SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Ethanol 200 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 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
Ethanol	Ethyl alcohol; EtOH	64-17-5	90-100%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	If symptoms are experienced, remove source of contamination or move to fresh air. If breathing is difficult, get medical attention.
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. Do NOT induce vomiting. If the material is swallowed, get medical attention or advice.

4.2 Most important symptoms and effects, both acute and delayed

None reasonably foreseeable. 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

No information 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 may form 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

In case of fire and/or explosion, do not breathe fumes. 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 9.7 °C at 1,013 hPa (ECHA)

Autoignition Temperature 455 °C at 1,013 hPa

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

Use personal protective equipment as required. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges. Remove persons to safety. Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface, and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and materials for containment and cleaning up

In case of a spill, cover drains. Wipe up 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

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

Use local and general ventilation. Keep away from sources of ignition. No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues, and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapors are heavier than air, spread along floors and form explosive mixtures with air.

Hygiene measures
Wash hands after use. Do not eat, drink, and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink, and animal feeding stuffs.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Keep containers tightly closed in a dry, cool, and well-ventilated place. Keep away from heat, sparks, and flame. Flammables area.

Incompatibilities
Strong oxidizing 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	1000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

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

Biological occupational exposure limits
No information available.

8.2 Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

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 of environmental exposure
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Pungent
Odor Threshold	No information available
pH	No information available
Melting Point/Range	-97.8 °C
Boiling Point/Range	64.7 °C at 1,013 hPa
Evaporation Rate	9.7 °C at 1,013 hPa
Flammability (solid)	No information available
Flammability or explosive limit	No data available
Upper	
Lower	
Vapor Pressure	169.3 hPa at 25 °C (ECHA)
Vapor Density	No information available
Density	786.4 kg/m3 at 25 °C
Solubility	≥1,000 g/l at 20 °C

Partition coefficient; n-octanol/water	log Kow: -0.77
Autoignition Temp	455 °C at 1,013 hPa
Decomposition Temp	No information available
Viscosity	0.544 – 0.59 mPa s at 25 °C
Molecular Formula	C2H6O
Molecular Weight	46.069 g/mol
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
Reactive. Risk of ignition.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
No known hazardous reactions.

10.4 Conditions to avoid
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
Incompatible products.

10.5 Incompatible materials
Oxidizers.

10.6 Hazardous decomposition products
Carbon monoxide (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)

Skin corrosion/irritation
Not a corrosive/irritant to skin in small amounts.

Serious eye damage/eye irritation
Causes serious eye irritation.

Respiratory or skin 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

Specific target organ toxicity - single exposure
None known.

Specific target organ toxicity - repeated exposure
None known.

Reproductive toxicity
No information available.

Chronic effects
No information available.

11.2 Additional Information
No information available.

SECTION 12: Ecological information

12.1 Toxicity

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

12.2 Persistence and degradability
Biodegradable. Persistence is unlikely based on information available.

12.3 Bio accumulative potential
n-octanol/water (log Kow): -0.77.

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

IMDG

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

IATA

UN-no	UN1170
Proper Shipping Name	ETHANOL
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)

Not applicable.

CERCLA Hazardous Substance 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 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

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 Drinking Water Act

Not regulated.

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).

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

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

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

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

California Proposition 65

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

SECTION 16: Other information

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Revision 2: 07/01/2024
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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.