

Section 1: Product and Company Identification

Absolute Accuracy
4591 S Wayside Dr
Houston, TX 77087
(832) 571-2387

Product Code: 2954
Part Number: 2954

Synonyms:
Recommended Use:
Usage Restrictions:

Section 2: Hazards Identification



Warning

Hazard Classification:
Gases Under Pressure

Hazard Statements:
Contains gas under pressure; may explode if heated

Precautionary Statements

Storage:
Protect from sunlight.
Store in well-ventilated place.

Section 3: Composition/Information on Ingredients

	CAS #	Concentration
Ethanol	64-17-5	216 ppm
Air	Not applicable	Balance

	Chemical Substance	Chemical Family	Trade Names
Ethanol	ETHYL ALCOHOL, 100%	Alcohols	ETHANOL; ETHYL ALCOHOL; /4; ALCOHOL; ALCOHOL ANHYDROUS; ALGRAIN; ANHYDROL; Absolute alcohol; Anhydrous ethanol; Ethanol denatured; Fermentation alcohol; Grain alcohol; 1-Hydroxyethane; Methyl carbinol; Ethyl alcohol anhydrous; Absolute ethanol; Denatured ethanol; ETHYL HYDRATE; ETHYL HYDROXIDE; JAYSOL; TECSOL; STCC 4909159; UN 1170; C2H6O
Air	AIR, COMPRESSED	Inorganic gases	AIR; UN 1002 Nitrogen CAS: 7727-37-9 Oxygen CAS: 7782-44-7

Section 4: First Aid Measures

	Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Ethanol	Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.	Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.	Contact local poison control center or physician immediately. Never make an unconscious person vomit or drink fluids. When vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately.	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.	For ingestion, consider gastric lavage.
Air	Wash exposed skin with soap and water.	Flush eyes with plenty of water.	If a large amount is swallowed, get medical attention.	If adverse effects occur, remove to uncontaminated area. Get medical attention.	

Section 5: Fire Fighting Measures

	Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
Ethanol	Alcohol resistant foam, carbon dioxide, regular dry chemical, water, alcohol resistant foam Large fires: Use alcohol-resistant foam or flood with fine water spray.	Carbon monoxide, carbon dioxide, and toxic and irritating fumes	<ul style="list-style-type: none"> ▪ Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. ▪ Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.
Air	Use extinguishing agents appropriate for surrounding fire.		<ul style="list-style-type: none"> ▪ No respirator is required under normal conditions of use.

Section 6: Accidental Release Measures

	Personal Precautions	Environmental Precautions	Methods for Containment
Ethanol	Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.	Avoid heat, flames, sparks and other sources of ignition.	Stop leak if possible without personal risk. Reduce vapors with water spray. Remove sources of ignition.
Air			Stop leak if possible without personal risk.

	Methods for Cleanup	Other Information
Ethanol	Small spills: Absorb with sand or other noncombustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal.	Not available
Air		

Section 7: Handling and Storage

	Handling	Storage
Ethanol	Store and use with adequate ventilation. Firmly secure cylinders upright to keep them from falling or being knocked over. Screw valve protection cap firmly in place by hand. Store only where temperature will not exceed 125F (52C). Store full and empty cylinders separately. Use a first-in, first-out inventory system to prevent storing full cylinders for long periods.	Do not get liquid in eyes, on skin, or clothing. Protect cylinders from damage. Use a suitable hand truck to move cylinders; do not drag, roll, slide, or drop. Open valve slowly. Close cylinder valve after each use; keep closed even when empty. If valve is hard to open, discontinue use and contact your supplier.
Air	Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101.	

Section 8: Exposure Controls/Personal Protection

	Exposure Guidelines
Ethanol	ETHYL ALCOHOL, 100%: ETHYL ALCOHOL (ETHANOL): 1000 ppm (1900 mg/m3) OSHA TWA 1000 ppm ACGIH TWA 1000 ppm (1900 mg/m3) NIOSH recommended TWA 10 hour(s)
Air	AIR, COMPRESSED: No occupational exposure limits established.

Engineering Controls

Handle only in fully enclosed systems.

	Eye Protection	Skin Protection	Respiratory Protection
Ethanol	Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.	Wear appropriate chemical resistant clothing.	Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.
Air	Eye protection not required under normal conditions.	Protective clothing is not required under normal conditions.	No respirator is required under normal conditions of use.

