SAFETY DATA SHEET

Ethyl Alcohol, USP Grade (Undenatured Ethanol)

Revised: 07/01/2026

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Ethyl Alcohol, USP Grade (Undenatured Ethanol)
Synonyms: ethanol
CAS Number: 64-17-5
Grade/Purity: USP Grade, undenatured (MIL-E-51454A)
Product Type: Flammable Solvent (Liquid)
Product Use: Industrial, Manufacturing or Laboratory use
Manufacturer/Supplier: Alliance Chemical, 204 South Edmond St, Taylor, Texas 76574
Information: 512-365-6838 | www.alliancechemical.com
Emergency: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Signal Word: Danger
GHS Pictograms:



Hazard Statements:

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.

Precautionary Statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P242	Use non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves, eye protection and face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes; remove contact lenses if present and easy to do; continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use alcohol-resistant foam, dry chemical, or carbon dioxide to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents and container in accordance with all applicable regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	% MIN	% MAX	CAS #	EINECS# / ELINCS#	FORMULA	MOLECULAR WEIGHT
ethanol	~99.5%	~99.5%	64-17-5	200-578-6	C_2H_6O	46.07 g/mol

4. FIRST-AID MEASURES

Eyes	Immediately flush eyes with plenty of water for at least 15 minutes, holding eyelids open. Remove contact lenses if present and easy to do; continue rinsing. Get medical attention if irritation persists.
Skin	Remove contaminated clothing. Wash affected skin with soap and plenty of water. Get medical attention if irritation develops or persists. Wash clothing before reuse.
Inhalation	Remove person to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if symptoms (headache, drowsiness, dizziness) persist.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention if a large amount is swallowed or symptoms develop.

5. FIRE-FIGHTING MEASURES

Suitable Media	Alcohol-resistant foam, CO2, dry chemical powder. Water spray may be used to cool fire-exposed containers.
Unsuitable Media	Do not use a solid water stream — may scatter and spread fire.
Protective Equipment	Wear self-contained breathing apparatus and full protective clothing.
Combustion Products	May include carbon oxides and other toxic fumes. See Section 10.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental	Prevent leakage or spillage from entering drains, sewers, or waterways.
Containment & Cleanup	Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7. HANDLING AND STORAGE

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area away from heat, sparks, and open flame. Keep away from: Strong oxidizers (nitric acid, hydrogen peroxide, perchlorates), strong acids, alkali metals, acid chlorides, amines, isocyanates. Keep containers tightly closed. Ground and bond containers when transferring material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.

Occupational Exposure Limits:

AGENCY	EXPOSURE LIMIT
OSHA PEL	1000 ppm (1900 mg/m3) TWA
ACGIH TLV	STEL 1000 ppm
NIOSH REL	1000 ppm (1900 mg/m3) TWA
IDLH	3300 ppm (10% LEL)

Eyes	Wear chemical safety goggles or face shield.
Skin	Wear chemical-resistant gloves and protective clothing.
Inhalation	Use a NIOSH-approved respirator with organic vapor cartridges. For confined spaces or exposures above the OEL, use supplied-air respiratory protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid
Odor	Characteristic mild, sweet alcohol odor

Median Particle Size	Not Applicable
Particle Size Distribution	Not Applicable
Particle Shape	Not Applicable
Surface Area	Not Applicable
Dustiness	Not Applicable
Hygroscopicity	Not Applicable
pH	Not applicable (neutral organic solvent)
Melting Point	approx. -114 C
Boiling Point	approx. 78 C
Flash Point	approx. 13 C (closed cup)
Vapor Pressure	approx. 44 mmHg at 20 C
Specific Gravity	0.789 (20 C)
Solubility	Miscible with water
Molecular Formula	C_2H_6O
Molecular Weight	46.07 g/mol

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Hazardous Reactions	Vapours may form explosive mixtures with air; reacts vigorously with strong oxidizers (nitric acid, hydrogen peroxide, perchlorates) with fire/explosion risk; reacts violently with alkali metals liberating hydrogen; can accumulate a static charge on transfer. Vapour is heavier than air and can travel to an ignition source and flash back.
Conditions to Avoid	Heat, sparks, open flame, and incompatible materials.
Incompatible Materials	Strong oxidizers (nitric acid, hydrogen peroxide, perchlorates), strong acids, alkali metals, acid chlorides, amines, isocyanates
Decomposition Products	May produce carbon oxides and other toxic fumes when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: See below for route-specific data.

ROUTE	VALUE
LD50 Oral	7060 mg/kg (rat, oral) - low acute oral toxicity, not GHS-classified for the neat product
LD50 Dermal	>15800 mg/kg (rabbit, dermal) - not classified
LC50 Inhalation	approx. 124.7 mg/L (rat, 4 h vapour) - not classified for acute inhalation

IARC	Not listed as carcinogen.
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Fish LC50: approx. 13480 mg/L (Pimephales promelas, 96 h) - not classified as aquatic-hazardous; Daphnia EC50: approx. 9268 mg/L (Daphnia magna, 48 h) - practically non-toxic [PubChem]
Persistence	Readily biodegradable; not persistent. Not classified for aquatic hazard (no H400/H410).
Bioaccumulation	BCF: Low (BCF ~1) - does not bioaccumulate
Mobility in Soil	High mobility in soil (Log Kow < 1)

13. DISPOSAL CONSIDERATIONS

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

14. TRANSPORT INFORMATION

US DOT	UN1170, Ethanol, 3, PG II
IMDG	UN1170, Ethanol, 3, PG II
IATA/ICAO	UN1170, Ethanol, 3, PG II
Marine Pollutant	No

15. REGULATORY INFORMATION

TSCA: listed. SARA 313 (TRI): not listed. CERCLA: no reportable quantity. California Proposition 65: the listed entities are 'Alcoholic beverages' - neat industrial/USP ethanol is generally not the listed entity (evaluate end use). State Right-to-Know: listed in NJ, PA, MA. US DOT: Class 3, UN1170, PG II.	
SARA 311/312	See Section 2 for hazard classifications.

16. OTHER INFORMATION

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