

SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Bio Ethanol Fuel
CAS number	64-17-5
Synonyms	Ethanol 200 Proof Completely Denatured w/ Rubber Hydrocarbon Solvent; Biofuel Ethanol

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

Identified uses	Use in accordance with manufacturer's recommendations.
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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)

Flammable Liquids	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Reproductive Toxicity	Category 2
Specific Target Organ Toxicity (repeated exposure)	Category 2
Target Organ(s) - Central nervous system	

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

Highly flammable liquid and vapor.
Causes serious eye irritation.
Suspected of damaging fertility or the unborn child.
May cause damage to organs (Nervous system) through prolonged or repeated exposure by inhalation.

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/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Response: If exposed or concerned, get medical advice/attention.

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 appropriate media to extinguish.

Storage: Store in a well-ventilated place. Keep cool. Store locked up.

Disposal: Dispose of contents/container in accordance with local/regional/national/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	>= 98.0%

-	Rubber Hydrocarbon Solvents	-	</= 2.0%
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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. Get medical attention if irritation develops and persists.
In case of eye contact	Immediately flush your eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
If swallowed	Rinse mouth. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

Narcosis. Headache. Behavioral changes. Decrease in motor functions. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing. Prolonged exposure may cause chronic effects.

4.3 Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to the affected area. Call an ambulance. Continue flushing during transport to hospital. Keep the victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use a water jet as an extinguisher, as this will spread the fire.

5.2 Specific hazards arising from the substance or mixture

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. Combustion products may include carbon oxides. Highly flammable liquid and vapor.

5.3 Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Use standard firefighting procedures and consider the hazards of other involved materials.

5.4 Further information

Flash Point 57.2 °F (14.0 °C) Closed Cup

Autoignition Temperature 685.4 °F (363 °C)

Explosion limits

Upper 19 % v/v

Lower 3 % v/v

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

Keep unnecessary personnel away. Keep people away from upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see Section 8 of the SDS.

6.2 Environmental precautions

Avoid discharge into drains, water courses, or onto the ground.

6.3 Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Never return spills to original containers for re-use.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand, or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand, or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements. For disposal, see Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not 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. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Hygiene measures

Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store locked up. 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. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials.

Incompatibilities

See Section 10 of the SDS.

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	1000 ppm 1900 mg/m ³

US. ACGIH Threshold Limit Values

Component	Type	Value
Ethanol	STEL	1000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Ethanol	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**

Chemical goggles are recommended.

Skin protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Body Protection

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Wear appropriate thermal protective clothing, when necessary.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Respirator type: Chemical respirator with 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	No information available
Odor Threshold	No information available
pH	No information available
Melting Point/Range	-173.2 °F (-114 °C)
Boiling Point/Range	176 °F (80 °C)
Evaporation Rate	3
Flammability (solid)	Not applicable
Flammability or explosive limit	
Upper	19 % v/v
Lower	3 % v/v
Vapor Pressure	41.6 mm Hg
Vapor Density	1.6 (air = 1)
Density	6.7 lb/gal (bulk)
Solubility	Completely soluble
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	685.4 °F (363 °C)
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	C ₂ H ₆ O
Molecular Weight	46.068 g/mol
VOC Content(%)	No information available
Oxidizing properties	Not oxidizing

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

The product is stable and non-reactive under normal conditions of use, storage, and transport.

10.2 Chemical stability

Material is stable under normal conditions.

10.3 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

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

Skin corrosion/irritation

Causes mild skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Not a respiratory sensitizer. This product is not expected to cause skin sensitization.

Germ cell mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Ethanol	64-17-5	Not listed	Known	A3	Not listed	A3

Specific target organ toxicity - single exposure

None known.

Specific target organ toxicity - repeated exposure

May cause damage to organs (Nervous system) through prolonged or repeated exposure by inhalation.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Chronic effects

May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

11.2 Additional Information

No information available.

SECTION 12: Ecological information

12.1 Toxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

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 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

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

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	UN1987
Proper Shipping Name	Alcohols, n.o.s.
Hazard Class	3
Packing Group	II

IMDG

UN-no	UN1987
Proper Shipping Name	Alcohols, n.o.s.
Hazard Class	3
Packing Group	II

IATA

UN-no	UN1987
Proper Shipping Name	Alcohols, n.o.s.
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 listed.

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

Issue date: 05/13/2024

Revision 1: 12/30/2024

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.