

Safety Data Sheet

Ethanol 50%, (v/v)

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Ethanol 50%, (v/v)

Synonyms/Generic Names: Ethyl Alcohol, grain alcohol, EtOH

Product Number: 8589

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information: 920-623-2140 (Monday-Friday 8:00-4:30)
www.columbuschemical.com

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Hazard Not Otherwise Classified (HNOC): None

Target Organs: Nerves, Liver, Heart

Signal Words: Danger

Pictograms



GHS Classification:

Flammable liquids	Category 4
Skin irritation	Category 2
Eye irritation	Category 2B
Specific target organ toxicity-single exposure- respiratory system	Category 3

GHS Label Elements, including precautionary statements:

Hazard Statements:

H225	Highly flammable liquid and vapor
H315+H320	Causes skin and eye irritation
H335	May cause respiratory irritation

Precautionary Statements:

P210	Keep away from heat. No smoking.
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P233	Keep container tightly closed.
P240	Ground container and receiving equipment.
P241	Use explosion-proof equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing vapors/spray.
P264	Wash hands thoroughly after handling.
P271	Use in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use appropriate media to extinguish.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

Potential Health Effects

Eyes	Causes eye irritation
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	May be harmful if swallowed

NFPA Ratings

Health	2
Flammability	3
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	2
Fire	3
Reactivity	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Ethyl Alcohol	42-45	64-17-5	200-578-6	C ₂ H ₅ OH	46.07 g/mol
Water	Balance	7732-18-5	231-791-2	H ₂ O	18.00 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes and seek medical attention.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Flammable liquid. Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots. Material can react violently with water (spattering and misting) and react with metals to produce flammable hydrogen gas.
Specific hazards arising from the chemical	Emits toxic fumes (carbon oxides) under fire conditions. (See also Stability and Reactivity section). Vapors can travel to a source of ignition and flash back. Containers may explode in a fire. Cool containers from a distance using water spray. SENSITIVE TO STATIC DISCHARGE.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Absorb neutralized spill with vermiculite or other inert absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Use with adequate ventilation and grounding. Wash thoroughly after using. Keep container closed when not in use.

Conditions for safe storage, including any incompatibilities

Store in tightly closed, original containers in a cool, dry, well ventilated area. Store between 55-100°F for product stability. Do not store with strong oxidizing agents, strong acids, peroxides, aldehydes, halogens, ammonia, acid anhydrides or alkali metals.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Ventilation and appropriate grounding of containers.

Component	Exposure Limits	Basis	Entity
Ethyl Alcohol	1000 ppm 1900 mg/m ³	REL	NIOSH
	1000 ppm 1900 mg/m ³	PEL	OSHA
	1000 ppm 1880 mg/m ³	STEL	ACGIH

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health
 WEEL: Workplace Environmental Exposure Levels
 CEIL: Ceiling

Eyes	Wear chemical safety glasses of goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, apron or lab coat.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear, colorless liquid
Odor	Mild alcohol
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	-144°C (-227.2°F)
Initial boiling point and boiling range	78°C (172.4°F) to 80°C (174°F)
Flash point	24°C (75°F): Closed cup
Evaporation rate	Not Available
Flammability (solid, gas)	Flammable liquid
Upper/lower flammability or explosive limit	3.3-19%
Vapor pressure	(@ 20°C) 44.6 mmHg
Vapor density	(air=1) 1.6
Relative density	Not Available
Solubility (ies)	Completely soluble in water
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Keep away from heat, flame and sparks.
Incompatible Materials	Alkali metals, Ammonia, Oxidizing agents, peroxides.
Hazardous Decomposition Products	Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Ethanol

Skin	Not Available
Eyes	Not Available
Respiratory	LC50 Inhalation – rat – 10 h – 20000 ppm
Ingestion	LD50 Oral – rat – 7,060 mg/kg

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	A3: Confirmed animal carcinogen with unknown relevance to humans (ethanol).
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Irritation, drying of skin.
Eyes	Irritation, redness, watering of eyes.
Respiratory	Irritation, coughing, dizziness, drowsiness.
Ingestion	Irritation, nausea, vomiting.

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Target Organ(s)	Nerves, Liver, Heart
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION**Ecotoxicity***Ethanol*

Aquatic Vertebrate	LC ₅₀ (96 hours): 13,000 mg/L <i>Oncorhynchus mykiss</i> (Rainbow Trout)
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Will not accumulate
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Product or Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN1170, Ethanol solution, 3, pg II
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TDG	UN1170, ETHANOL SOLUTION, 3, pg II
IMDG	UN1170, ETHANOL SOLUTION, 3, pg II
Marine Pollutant	No
IATA/ICAO	UN1170, Ethanol solution, 3, pg II

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
DSL / NDSL	All ingredients are listed on the DSL inventory.
California Proposition 65	Listed: Ethyl Alcohol
Rhode Island: Hazardous Substance List	Listed: Ethyl Alcohol
Massachusetts: Toxic or Hazardous Substance List, Right to Know	Listed: Ethyl Alcohol
Pennsylvania: Hazardous Substance List	Listed: Ethyl Alcohol
New Jersey: Right to Know Hazardous Substance List	Listed: Ethyl Alcohol
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Fire Hazard, Acute Health Hazard, Chronic Health Hazard.
SARA 312	Fire Hazard, Acute Health Hazard, Chronic Health Hazard.
SARA 313	Not Listed
WHMIS Canada	Class B2: Flammable and combustible material – Flammable liquid. Class D2B: Poisonous and infectious material – Other effects – Toxic.

16. OTHER INFORMATION

Revision	Date
Original	08/02/2011
Revision 1	10/21/2015
Revision 2	02/06/2017
Revision 3	04/18/2022

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