Material Safety Data Sheet

I. Product and Supplier Information

Product Name: Methyl Alcohol
Product Number: 10705
Product Synonyms: Methanol
Chemical Family or Formula: Alcohol C H3OH

MSDS Number: UPSMA
Publication Date: Nov. 8, 2001
Replaces: NA

Supplier: Ultra Pure Solutions, Inc.
11485 Commercial Parkway (Bldg 10)
Castroville, CA 95012

Phone: 831-632-2120
Fax: 831-632-2521
Web page: ultrapuresln@earthlink.net

Product Information: 831-632-2120
Transportation Emergency: 800-424-9300

II. Composition and Information on Ingredients

CAS #	SARA 313	Material or Component	%	RQ#	Exposure Limits TWA*	STEL*	WEEL*
67-56-1	Yes	Methanol	100	5000	200 ppm	250 ppm	NE

A4=Not Classifiable as a Human Carcinogen
BEI= Biological Exposure Limit exists for this material

No component is listed in "Threshold and Biological Exposure Indices for 2001" from ACGIH except as noted above.
Components listed in Title III Sec. 313 (EPCRA) are indicated by "Yes" above.
*TWA= Time Weighted Average; STEL= Short Term Exposure Limit; WEEL= Workplace Employee Exposure Level
NE= Not Established

III. Hazards Identification

OSHA Hazard Classification: EXTREMELY FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED OR SWALLOWED. CAUSES EYE IRRITATION. May cause damage to central nervous system, liver , kidneys. Chronic exposure during pregnancy may be harmful.

Routes of Entry: Skin, eyes, Inhalation, ingestion-toxic

Chemical Interactions: Avoid contact with all oxidizing agents.

Medical Conditions Aggravated:
Chronic disease of the nervous system, skin gastrointestinal tract and eyes.

Human Threshold Response Data
Odor Threshold: Not established
Irritation Threshold: Not established

Hazard Category Classifications and Ratings

Hazard Categories:	Health	Fire	Pressure	Reactivity	Reference 49 CFR 171.8 & 173,
Immediate	Yes	Yes	No	No	OSHA 29 CFR 1910.1200 and
Delayed	Yes	Yes	No	No	SARA 302/311/312/313.

HMIS Hazard Ratings: Health 3 Fire 3 Instability 0 Other B (Goggles, gloves)
NFPA 704 Hazard Ratings: Health 3 Flammability 3 Reactivity 0 Special NA
Hazard Ratings: Least: 0 Slight: 1 Moderate: 2 High: 3 Extreme: 4

Immediate (Acute) Health Effects

Inhalation Toxicity:

Harmful if inhaled or swallowed.

Inhalation Irritation: High concentrations or prolonged exposure can cause headaches, dizziness, nausea and may produce adverse effects on vision.

Skin Contact:

Skin contact may cause pain, redness, and severe irritation.

Skin Absorption:

May be absorbed through the skin with damage to kidneys, liver and central nervous system.

Eye Contact

Liquid and vapor cause eye irritation, tearing and a burning sensation.
May cause eye injury which can last several days.

Ingestion Irritation:

Poisonous or fatal if swallowed. A small amount can cause mental sluggishness, nausea and vomiting leading to adverse effects on vision, possible blindness and death if treatment is not received.

Ingestion Toxicity:

See above entry.

AcuteTarget Organ Toxicity:

Kidneys, liver, central nervous system.

Prolonged (Chronic) Health Effects

Carcinogenicity:

This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

Reproductive and Developmental Toxicity:

Animal studies show adverse effects on fertility when females were exposed chronically during pregnancy.

Sensitization:

None known.

Inhalation:

Prolonged or repeated exposure may cause more severe irritation. May cause pulmonary edema (fluid build-up in lungs). See also Inhalation entry above.

Skin Contact:

Prolonged or repeated skin exposure may cause dermatitis.

Skin Absorption:

Reported effects from chronic exposure include vision impairment and death.

Ingestion:

Chronic ingestion unlikely. See Acute entry above.

General :

Prolonged or repeated exposure may cause all acute toxic symptoms described above.

Chronic Target Organ Toxicity:

Vision, death.

Supplemental Health Hazard Information:

No additional health information available.

IV. First Aid

Inhalation:

Remove individual to fresh air. If not breathing, give artificial respiration or oxygen as appropriate. Seek medical attention if breathing becomes difficult.

