

# Material Safety Data Sheet

Date Printed: March 31, 2003

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## Section I – MATERIAL IDENTIFICATION

**Product Name:** LIQUIFUSION™ BUBBLE BUSTER  
**Product Description:** Medh, Medh-c  
**MSDS Revision #:** 6101-08  
**Chemical Family:** Alcohols  
**Intended Use:** Chemical Intermediate  
**CAS Name:** Methyl Alcohol  
**CAS #:** 67-56-1  
**Empirical Formula:** C H<sub>4</sub> O

**EMERGENCY TELEPHONE NUMBER: 800-424-9300**

## Section II – INGREDIENTS

Chemical Name	CAS #	%
I. Methyl Alcohol	67-56-1	The percentages of these ingredients are proprietary information. Significant amounts however, are present in this material.

### OSHA (ACGIH) Exposure Limits

CAS #	TWA		STEL	CEILING	
67-56-1	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm
	mg/m <sup>3</sup>				
	200	260	250	325	N/E
Skin	(200)	(262)	(250)	(328)	(N/E)
(N/E) Skin					

**N/E = Not Established. All values in ( ) are U.S. ACGIH (American Conf. Of Gov. Indust. Hygienists) – TLV; All others are OSHA – PEL.**

## Section III – HEALTH HAZARDS

### Emergency Overview

HMIS Health Rating 2 Flammability 3 Reactivity 0

Mobile liquid, clear colorless, mild alcohol.

Moderate eye irritant. Moderate skin irritant.

Ignition will give rise to Class B fire. In case of fire use:

Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol foam.

Routes of Exposure: Ingestion  
Skin absorption

Exposure Standards: See section II for exposure standards on ingredients.

**Health Hazards:** Moderate Eye Irritant  
Moderate Skin Irritant

**Target Organs:** Blood  
Central Nervous System  
Eye  
Skin

**Signs and Symptoms of Exposure (Acute effects)**

Contact with eyes causes irritation, redness and discomfort, which is transient.  
Contact with the skin may cause dryness (defatting), itching and/or rash.  
Product is absorbed through skin and may cause nausea, headache and general discomfort.  
Inhalation of vapors may cause cyanosis, lethargy, loss of consciousness and death.  
Ingestion may cause malaise, discomfort, death unless treated promptly.

**Signs and Symptoms of Exposure (Possible Longer Term Effects)**

Effects from inhalation of vapors may be delayed.  
Repeated and/or prolonged exposures may result in: adverse skin effects (such as defatting, rash, irritation or corrosion), adverse eye effects (such as conjunctivitis or corneal damage).

**Medical Conditions Generally Aggravated by Exposure**

Skin Disorders  
Liver Disorders  
Eye Disease

**Irritation Effects Data**

Moderate Irritant to the eyes of a rabbit  
Moderate Irritant to the skin of a rabbit

**Acute Toxicity Effects Data**

Oral LD50 (rat): 6200 mg/kg  
Dermal LD50 (rabbit): 16000 mg/kg  
Inhalation LC50 (rat): 100000 ppm/hr

**Other Acute Effects**

No Data

**Chronic/Subchronic Data**

Chronic Exposures in test animals has caused changes in: central nervous system, blood.

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**Section IV – FIRST AID**

**Eye Contact:** Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

**Skin:** Wash affected area with soap and water.

**Inhalation:** Move patient to fresh air. If breathing has stopped or is labored, give assisted respiration (e.g. mouth to mouth). Supplemental oxygen may be indicated. Call a physician. There has been no clinical experience with overexposure via the respiratory route.

**Ingestion:** If swallowed, call a physician immediately. Remove stomach contents by gastric suction or induce vomiting only as directed by medical personnel. Never give anything by mouth to an unconscious person. Medical care must emphasize the control of acidosis and the use of intravenous bicarbonate has been lifesaving. Evidence is good that treatment of methanol absorption is enhanced through the administration of ethanol, which should be given to produce a blood level of at least 0.1%. Ethanol diminishes the production of toxic metabolites of methanol. Blood methanol level of 50 mg/100ml is an indication for hemodialysis, which has improved the prognosis of methanol intoxication. Methanol is often confused with beverage alcohol (ethylalcohol). Care must be taken to prevent its ingestion, the most frequent cause of methanol poisoning.

