

HAMMONDS FIZZY®

Material Safety Data Sheet

Effective 1/1/04

Emergency Phone Number (800) 424-9300

Hammonds Fuel Additives, Inc. urges each customer, or recipient, of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate to use and understand the data contained in this MSDS.

To promote safe handling, each customer, or recipient, should: (1) notify its employees, agents, contractors and others whom it knows or believes will use this material or the information in this MSDS and any other information regards hazards or safety; (2) furnish this same information to each of its customers for the product; and (3) request its customers to notify their employees, customers, and other users of the product of this information.

1. Identification

PRODUCT NAME:	FIZZY®
CHEMICAL NAME:	2-(2-Methoxyethoxy) ethanol
CHEMICAL FAMILY:	Glycol Ethers
FORMULA:	CH ₃ O(CH ₂ CH ₂) ₂ H
MOLECULAR WEIGHT:	120.2
SYNONYMS:	Diethylene glycol monomethyl ether (DiEGME)
CAS # AND NAME:	111-77-3 Ethanol, 2-(2-methoxyethoxy)

2. Physical Data (Determined on typical material)

BOILING POINT, 760 mm Hg: 194° C: (381.2°F)

SPECIFIC GRAVITY (H₂O = 1): 1.022 at 20/20°C

PRODUCT NAME:	FIZZY®
FREEZING POINT:	-85° C (-121° F)
VAPOR PRESSURE AT 20° C:	0.1 mmHG
VAPOR DENSITY (air = 1):	4.1

HAMMONDS FIZZY®**EVAPORATION RATE:**

(Butyl Acetate = 1): 0.02

SOLUBILITY IN WATER by wt: 100% at 20°C**APPEARANCE:** Transparent colorless**ODOR:** Mild**PHYSICAL STATE:** Liquid**PERCENT VOLATILES (by weight):** 100**3. Ingredients**

%	MATERIAL	CAS#	EXPOSURE LIMIT
99.5-100	Diethylene Glycol Monomethyl Ether	111-77-3	None established
0-0.5	Ethylene Glycol	107-21-1	See Section V

4. Fire and Explosion Hazard Data

FLASH POINT (test method(s)): 188° F (87° C) Pensky-Martens Closed Cup ASTM D 93
200° F (93°C) Cleveland Open Cup ASTM D 92

FLAMMABLE LIMITS IN AIR, by volume:

LOWER: 1.5 (CALC'D)
UPPER: 9.5 (est.)

EXTINGUISHING MEDIA: Apply alcohol-type or all-purpose type foam by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires.

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus when fighting fires in enclosed areas. Do not direct a solid stream of water or foam into hot, burning pools; this may cause frothing and increase fire intensity.

UNUSUAL FIRE AND EXPLOSION HAZARDS: See "Other Precautions" in Section 9.

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EXPOSURE LIMITS:

Ethylene glycol: 100 mg/m³ (39.4 ppm) Ceiling, Aerosol ACGIH
125 mg/m³ (50 ppm) Ceiling, Vapor and Mist, OSHA
Internal Exposure Limit:
100 mg/m³ (39.4 ppm) Ceiling, Aerosol and Vapor

EFFECTS OF ACUTE OVEREXPOSURE:

SWALLOWING: Slightly toxic. May produce signs of intoxication characterized by incoordination, dizziness, drowsiness, headache, nausea, mental confusion, slurred speech and stupor, depending on the quantity of material ingested.

SKIN ABSORPTION: No evidence of harmful effects from available information.

INHALATION: Short-term harmful health effects are not expected from vapor generated at ambient temperature.

SKIN CONTACT: No evidence of harmful effects from available information.

EYE CONTACT: Excess redness and swelling of the conjunctiva may occur. Causes irritation experienced as stinging and discomfort or pain.

EFFECTS OF REPEATED OVEREXPOSURE: No adverse effects anticipated from available information.

OTHER HEALTH HAZARDS: None currently known.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: knowledge of the available toxicology information and of the physical and chemical properties of the material suggests that overexposure is unlikely to aggravate existing medical conditions.

ADDITIONAL TOXICITY INFORMATION: When administered orally to pregnant laboratory animals at high dosages and during the critical time of fetal development, Diethylene Glycol Monomethyl Ether (DiGME) produced an increase in the incidence of birth defects and evidence of embryo lethality and fetotoxicity. When DGME was applied to the skin of pregnant rabbits during the critical phase of fetal development at dosages of 250 mg/kg and greater, an increased incidence of variations typically associated with delayed development was observed in offspring, but with no accompanying evidence of malformations.

EMERGENCY AND FIRST AID PROCEDURES:

SWALLOWING: If patient is fully conscious, give two glasses of water. Induce vomiting. Obtain medical attention.

SKIN: Wash skin with soap and water.

INHALATION: No emergency care anticipated.