Skin Contact:

Flush skin with water for 15 minutes and remove contaminated clothing. Wash shoes and clothing before reuse.

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids apart.

Ingestion:

Immediately drink water to dilute. Induce vomiting. Consult a physician immediately.
Never give anything by mouth to an unconscious person.

Note to physician:

When plasma methanol concentrations are higher than 20 mg/deciliter, when ingested doses are greater than 30 milliliters, and when there is evidence of acidosis or visual abnormalities, a 10% solution of ethanol in 5% aqueous dextrose, administered intraneneously, is a safe, effective antidote. (WJ of M, Mar 1985, p 337)

V. Fire Fighting Measures

Flammability Summary (OSHA):

Extremely flammable.

Flammable Properties:

Flash Point:	60F (15.6C) CC; 54F (12.2C) OC
Autoignition Temperature:	Not found
Upper Flammable/Explosive Limit, % in air	36.5
Lower Flammable/Explosive Limit, % in air	5.6

Fire/Explosion Hazards: Extremely dangerous! Vapor can travel distances to ignition sources and flash back.

Hot organic chemical vapors or mists are susceptible to sudden spontaneous combustion when mixed with air. Ignition may occur at temperatures below published autoignition or ignition temperatures. Ignition temperatures decrease with increasing vapor volume and vapor/air contact time and are influenced by pressure changes. Ignition may occur at typical elevated temperature process conditions, especially in processes operating under vacuum if subjected to the sudden ingress of air, or with sudden escape of hot vapors into outside air.

Extinguishing Media:

Water spray, foam, dry chemical or CO2
Do not allow contaminated water to enter sewers or waterways.

Fire Fighting Instructions:

In case of fire, use normal fire fighting equipment including a NIOSH approved self-contained breathing breathing apparatus (SCBA). Use water to cool containers.

Hazardous Combustion Products:

Oxides of carbon.

VI. Accidental Release Measures

Personal Protection for Emergency Situations:

Evacuate the area of all unnecessary personnel. Eliminate any ignition sources until the area is determined to be free from expolsion and fire hazards. Contain the release and eliminate its source if this can be done safely.

Spill Mitigation Procedures

Air Release:

Hazardous concentrations in air may be found in local spill area and immediately downwind. Vapors may be suppressed by the use of water fog. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste. Do not flush to sewer! US regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of stipulated quantities. US Coast Guard National Response Center is 800-424-8802.

Water Release:

This material is soluble in water. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste. Notify all downstream users of possible contamination.

Land Release:

Create a dike or trench to contain materials. Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container. Decontaminate all clothing and the spill area using a detergent and flush with large amounts of water. Contain all contaminated water for disposal and/or treatment.

Additional Spill Information:

Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response

personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dispose of spill residues per guidelines under Section XIII, Disposal Considerations.

VII. Handling and Storage

Handling: Use with adequate ventilation. Vent containers before opening wide.
Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash with water. Avoid breathing vapor, mist or gas. Electrically ground all equipment when handling this product. Retained residue may make empty containers hazardous. USE CAUTION!

Storage
Keep container closed when not in use. Store in a cool area away from ignition sources and oxidizers.

Shelf Life Limitations:
See label or certificate of analysis for shelf life if applicable.

Incompatible Materials for Storage:
Refer to Section X, "Incompatible Materials."

VIII. Exposure Controls and Personal Protection

Ventilation:
Local exhaust ventilation or other engineering controls are normally preferred when handling or using this product. Otherwise, use general exhaust ventilation if that is sufficient for general worker safety and comfort. Explosion proof motors and fans are required. A NIOSH/MSHA approved air supplied respirator is advised in the absence of adequate environmental control.

Protective Equipment for Routine Use of Product

Respiratory Protection:
See previous paragraph. Material should be handled or transferred in an approved fume hood or with adequate ventilation.

Respirator Type(s):
Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Skin: Wear impervious gloves (butyl rubber, Viton, e.g.) to avoid skin contact. Follow good industrial hygiene practices.

Eyes: Use chemical safety glasses with side shields, safety goggles and/or a full face shield where splashing is possible.

Protective Clothing Type: Impervious

Other: A safety shower and eye bath should be readily available.

