

Safety Data Sheet

Ethanol, Denatured, 70%

CAROLINA[®]
www.carolina.com

Section 1

Product Description

Product Name: Ethanol, Denatured, 70%
Recommended Use: Science education applications
Synonyms: Ethyl Alcohol Solution, Alcohol
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2

Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER



Highly flammable liquid and vapor. Fatal if swallowed. Toxic in contact with skin or if inhaled. Causes eye irritation. May cause damage to organs. Toxic to aquatic life.

GHS Classification:

Flammable Liquid Category 2, Acute Toxicity - Oral Category 2, Serious Eye Damage/Eye Irritation Category 2B, Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 2, Hazardous to the aquatic environment - Acute Category 2, Acute Toxicity - Inhalation Dust / Mist Category 3, Acute Toxicity - Dermal Category 3

Section 3

Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Ethanol	64-17-5	60
Water	7732-18-5	30
2-Propanol	67-63-0	6.3
Methanol	67-56-1	2.9
Methyl Isobutyl Ketone	108-10-1	0.8

Section 4

First Aid Measures

Emergency and First Aid Procedures

Inhalation: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Eyes: 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.
Skin Contact: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF ON SKIN: Wash with plenty of soap and water.
Ingestion: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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Section 5

Firefighting Procedures

Extinguishing Media:	Use dry chemical, CO2 or appropriate foam.
Fire Fighting Methods and Protection:	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards:	Vapors may travel back to ignition source. Closed Containers exposed to heat may explode.
Hazardous Combustion Products:	Carbon dioxide, Carbon monoxide

Section 6

Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled:	No health affects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS. Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Ventilate the contaminated area.
Methods for Clean-up	Ventilate the area by opening door and/or turning on fans and blowers. Use an inert absorbent such as sand or vermiculite. Place in properly labeled closed container. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area.

Section 7

Handling and Storage

Handling:	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 dust/fume/gas/mist/vapors/spray. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do no eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Storage:	Keep container tightly closed. Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up. Suitable for any general chemical storage.
Storage Code:	Red - Flammables. Store in approved flammable containers. Store away from oxidizing materials.

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Section 8

Protection Information

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
Ethanol	N/A	1000 ppm STEL	1000 ppm TWA; 1900 mg/m ³ TWA	N/A
2-Propanol	200 ppm TWA	400 ppm STEL	400 ppm TWA; 980 mg/m ³ TWA	N/A
Methanol	200 ppm TWA	250 ppm STEL	200 ppm TWA; 260 mg/m ³ TWA	N/A
Methyl Isobutyl Ketone	20 ppm TWA	75 ppm STEL	100 ppm TWA; 410 mg/m ³ TWA	N/A

Control Parameters

Engineering Measures:

Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

Respiratory Protection:

No respiratory protection required under normal conditions of use.

Respirator Type(s):

NIOSH approved air purifying respirator with organic vapor cartridge and HEPA filter.

Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves:

Butyl rubber, Natural latex,, Neoprene, Nitrile

Section 9

Physical Data

Formula: See Section 3

Molecular Weight: This product is a mixture.

Appearance: Colorless Liquid

Odor: Strong Alcohol Odor

Odor Threshold: No data available

pH: No data available

Melting Point: -48 C -114 C

Boiling Point: 79 C

Flash Point: 21 C 13 C

Flammable Limits in Air: (Ethanol) 3.3 - 19%

Vapor Pressure: (Ethanol) 44 mmHg at 25 °C

Evaporation Rate (BuAc=1): No data available

Vapor Density (Air=1): 1.6 (ethanol)

Specific Gravity: 0.86

Solubility in Water: Soluble

Log Pow (calculated): -0.32

Autoignition Temperature: 363 C

Decomposition Temperature: No data available

Viscosity: No data available

Percent Volatile by Volume: No data available

Section 10

Reactivity Data

Reactivity:

Not generally reactive under normal conditions.

Chemical Stability:

Stable under normal conditions.

Conditions to Avoid:

Sparks, open flame, other ignition sources, and elevated temperatures. Temperatures above the high flash point of this combustible material in combination with sparks, open flames, or other sources of ignition.

