

Effective Date: 12/01/88

## MANUFACTURER:

KTI CHEMICALS INCORPORATED  
(A Subsidiary of  
UNION CARBIDE CORPORATION)  
1170 Sonora Court  
Sunnyvale CA 94086

INFORMATION TELEPHONE:  
408-733-3500

EMERGENCY TELEPHONE:  
800-UCC-HELP

Union Carbide 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 or fire prevention, as necessary or appropriate to use and understand the data contained in this MSDS.

To promote safe use and handling of this product, each customer or recipient should (1) notify its employees, agents, contractors, and others whom it knows or believes will use this material of the information on this MSDS and any other information regarding 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.

U.S. EMERGENCY PHONE NUMBER: 1-800-UCC-HELP. OUTSIDE THE U.S., CALL CHEMTREC: 202-483-7616. THESE PHONE NUMBERS ARE AVAILABLE DAYS, NIGHTS, WEEKENDS, AND HOLIDAYS. UNION CARBIDE CORPORATION, 39 OLD RIDGEBURY RD., DANBURY, CT 06817-0001.

## I. IDENTIFICATION

PRODUCT NAME: KTI KPR THINNER - Gallon ( FOR PHOTOENGRAVING )

CHEMICAL NAME: N/A

CHEMICAL FAMILY: N/A

FORMULA: C5H10O3

SYNONYMS: See section X, item 1.

MOLECULAR WEIGHT: 118.14

DOT SHIPPING NAME: NON REGULATED

UN/NA: N/A

DOT HAZARD CLASS: NON REGULATED

CAS #: 110-49-6

CAS NAME: Ethanol, 2-Methoxy-, Acetate

## II. PHYSICAL DATA

BOILING POINT (760 mm Hg):	293 (DEG F)	VAPOR PRESSURE ( at 20C ):	2.0 mm Hg
SPEC GRAVITY (Water = 1):	1.0067	SOLUBILITY IN WATER, % by wt.:	Cpcomplete
VAPOR DENSITY (Air = 1):	4.07	% VOLATILES ( by Volume ):	100 %
EVAPORATION RATE (Butyl acetate = 1):	<1	PRODUCT APPEARANCE:	Colorless liquid
		ODOR:	Mild odor

III. INGREDIENTS

INGREDIENT DESCRIPTION	CAS NUMBER	WEIGHT PERCENT	TLV	PEL
2-Methoxyethyl acetate	110-49-6	100 %	5.00 ppm	25.00 ppm

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (DEG F): 121 TCC

FLAMMABLE LIMITS IN AIR, % by volume: LOWER: 1.7 UPPER: 8.2

EXTINGUISHING MEDIA: Alcohol foam, carbon dioxide, dry chemical, water spray.

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Containers near fire may be cooled with water. May emit toxic fumes if burned.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Fire or excessive heat may cause production of hazardous decomposition products.

V. HEALTH HAZARD INFORMATION

EXPOSURE LIMITS AND SOURCE:

For 2-Methoxyethyl acetate: 5 ppm TWA-8 - skin (ACGIH 1987-88), and 25 ppm - skin (OSHA). See section X, item 2.

EFFECTS OF ACUTE EXPOSURE:

SWALLOWING: Headache, dizziness, drowsiness, lack of appetite, nausea, vomiting, apathy. Swallowing large quantities may result in kidney damage.

SKIN ABSORPTION: Prolonged or widespread contact with skin may lead to the absorption of harmful amounts of material resulting in signs and symptoms of toxicity as described in effects of swallowing.

INHALATION: Vapors may be irritating to eyes, nose and respiratory tract, and cause dizziness, headache, nausea, vomiting, chest discomfort, and apathy.

V. HEALTH HAZARD INFORMATION CONT.

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EFFECTS OF ACUTE EXPOSURE CONT.  
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SKIN CONTACT: Prolonged or repeated contact may cause defatting and drying of skin.

EYE CONTACT: Liquid may cause moderate irritation, seen as excess reddening and swelling of the conjunctiva, iritis, and minor corneal injury.

EFFECTS OF REPEATED OVEREXPOSURE:

Repeated overexposure may cause injury to bone marrow and blood cells, kidney, liver, and testes.

OTHER POTENTIAL HEALTH EFFECTS:

In laboratory inhalation studies with a closely related chemical, 2-Methoxyethanol, birth defects, increased fetal lethality, and delayed fetal development have been observed in offspring of female animals exposed to concentrations in air of 50 ppm and higher.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY OVEREXPOSURE:

A 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.

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EMERGENCY FIRST AID PROCEDURES

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SWALLOWING: If the patient is conscious and retains the gag reflex, give two glasses of water. Induce vomiting. Obtain medical attention.

SKIN: Remove contaminated clothing and wash skin with soap and water. Wash clothing before reuse.

INHALATION: Remove to fresh air. Give artificial respiration if not breathing. Qualified personnel may give oxygen if breathing is difficult. Call a physician.

EYES: Immediately flush eyes thoroughly with water and continue flushing for at least 15 minutes. Seek medical attention.