Exposure Limit Data : See Section II

Chemical Name: NIOSH Level Immediately Dangerous to Life or Health:
1990 NIOSH 25,000 ppm; 1994 NIOSH 6000ppm

IX. Physical Data

Physical State:	Liquid
Color:	Colorless
Odor:	Mild alcohol odor
Molecular Weight:	32.0
pH (@ 25 Deg. C):	Not applicable
Octanol/Water Coeff:	No data
Solubility in Water:	100%
Bulk Density:	Not applicable
Specific Gravity:	0.792
Vapor Density (Air = 1):	1.1
Vapor Pressure: (@ 20 Deg. C):	96 mm Hg
Evaporation Rate(Butyl acetate =1):	2.0
Volatiles % by vol.:	100
Boiling Point:	54.4C (148.3F)
Freezing Point:	-97.8C (-144F)

X. Stability and Reactivity

Stability and Reactivity Summary:
Stable under normal conditions.
Reactive Properties:
Sensitivity to mechanical shock: None
Hazardous Polymerization: Will not occur
Conditions to Avoid: High temperatures, exposure to heat, sparks, flame
Chemical Incompatibility: Sulfuric acid, oxidizers
Incompatible materials: Corrosive to copper, zinc and their alloys, as well as other metals.
Hazardous Decomposition Products: CO, CO2
Decomposition Temperature: No data
Product May Be Unstable At Temperatures Above: No data

XI. Toxicological Information

Component Animal Toxicology
Oral LD50 value: 7.3 g/kg (rats) "Practically non toxic to rats."
Dermal LD50 value: 1.6 g/kg monkey
Inhalation LC50 value: 64,000 ppm (rats, 4 hrs)
Product Animal Toxicity:
See above
Skin Irritation:
This material is expected to be moderately irritating.
Eye Irritation:
This material is expected to be severely irritating.
Reproductive and Developmental Toxicity:
Caused birth defects in rats exposed to high levels of vapors : 20,000 ppm.
Component Data:
All data refer to methanol.
Mutagenicity:
In vitro: Limited positive evidence. In vivo: No information.
Carcinogenicity:
No evidence in animals from ingestion or skin absorption.
OSHA, NTP, or EPA.

XII. Ecological Information

Ecological Toxicity Values:

Environmental fate: No information found
Enviromental Toxicity: No information found

XIII. Disposal Considerations

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THIS MATERIAL
THE USER OF THIS MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS
Waste Disposal Summary:
Product as supplied qualifies as "Unlisted Hazardous Waste D001" with the characteristic of ignitability.

Potential US EPA Waste Codes:
U002; D001
Disposal Methods:
Disposed of in accordance with local, state and federal regulations for hazardous waste.
Components subject to land ban restrictions:
No components subject to land ban restrictions.

XIV. Transportation Information

Proper Shipping Name, Hazard Class, UN/NA Number Packing Group, Emergency Response Guide Number	
US Domestic DOT:	Methanol, 3, UN1230, PG II ERG 131
Labels required per 49 CFR 172.101:	Flammable

Size for "Limited quantity" per 49 CFR 173.150-.155:	1 quart max. in 66# max. container
Reportable Quantity ("RQ") per 49 CFR172.101:	5000#
Passenger air/ Rail	1 liter
Cargo air only:	60 liter
Vessel stowage:	A

XV. Regulatory Information

UNITED STATES:
Toxic Substances Control Act (TSCA):
The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.
Pesticide acceptance indication: US EPA Registration Number:
Not applicable

Superfund Amendments and Reauthorization Act (SARA) Title III:
See Section III of this MSDS.
Hazard Categories Sections 311/312 (40 CFR 370.2):
Health:
Acute Yes
Chronic Yes
Physical: None
Emergency Planning & Community Right to Know (40 CFR 355, App. A):
Extremely Hazardous Substance Section 302 - Threshold Planning Quantity:
Not applicable
Reportable Quantity (40 CFR 302.4):
5000#
Supplier Notification Requirements (40 CFR 372.45), 313 Reportable Components
See sSection II.

State Right-to-Know Regulations Status of Ingredients
Methanol listed in: CT, FL, IL, MA, NJ, NY, PA, RI

XVI. Additional Information

MSDS REVISION STATUS: Revised to meet the ANSI standard of 16 sections.
THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION INTHIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. WE BELIEVE THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF ITS PUBLICATION DATE, BUT MAKE NO WARRANTY THAT IT IS. IF THIS MSDS IS MORE THAN THREE YEARS OLD YOU SHOULD CONTACT THE SUPPLIER TO MAKE CERTAIN THAT THE INFORMATION IS CURRENT.
MSDS data source: Celenese #214311 11/17/98