carbon dioxide(CO2).

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/4h (Rat)

Skincorrosion/irritation
Prolonged skin contact may cause temporary irritation.

Seriouseye damage/eye irritation
Causes serious eye irritation.

Respiratory orskin sensitization
Not classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Not classified as a germ cell mutagenic.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Ethanol	64-17-5	Not listed	Not listed	Not listed	Not listed	Not listed

Specifictarget organ toxicity - single exposure
None known.

Specifictarget organ toxicity - repeated exposure
None known.

Reproductivetoxicity
No information available.

Chroniceffects
Prolonged inhalation may be harmful.

11.2 AdditionalInformation
No information available.

SECTION 12: Ecological information

12.1 Toxicity

Product		Species	Test Results
Ethanol	EC10	Freshwater Algae	11.5 mg/L, 72 hours
	EC50	Freshwater Algae	275 mg/L, 72 hours
	LC50	Freshwater Fish	11200 mg/L, 24 hours
	NOEC	Freshwater Fish	250 mg/L
	EC50	Freshwater Invertebrate	5012 mg/L, 48 hours
		Marine Invertebrate	857 mg/L, 48 hours
	NOEC	Freshwater Invertebrate	9.6 mg/L, 10 days
		Marine Invertebrate	79 mg/L, 96 hours

12.2 Persistenceanddegradability
No information available.

12.3 Bioaccumulativepotential
No information available.

12.4 Mobilityin soil
No information available.

12.5ResultsofPBTandvPvB assessment
No information available.

12.6 Endocrine disrupting properties

Noinformation available.

12.7 Other adverse effects

Noinformation available.

SECTION 13: Disposal considerations

13.1Waste 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	UN1170
Proper Shipping Name	ETHANOL
Hazard Class	3 II
Packing Group	

IMDG

UN-no Proper Shipping Name	UN1170 ETHANOL
Hazard Class Packing Group	3 II

IATA

UN-no	UN1170
Proper Shipping Name	ETHANOL
Hazard Class	3 II
Packing Group	

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 Section12(b)Export Notification (40 CFR 707, Subpt. D)

Not applicable.

CERCLA HazardousSubstance List (40 CFR 302.4)

Not applicable.

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 302Extremelyhazardous substance

Not listed.

SARA 311/312Hazardous

See Section 2 for more information.

SARA 313 (TRI reporting)

Not regulated.

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 DrinkingWaterAct

Not regulated.

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

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

US state regulations

US. MassachusettsRTK - SubstanceList

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

US. New JerseyWorkerandCommunityRight-to-Know Act

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

US. PennsylvaniaWorkerandCommunity Right-to-Know Law

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

CaliforniaProposition65

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

SECTION 16: Other information

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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.