ENG SCIENTIFIC, LLC

121 Jersey Ave, 2nd Floor New Brunswick, NJ, USA 08901

SAFETY DATA SHEET (SDS)

#1 - IDENTIFICATION

Product Identifier - Ethanol Fixative, 80%

Product Code - 5990

Synonyms – Ethanol (80%)

Recommended use - Professional, scientific and medical-technical activities

Recommended restrictions - None known

Manufacturer:

Company Name - ENG Scientific, LLC

121 Jersey Ave, 2nd Floor

New Brunswick, NJ, USA 08901

Contact Telephone (973) 472 - 7200

Toll Free (800) 922 - 0223

Website www.engscientific.com E-mail info@engscientific.com

Emergency Contact Chemtrec (800) 424-9300

(217) 424-5200 ADM Corporate

#2 - Hazard(s) Identification

Physical hazards Flammable liquid Category 2 Health hazard Eye damage/irritation Category 2A

Label elements









Signal word Danger

Hazard statement Flammable liquid

Precautions Keep away from heat/open flames/hot surfaces

Store at room temperature Storage Supplemental info Avoid release to the environment

Disposal Dispose of contents-according to local regulations

NFPA Rating - HEALTH:

> - FLAMMABILITY: 3 - REACTIVITY: 0

#3 – Composition

Chemical name: Ethanol (CDA 19) CAS # 64-17-5

#4 – First-aid measures

Inhalation: Remove to fresh air.

Eve contact: Remove contact lenses if worn. In case of contact, immediately flush eyes with plenty of clean running water for at least 15 minutes, lifting the upper and lower eyelids occasionally. Obtain medical attention.

Skin contact: Wash skin and clothing with soap and water.

Swallowing: I patient is fully conscious, give two glasses of water. Induce vomiting. This should be done only by Medical or experienced first aid personnel. Obtain medical attention without delay

#5 – Fire-fighting measures

Extinguishing media: Use water spray, carbon dioxide, dry chemical, alcohol-type, or universal type foams applied by manufacturer's recommended technique.

Special fire-fighting procedures: Ethanol burns with a clean clear flame that is almost invisible in daylight. Closed containers may rupture violently and suddenly release ethanol when exposed to fire or excessive heat for a sufficient period of time. Vapors are slightly heavier than air and may travel long distances toward sources of ignition.

#6 - Accidental release measures

Steps to be taken in case material is released or spilled: Extinguish all sources of ignition; ventilate the area; flood or flush the area with water. Prevent spilled ethanol from entering sewers, confined spaces, drains, or waterways. Put material in suitable, covered, labeled containers. Flush area with water.

#7 – Handling and storage

Handling: No smoking or open flame in storage, use or handling areas. Use explosion proof electrical equipment. Ensure proper grounding procedures are in place.

Storage: Store at room temperature and in a tightly closed container.

#8 – Exposure controls/personal protection

Respiratory protection: NOISH - approved respirator.

Ventilation: General (mechanical) room ventilation recommended. Special local ventilation also recommended.

Protective gloves: Impermeable.

Eye protection: Chemical splash goggles or face shield.

Other protective equipment: Lab coat, eye bath, safety shower.

#9 – Physical and chemical properties

Appearance: Clear, colorless liquid.

Odor: Clear, bright characteristic odor. **Boiling point**: 170.2°F

Specific gravity: $(H_2O = 1) 0.7295 @ 20^{\circ}C$

Vapor density: (air = 1) > 1 **Solubility in H₂0** = Complete **Freezing point**: -97.8°C **Evaporation Rate** = >2

Flash point: 53°F, Tag Closed Cup ASTM D 56

#10 – Stability and reactivity

Stability: Stable as supplied.

Incompatibility: Concentrated nitric or sulfuric acid, strong oxidizing agents

Conditions to avoid: Avoid contact with sparks, heat, open flame, or ignition sources.

Hazardous polymerization: Will not occur.

#11 - Toxicology information

Route of Exposure - Inhalation

Prolonged inhalation of vapors causes dizziness, nausea, visual impairment, respiratory failure, muscular non-coordination and narcosis. Inhalation of high concentrations for prolonged periods has resulted in death. Liver damage has resulted from prolonged or repeated inhalation of vapors.