NOTES TO PHYSICIANS:

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Recovery from recurrent overexposure may be prolonged.

VI. REACTIVITY DATA

STABILITY CONDITIONS None  
UNSTABLE STABLE TO AVOID:  
X

INCOMPATIBILITY (MATERIALS TO AVOID): Avoid contact with strong oxidizers, oxides of nitrogen may be produced.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS: Burning can produce carbon dioxide and/or carbon monoxide.

HAZARDOUS POLYMERIZATION MAY OCCUR WILL NOT OCCUR TO AVOID: None  
X

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Avoid inhalation and skin contact. Wear suitable protective equipment. Contain the spill and use absorbent to collect liquid for disposal. Dispose of residue in accordance with government regulations. Avoid discharge to natural waters.

WASTE DISPOSAL METHOD: Incinerate where permitted under appropriate Federal, State and Local regulations.

VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Above recommended exposure levels, a NIOSH-approved respirator for organic vapors is recommended. Supplied air respirator in emergency or high concentrations.

VENTILATION: Handling of this product should be done in a closed ventilated system, such as an exhaust hood.

PROTECTIVE GLOVES: Butyl rubber. EYE PROTECTION: Safety glasses with side shields, monogoggles, or face shield, dependent on volume of material to be handled.

OTHER PROTECTIVE EQUIPMENT: As necessary to prevent skin contact. Eye bath and safety shower.

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Warning! Harmful if inhaled or absorbed through skin. Causes eye irritation. Combustible liquid and vapor. May cause dizziness and drowsiness. May cause liver, kidney, red blood cell, and testes damage. In laboratory animal studies, birth defects and adverse effects on pregnancy have been observed with a closely related chemical, 2-methoxyethanol.

For women of childbearing potential:

- \* Maximum personal exposure limit in air 2 ppm (8-hour time weighted average).
- \* Maximum 15 minute excursion level 5 ppm (no more than four such excursions daily with a minimum separation of 1 hour).
- \* Avoid all skin contact.

In laboratory animals, prolonged and repeated exposure to a closely related chemical, 2-methoxyethanol, has caused damage to male reproductive organs.

For persons other than women of childbearing potential:

- \* Maximum personal exposure limit in air 5 ppm (ACGIH 1987-88), 8-hour time weighted average.
- \* Avoid all skin contact.

====FOR INDUSTRY USE ONLY=====

OTHER PRECAUTIONS: Not for use in consumer products.

X. OTHER INFORMATION

1. SYNONYMS

- \* For 2-Methoxyethyl acetate: Ethylene glycol monomethyl ether acetate. CAS NAME: Ethanol, 2-methoxy-, acetate

2. UNION CARBIDE RECOMMENDATIONS for 2-Methoxyethyl acetate:

For women of childbearing potential:

- \* Personal exposure limit - 2 ppm (8-hour time weighted average).
- \* Short term exposure limit - 5 ppm (15-minute time weighted average excursion, no more than four times daily, with a minimum separation of 1 hour).
- \* Avoid all skin contact.

For other persons:

- \* Personal exposure limit - 5 ppm (8-hour time-weighted average).
- \* Avoid all skin contact.

REGULATORY INFORMATION

- FEDERAL EPA -

STATUS ON SUBSTANCE LISTS:

Refer to Section III. for the ingredient concentrations to be used for calculations for regulations. Trade Secrets are indicated by "TS".

COMPREHENSIVE ENVIRONMENTAL RESPONSE, 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 (RQ's) in 40 CFR 302.4.

Components present in this product at a level which could require reporting:

CHEMICAL NAME/CAS NUMBER  
- NONE -

UPPER BOUND CONCENTRATION

(X. REGULATORY INFORMATION CONT.)

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA).

Requires emergency planning based on Threshold Planning Quantities (TPQ's) and release reporting based on Reportable Quantities (RQ's) 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: (=) 1% or 0.1% carcinogen)

CHEMICAL NAME/CAS NUMBER	UPPER BOUND CONCENTRATION
- NONE -	

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA).

Requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313).

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

CHEMICAL NAME/CAS NUMBER	UPPER BOUND CONCENTRATION
2-Methoxyethyl acetate/110-49-6	* See Sec III

TSCA INVENTORY STATUS:

The ingredients of this product are on the TSCA inventory.

- STATE RIGHT-TO-KNOW -

CALIFORNIA PROPOSITION 65.

- NONE -

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:

CHEMICAL NAME/CAS NUMBER	UPPER BOUND CONCENTRATION
2-Methoxyethyl acetate/110-49-6	* See Sec III

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:

CHEMICAL NAME/CAS NUMBER	UPPER BOUND CONCENTRATION
2-Methoxyethyl acetate/110-49-6	* See Sec III

N/D = Not Determined      N/A = Not Applicable

The opinions expressed herein are those of qualified experts within Union Carbide Corporation. 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 use of the product are not within the control of Union Carbide Corporation, it is the user's obligation to determine the conditions of safe use of the product.