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## Section V – FIRE AND EXPLOSION DATA

Flash Point	12C (53.6F)
Flash Point Method(s)	Closed Cup
Upper Explosion Limits (UEL)	36%
Lower Explosion Limit (LEL)	6%
Autoignition Temperature	No Data
Fire Hazard Classification (OSHA/NFPA)	Flammable Liquid, Class IB

**Extinguishing Media** Ignition will give rise to a Class B fire. In case of fire use: water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol foam.

**Special Fire Fighting Procedures** Retain expended liquids from fire fighting for later disposal. Firefighters should wear butyl rubber boots, gloves and body suit and a self-contained breathing apparatus. Water spray is also useful in cooling fire-exposed tanks and in dispersing vapors.

**Unusual Fire and Explosion Hazards** May generate toxic or irritating combustion products. Sudden reaction and fire may result if product is mixed with an oxidizing agent. Vapor forms explosive mixtures with air. Vapors may travel along ground to a source of ignition and flash back. Vapors may collect in closed spaces such as sewers, caves or closed structures.

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## Section VI – REACTIVITY HAZARD DATA

**CHEMICAL STABILITY:** Stable

**CONDITIONS TO AVOID (if unstable):** Not applicable

**INCOMPATIBILITY (Materials to Avoid):** Alkalis (i.e. sodium or potassium hydroxide etc.)

Oxidizing agents (i.e. perchlorates, nitrates etc.) Heat

**HAZARDOUS DECOMPOSITION PRODUCTS (from burning, heating or reaction with other materials):**

**CO (Carbon Monoxide) in a fire**

**CO<sub>2</sub> (Carbon Dioxide) in a fire**

**Water**

**Aldehydes**

**Organic acid vapors**

**HAZARDOUS POLYMERIZATION** Will not occur

**CONDITIONS TO AVOID (if polymerization may occur)** Not applicable

## Section VII – SPILL, LEAK AND WASTE DISPOSAL INFORMATION

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**CONTAINMENT TECHNIQUES** (Removal of ignition sources, diking etc)

Ventilate the space involved. Shut off or remove all ignition sources.

**CLEAN UP PROCEDURES** If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in a container or dumpster pending disposal. Clean up personnel must be equipped with self-contained breathing apparatus and butyl rubber protective clothing.

**OTHER EMERGENCY ADIVSE** Vapors tend to remain close to the ground and collect in out-of-the-way places. Use non-sparking blowers or ventilation facilities to remove potential explosive or toxic accumulations.

**WASTE DISPOSAL METHOD:** Comply with federal, state and local regulations. Incinerate in suitable combustion chamber. Incinerate in an open container. Dispose of in a permitted waste management facility if incineration or landfill is not practicable.

**ENVIRONMENTAL EFFECTS** methanol is hazardous waste according to the Resource Conservation and Recovery Act (RCRA) regulations (40 CFR 261.33f) subject to the small quantity exclusion defined in 40 CFR 261.5Y(a) and (b). The hazardous waste number for methanol is U154.

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## Section VIII – PERSONAL PROTECTION /EXPOSURE CONTROLS

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**EYE PROTECTION:** Splash proof goggles.

**HAND PROTECTION:** Rubber gloves.

**RESPIRATORY PROTECTION:** In poorly ventilated areas, a cartridge mask, NIOSH approved for organic vapors.

**PROTECTIVE CLOTHING:** Appropriate protective clothing; long sleeved clothing.

**ENGINEERING CONTROLS:** Explosion proof and general local exhaust with 12-30 air changes per hour.

**WORK AND HYGENIC PRACTICES:** Wash at the end of each work shift and before eating, smoking or using the toilet. Launder or discard contaminated clothing.

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## Section IX – STORAGE AND HANDLING

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**Storage** Keep away from oxidizers, heat or flames. Store away from ignition sources. Ground all containers during transfer. Electrical installations should be in accordance with Article 501 of the National Electrical Code for Class I Division 2 locations. Keep container closed.