EYES: Immediately flush eyes with water and continue washing for several minutes. Remove contact lenses, if worn. Obtain medical attention.

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NOTES TO PHYSICIAN: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

Section 6 Reactivity Data

STABILITY: Stable

CONDITIONS TO AVOID: Do not distill to dryness. Avoid excessive temperature or prolonged reflux, such as in batch distillations.

INCOMPATIBILITY (materials to avoid):

Strong alkalis
High temperatures in the presence of strong bases.
Acids.
Strong oxidizing agents.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:

Burning can produce the following products:

Carbon monoxide and/or carbon dioxide.

Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations
can act as an asphyxiant.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: None known.

Section 7 Spill or Leak Procedures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Small spills can be flushed with large amounts of water; larger spills should be collected for disposal.

WASTE DISPOSAL METHOD: Incinerate in a furnace where permitted under Federal, State and local regulations.

At very low concentrations in water, this product is biodegradable in a biological wastewater treatment plant.

Section 8 Special Protection

RESPIRATORY PROTECTION (specify type): None expected to be needed.

VENTILATION: General (mechanical) room ventilation is expected to be satisfactory.

PROTECTIVE GLOVES: PVC coated, Polyethylene

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EYE PROTECTION: Safety Glasses or Monogoggles

OTHER PROTECTIVE EQUIPMENT: Eye Bath, Safety Shower

Section 9 Special Precautions

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

WARNING! Causes eye irritation, combustible.

IN LABORATORY ANIMAL STUDIES, BIRTH DEFECTS AND ADVERSE EFFECTS ON PREGNANCY HAVE BEEN OBSERVED:

- Avoid contact with eyes.
- Keep away from heat and flame.
- Keep container closed.
- Use with adequate ventilation.
- Wash thoroughly after handling.

FOR INDUSTRY USE ONLY

OTHER PRECAUTIONS:

ADDITIONAL INFORMATION: There may be additional product safety information on this product, which may be obtained by calling your Hammonds Fuel Additives Sales or Customer Service contact.

PROCESS HAZARD: Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into hot equipment under a vacuum, may result in ignitions without the presence of obvious ignition sources. Published "Autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions.

Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Further information is available in a technical bulletin entitled "Ignition Hazards of Organic Chemical Vapors."

Section 10 Regulatory Information

STATUS ON SUBSTANCE LISTS: The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations. Trade Secrets are indicated by "TS."

FEDERAL EPA

Comprehensive Environmental Resource Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal to, or greater than the reportable quantities (Rqs) in 40 CFR 302.4

Components present in this product at a level which could require reporting under the statute are:

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CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Methanol	67-56-1	0.02
Ethylene Glycol	107-21-1	0.5
Ethylene Glycol Monoethyl ether	110-80-5	0.0011

In addition, this product contains other Glycol Ether(s), which, although included as a broad category on the CERCLA hazardous substance list, has not been assigned a reportable quantity.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (Rqs) in 40 CFR 355 (used for SARA 302,311 and 312).

Components present in this product at a level which could require reporting under the statute are: **NONE**

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDS's that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Glycol Ethers	None	100

TSCA INVENTORY STATUS: All components of this product are on the TSCA Inventory or are exempt from TSCA inventory requirements.

STATE RIGHT-TO-KNOW

CALIFORNIA Proposition 65: This product contains Ethylene Glycol Monomethyl Ether and Ethylene Glycol Monoethyl Ether, known to the State of California to cause birth defects, or other reproductive harm.

See Massachusetts listing for amounts.

MASSACHUSETTS 105 CMR 670.000 Right-To-Know, Substance List (MSL): Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:
HAZARDOUS SUBSTANCES (=> 1%)

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CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Diethylene Glycol Monomethyl Ether	111-77-3	100
Ethylene glycol monomethyl ether	109-86-4	0.0035
Ethylene glycol monoethyl ether	110-80-5	0.0011

PENNSYLVANIA Right-To-Know, Hazardous Substance List: Hazardous Substances and Special Hazardous Substances on the list must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

HAZARDOUS SUBSTANCES (=> 1%)

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Diethylene Glycol Monomethyl Ether	111-77-3	100

CALIFORNIA SCAQMD RULE 443-1 VOC'S: Vapor Pressure 0.1 mmHg at 20° C
VOC 1000 g/L
VOC 1021 g/L less water and less exempted solvents

OTHER REGULATORY INFORMATION:

EPA Hazard Categories: Immediate Health, Delayed Health and Fire.

NOTE: The opinions expressed herein are those of qualified experts within Hammonds Fuel Additives Inc. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of Hammonds Fuel Additives, Inc., it is the user's obligation to determine the conditions of safe use of the product.

Date: 1/1/2000

REVISION DATE: 1/1/2000

REVISED SECTIONS

SECTION II - PHYSICAL DATA

SECTION X- REGULATORY INFORMATION

PRODUCT: 46702

F NUMBER: C0314L

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