Incompatible Materials:

Water-reactive materials, Acids, Strong oxidizing agents, Strong reducing agents, Metals, Peroxides, Epoxides, Isocyanates, Magnesium

Hazardous Polymerization:

Will not occur

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Section 11

Toxicity Data

Routes of Entry: Inhalation and ingestion.
Symptoms (Acute): Eye disorders, Respiratory Irritation, Liver disorders
Delayed Effects: No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Water	7732-18-5	Oral LD50 Rat 90000 mg/kg		
2-Propanol	67-63-0	Oral LD50 Rat 5045 mg/kg Oral LD50 Mouse 3600 mg/kg		INHALATION LC50 Rat 16000 PPM 8H
Methanol	67-56-1	Oral LD50 Mouse 7300 mg/kg		INHALATION LC50 Rat 64000 PPM 4H

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
Ethanol	64-17-5	Listed	Listed	Listed
2-Propanol	67-63-0	Listed	Not listed	Not listed
Methanol	67-56-1	Not listed	Not listed	Not listed
Methyl Isobutyl Ketone	108-10-1	Listed	Not listed	Listed

Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.

Target Organ Effects:

Acute: Central Nervous System
Chronic: Liver

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Section 12

Ecological Data

Overview: This material is not expected to be harmful to the ecology.
Mobility: This material is expected to have very high mobility in soil. It does not absorb to most soil types.
Persistence: Biodegradation
Bioaccumulation: Bioconcentration is not expected to occur.
Degradability: Biodegrades quickly.
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Ethanol	64-17-5	96 HR LC50 PIMEPHALES PROMELAS 13400 - 15100 MG/L [FLOW-THROUGH] 96 HR LC50 PIMEPHALES PROMELAS > 100 MG/L [STATIC] 96 HR LC50 ONCORHYNCHUS MYKISS 12 - 16 ML/L [STATIC] 48 HR EC50 DAPHNIA MAGNA 2 MG/L [STATIC] 24 HR EC50 DAPHNIA MAGNA 10800 MG/L 48 HR LC50 DAPHNIA MAGNA 9268 - 14221 MG/L
Water 2-Propanol	7732-18-5 67-63-0	No data available 96 HR LC50 LEPOMIS MACROCHIRUS > 1400000 MG/L 96 HR LC50 PIMEPHALES PROMELAS 11130 MG/L [STATIC] 96 HR LC50 PIMEPHALES PROMELAS 9640 MG/L [FLOW-THROUGH] 48 HR EC50 DAPHNIA MAGNA 13299 MG/L 72 HR EC50 DESMODESMUS SUBSPICATUS > 1000 MG/L 96 HR EC50 DESMODESMUS SUBSPICATUS > 1000 MG/L
Methanol	67-56-1	96 HR LC50 LEPOMIS MACROCHIRUS 13500 - 17600 MG/L [FLOW-THROUGH] 96 HR LC50 ONCORHYNCHUS MYKISS 18 - 20 ML/L [STATIC] 96 HR LC50 ONCORHYNCHUS MYKISS 19500 - 20700 MG/L [FLOW-THROUGH] 96 HR LC50 PIMEPHALES PROMELAS > 100 MG/L [STATIC] 96 HR LC50 PIMEPHALES PROMELAS 28200 MG/L [FLOW-THROUGH]
Methyl Isobutyl Ketone	108-10-1	96 HR LC50 PIMEPHALES PROMELAS 496 - 514 MG/L [FLOW-THROUGH] 48 HR EC50 DAPHNIA MAGNA 170 MG/L 96 HR EC50 PSEUDOKIRCHNERIELLA SUBCAPITATA 400 MG/L

Section 13

Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): If discarded, this product is considered a RCRA ignitable waste, D001.

Section 14

Transport Information

Ground - DOT Proper Shipping Name:
UN1170 Ethanol solutions Class 3 P.G. II

Air - IATA Proper Shipping Name:
UN1170
Ethanol solutions
Class 3
P.G. II

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Section 15

Regulatory Information

TSCA Status:

All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Ethanol	64-17-5	No	No	No	No	No
2-Propanol	67-63-0	Isopropyl alcohol	No	No	No	No
Methanol	67-56-1	Methanol	No	5000 lb final RQ; 2270 kg final RQ	No	No
Methyl Isobutyl Ketone	108-10-1	Methyl isobutyl ketone	No	5000 lb final RQ; 2270 kg final RQ	No	No

California Prop 65:



WARNING: Cancer and Reproductive Harm – www.P65Warnings.ca.gov

Section 16

Additional Information

Revised: 05/24/2024

Replaces: 03/04/2021

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health