**Handling** Avoid contact with skin or eyes. Avoid breathing vapors. Empty containers may contain explosive vapors. Flush empty containers with water to remove residual flammable liquid and vapors. Smoking in area is prohibited. See “Flammable and Combustible Liquid Code” NFPA No. 30, National Fire Protection Association, Boston, MA. Remove all equipment, which may be a source of ignition from vicinity while handling.

**Other Precautions** Work areas must be well ventilated to maintain vapor concentration below a level which is irritating. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations e.g. OSHA).

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**Section X – TYPICAL PHYSICAL AND CHEMICAL PROPERTIES**


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Physical Form	Mobile Liquid		
Color	Clear colorless		
Odor	Mild Alcohol		
pH	Neutral		
Vapor Pressure (mm Hg) 50C	40 @ 5C	100 @ 21C	400 @
Vapor Density (Air = 1)	1.11		
Boiling Point	64.7C (148.5F)		
Freezing/Melting Point	-97.8C (-144F)		
Solubility in Water	Miscible in all proportions		
Specific Gravity (water = 1)	0.79609 15/4C	0.78208 30/4C	
Evaporation Rate (Butylacetate = 1)	12		
Viscosity (CPS)	No data		
Molecular Weight	32.04		
Critical Temperature	240C		
Specific Heat (liquid) 0.609 Cal/g @25-30C	0.594-0.600 Cal/g @15-20C		0.605-
Specific Heat (vapor) Cal/g-mole @ 100C	10.76 Cal/g-mole @ 25C		12.20
Heat of Vaporization	8430 Cal/mole @ 64.7C		
Heat of Combustion of Liquid	-173650 Cal/mole @ 25C		(gross)

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**Section XI – TRANSPORTATION INFORMATION**


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DOT Shipping Name	Methanol; flammable liquid; UN 1230
DOT Bulk Shipping Name	RQ Methyl Alcohol flammable liquid UN 1230
IMO Shipping Data	Methanol, Class 3.2 flammable liquid; Subsidiary risk: poison UN 1230; IMDG Code page: 3251; packaging group II
IACO/IATA Shipping Data	Methanol, Class 3 flammable liquid; UN 1230; Subsidiary risk: Poison; Packaging Group II

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**Section XII – U.S FEDERAL REGULATIONS**


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**Toxic Substances Control Act (TSCA)** All components are included in the EPA Toxic Substances Control Act (TSCA) Chemical Substances Inventory

**OSHA Hazard Communication Standard** (2CFR 1910.1200 hazard class (es))

**EPA SARA Title III Section 312** (40CFR 370) hazard class  
Immediate health hazard  
Fire hazard

**EPA SARA Title III Section 313** (40CFR 372) toxic chemicals above “deminimis” level are 67-56-I Methyl alcohol

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### Section XIII – STATE REGULATIONS

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Proposition 65 Substance(s) listed by the State of California under the “Safe Drinking Water and Toxic Enforcement Act of 1986”

None

New Jersey Trade Secret Registry Number(s)

None

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### Section IX – INTERNATIONAL REGULATIONS

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Canada

DSL – included on inventory

WHIS Hazard Classification

Class B Division 2

Class D Division 1B

WHMIS Trade Secret Registry Number(s)

None

WHMIS Hazardous Ingredients

Included in Section 2

WHMIS Symbols

Flames, stylized T

European Economic Community (EEC)

Einics Master Inventory

Included on inventory

EEC Symbol

Harmful (XN)

BBC COUNCIL DIRECTIVES RELATING TO THE CLASSIFICATION, PACKAGING AND LABELING OF DANGEROUS SUBSTANCES AND PREPARATIONS RISK ( R ) AND SAFETY ( S ) PHRASES

Flammable (R-10). Harmful by inhalation and if swallowed (R20/22). In use, may form flammable/explosive vapor-air mixture (R18).

Keep away from sources of ignition – No smoking (S16). Avoid contact with skin and eyes (S24/25).

Wear suitable protective clothing, gloves and eye/face protection (S36/37/39).

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