Route of Exposure - Skin

Essentially non-irritating. Repeated or prolonged contact causes drying, brittleness, cracking and irritation. Slightly toxic to animals by absorption.

First Aid - Skin

Remove contaminated clothing and wash contaminated skin with large amounts water. If irritation persists, contact a physician,

Route of Exposure - Eyes

May cause eye injury which may persist for several days. Liquid and vapor in high concentrations, causes irritation, tearing and burning sensation.

First Aid - Eyes

Flush eyes with water for at least 15 minutes. Contact a physician

Route of Exposure - Ingestion

Poisonous if swallowed. Can affect the optic nerve resulting in blindness. Can cause mental sluggishness, nausea and vomiting leading to severe illness, possibly death (in humans). Practically non-toxic to animals.

Health Conditions Aggravated by Exposure

Methanol exposure may aggravate existing eye, skin, kidney and liver disorders. Pre placement and annual medical examinations are recommended for workers who normally handle methanol with emphasis on neurological, visual, liver and kidney functions. Monitoring of air in the work place is recommended to maintain methanol vapors below recommended TLV.

#12 – Ecological information

DO NOT discharge into sewer or waterways. Small spills should be flushed with large quantities of water. Large spills should be collected for disposal. Flush with water, controlled burning.

#13 – Disposal considerations

Disposal of hazardous material may be subject to federal, state or local regulations. The information contained in this document is believed to be factual, however, nothing presented herein is to be taken as a warranty or representation for which ENG Scientific, LLC shall be responsible.

#14 – Transport information

PROPER SHIPPING NAME: Ethanol

UN NUMBER: 1170 HAZARD CLASS: 3 PACKING GROUP: II

DOT SHIPPING LABEL: Flammable Liquid



N/A For Limited Quantity

#15 – Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b)Export Notification (40 CFR 707, SUBPT. D) Not regulated

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050 Not on regulatory list

CERCLA Hazardous Substance List (40 CFR 302.4) Methanol (CAS 67-56-1)

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard – Yes

Delayed Hazard – Yes Fire Hazard – Yes Pressure Hazard – No Reactivity Hazard – No

SARA 302 Extremely hazardous substance Not listed

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not regulated

Clean Air Act (CAA) Section 112® Accidental Release Prevention (40 CFR 68.130): Not regulated

Clean Water Act (CWA) Section 112® (40 CFR 68.130): Not regulated

Safe Drinking Water Act (SDWA): Not regulated.

Drug Enforcement Administration (DEA) List 2 Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and

Chemical Code Number: Not listed.

Drug Enforcement Administration (DEA) List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c):

Not regulated

DEA Exempt Chemical Mixtures Code Number: Not regulated

Food and Drug Administration (FDA): N/A

US state regulation: California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US. Massachusetts RTK - Substance List: Ethanol (CAS 64-17-5) Methanol (CAS 67-56-1) 2-Propanol (CAS 67-63-0)

US. New Jersey Worker and Community Right-to-Know Act: Ethanol (CAS 64-17-5) Methanol (CAS 67-56-1) 2-Propanol

(CAS 67-63-0)

US. Pennsylvania RTK-Hazardous Substances: Ethanol (CAS 64-17-5) Methanol (CAS 67-56-1) 2-Propanol (CAS 67-63-0)

US. Rhode Island RTK: Methanol (CAS 67-56-1) 2-Propanol (CAS 67-63-0)

US California Proposition 65: WARNING

US-California Proposition 65 – Carcinogens and Reproductive Toxicity (CRT): Developmental toxin

Methanol (CAS 67-56-1)

International Inventories

Country/Region	Inventory name	On Inventory*
Canada	Non-domestic Substances List (NDSL)	No
Europe	European Inventory of Existing Chemical Substances (EINECS)	Yes
U.S.	Toxic Substances Control Act (TSCA) Inventory	Yes
Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

^{*} Yes complies with the inventory requirements administered by the governing country.

#16 – Other information

Issue date January 31, 2022

Version # 04

Further information The information contained in this document is believed to be factual, however, nothing

presented herein is to be taken as a warranty or representation for which ENG Scientific, LLC shall be responsible.