General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

Section 9: Physical and Chemical Properties

	Physical State	Appearance	Color	Change in Appearance	Physical Form	Odor	Taste
Ethanol	Liquid	Clear	Colorless	N/A	Volatile liquid	Pleasant odor	Burning taste
Air	Gas	Clear	Colorless		Gas	Not available	

	Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
Ethanol	55 F (13 C) (CC)	IB	Not available	685 F (363 C)	0.19	0.033
Air						

	Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity
Ethanol	172 F (78 C)	-179 F (-117 C)	40 mmHg @ 19 C	1.59 (Air=1)	0.7893	Soluble	Not available	5-10 ppm	1.4 (carbon tetrachloride =1)	1.17 mPa.s (1.17 centipoises) @ 20 C; 1.074 mPa.s (1.074 centipoises) @ 25 C
Air	-317 F (-194 C)	Not available	760 mmHg @ -194 C	1	Not applicable	Slightly soluble	Not applicable	Not available	Not applicable	0.01853 cP @ 26.85 C

	Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
Ethanol	46.07	C-H3-C-H2-O-H	Not available	Not available	Not available	1	Soluble: Benzene, ether, acetone, chloroform, methanol, organic solvents
Air			1.29 g/L @ 0 C			Not applicable	Slightly Soluble

Section 10: Stability and Reactivity

	Stability	Conditions to Avoid	Incompatible Materials
Ethanol	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	Halo carbons, metals, metal salts, oxidizing materials, halogens, peroxides, acids, metal oxides, bases, combustible materials
Air	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	None known

	Hazardous Decomposition Products	Possibility of Hazardous Reactions
Ethanol	Oxides of carbon	Will not polymerize.
Air	No hazard expected.	Will not polymerize.

Section 11: Toxicology Information

Acute Effects

	Oral LD50	Dermal LD50	Inhalation
Ethanol	7 gm/kg oral-rat LD50	LD50 (dermal, rabbit): greater than 15800 mg/kg (cited as greater than 20 mL/kg); at 20 mL/kg, 1/4 rabbits died	Irritation, difficulty breathing, headache, drowsiness, symptoms of drunkenness
Air	Not available	Not available	

	Eye Irritation	Skin Irritation	Sensitization
Ethanol	Irritation, tearing	Mild irritation, rash	Eye irritation, Category 2; H319: Causes serious eye irritation.
Air	No information is available	No information is available	No significant target effects reported.

Chronic Effects

	Carcinogenicity	Mutagenicity	Reproductive Effects	Develop mental Effects
Ethanol	NTP: Known Human Carcinogen (Alcoholic beverages); IARC: Human Sufficient Evidence, Group 1 (Alcoholic beverages), Animal Inadequate Evidence; ACGIH: A4 - Not Classifiable as a Human Carcinogen	Available.	Available.	No data
Air	Not available	Not available	No data	No data

Section 12: Ecological Information

Fate and Transport

	Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Ethanol	Fish toxicity: 93 ug/L 96 hour(s) LC50 (Mortality) Bluegill (Lepomis macrochirus) Invertebrate toxicity: 24 ug/L 48 hour(s) EC50 (Immobilization) Water flea (Daphnia pulex) Algal toxicity: 10000-25000 ug/L 1-2 hour(s) (Photosynthesis) Green algae (Acrosiphonia sonderi) Phyto toxicity: Not available Other toxicity: Not available	Highly toxic to aquatic life.	Not available	Not available
Air	Fish toxicity: Not available	Not available	Not available	Not available

Section 13: Disposal Considerations

Ethanol	Subject to disposal regulations: U.S. EPA 40 CFR 262.
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	Hazardous Waste Number(s): D001. Dispose in accordance with all applicable regulations.
Air	Dispose in accordance with all applicable regulations.

Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

DOT Information For This Mixture

Shipping Name	Compressed gas, n.o.s. (Air, Ethanol)
UN Number	UN1956
Hazard Class	2.2
Hazard Information	Non-Flammable Gas

Individual Component Information

	Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Labeling Requirements	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
Ethanol	ETHANOL or ETHYL ALCOHOL or ETHANOL SOLUTIONS or ETHYL ALCOHOL SOLUTIONS	UN1170	3	II, III	3	N/A	N/A	N/A
Air	Air, compressed	UN1002	2.2	Not available	2.2	Not available	Not available	Not available

Canadian Transportation of Dangerous Goods

	Shipping Name	UN Number	Class	Packing Group / Risk Group
Ethanol	Ethanol	UN1170	3	II
Air	Air, compressed	UN1002	2.2	Not available

Section 15: Regulatory Information

U.S. Regulations

	CERCLA Sections	SARA 355.30	SARA 355.40
Ethanol	Not regulated.	Not regulated.	Not regulated.
Air	Not regulated.	Not regulated.	Not regulated.

SARA 370.21

	Acute	Chronic	Fire	Reactive	Sudden Release
Ethanol	Yes	Yes	Yes	No	No
Air	No	No	No	No	Yes

SARA 372.65

Ethanol	Not regulated.
Air	Not regulated.

OSHA Process Safety

Ethanol	Not regulated.
Air	Not regulated.

State Regulations

	CA Proposition 65
Ethanol	Not regulated.
Air	Not regulated.

Canadian Regulations

	WHMIS Classification
Ethanol	B2, D2B
Air	A

National Inventory Status

	US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Ethanol	Listed on inventory.	Not listed.	Not determined.
Air	Not listed on inventory.	Not listed.	Not determined.

Section 16: Other Information

	NFPA Rating
Ethanol	HEALTH=2 FIRE=3 REACTIVITY=0
Air	HEALTH=0 FIRE=0 REACTIVITY=0

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard