MATERIAL SAFETY DATA SHEET

KEMTEC
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MSDS No. AA 05
Effective Date August 22, 1996

SECTION I NAME

24 HOUR EMERGENCY ASSISTANCE

CHEMTREC 800-424-9300
Day 716-226-8177

Product	ACETIC ACID,
Chemical Synonyms	Ethanoic acid; Methanecarboxylic acid
Formula	CH_3COOH
Unit Size	up to 2.5 Lt.
C.A.S. No.	64-19-7

NFPA HAZARD RATING
LEAST 0 SLIGHT 1 MODERATE 2 HIGH 3 EXTREME 4

HMIS *

Health	3
Fire	2
Reactivity	1

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Acetic Acid, Glacial	99.8%	TWA: 10 ppm; 25 mg/m^3
DANGER! POISON CORROSIVE! COMBUSTIBLE.		
CAUSES SEVERE BURNS. MAY BE FATAL IF SWALLOWED.		

SECTION III PHYSICAL DATA

Melting Point (°F)	16.7°C (61°F)	Specific Gravity (H_2O = 1)	1.051 @ 20/20°C
Boiling Point (°F)	118.1°C (245°F)	Percent Volatile by Volume (%)	100%
Vapor Pressure (mm Hg)	11.4 mm @ 20°C (68°F)	Evaporation Rate (Butyl Ac. =1)	1.0
Vapor Density (Air=1)	2.07		
Solubility in Water	Complete.		
Appearance & Odor	Clear, colorless liquid; strong acrid vinegar-like odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	43°C (109°F) CC.	Flammable Limits in Air % by Volume	Lower 5.3	Upper 16.6
Extinguisher Media	Use carbon dioxide (CO_2), dry chemical, alcohol foam. Large spills, use water spray or alcohol foam.			

SPECIAL FIREFIGHTING PROCEDURES

Water in a straight hose stream will scatter and spread fire and should not be used. Use water spray to cool container. In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing. Gives off flammable vapor above its flash point: 109°F. Vapor forms explosive mixtures with air. Dangerous in contact with chromic acid, sodium peroxide, nitric acid or other oxidizing materials.

Autoignition Temperature: 426°C (800°F).

UNUSUAL FIRE AND EXPLOSION HAZARDS

Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat or spark. Acid reacts with most metals to release hydrogen gas which can form explosive mixtures with air. Moderate fire hazard, when exposed to heat and flame; can react vigorously with oxidizing materials. May produce severe acid burns to skin and eyes. Prolonged breathing of concentrated vapor may be harmful. Glacial acetic acid contracts upon freezing (specific gravity of liquid at 62.1°F is 1.05 and of the solid at 62°F is 1.27).

(1990 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.5, GUIDE PAGE NO. 29)

D.O.T. **Acetic acid, glacial, 8, UN 2789, PG II**

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA

Threshold Limited Value
TWA: 10 ppm; 25 mg/m^3. STEL: 15 ppm; 37 mg/m^3. (ACGIH, 1992-93)
Toxicity data: orl-rat LD50: 3.3 g/kg

Effects of Overexposure
SKIN: Can cause chemical burn. EYES: Can cause chemical burn. Damage irreversible. Vapors are severely irritating. INHALATION: Causes severe irritation of nasal passages, throat and lungs. Can cause pulmonary edema. INGESTION: Causes severe irritation of and damage to mouth, throat and stomach.

Emergency and First Aid Procedures
SKIN: Immediately flush exposed area with water, then water containing sodium bicarbonate. If irritation persists, contact physician. EYES: Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. INHALATION: Remove to fresh air. If breathing has stopped, give artificial respiration, then oxygen if needed. Contact a physician immediately. INGESTION: Do NOT induce vomiting. Drink large quantities of water, follow with milk of magnesia, beaten eggs, or vegetable oil. Get prompt medical attention. Never give anything by mouth to an unconscious person.

SECTION VI REACTIVITY DATA

Stability			Conditions to Avoid
	Unstable		Keep from freezing. Avoid excessive temperature, heat, sparks and open flame
	Stable	X	

Incompatibility (Materials to Avoid)
Oxidizing agents, for example, hydrogen peroxide, nitric acid, perchloric acid or chromium trioxide; strong alkalies such as sodium hydroxide.

Hazardous Decomposition Products
Dangerous; when heated to decomposition, emits toxic and corrosive fumes of carbon monoxide and/or carbon dioxide.

Hazardous Polymerization		Conditions to Avoid
May Occur	Will Not Occur	Not applicable.
	X	

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled
Eliminate all sources of ignition. Avoid eye or skin contact. To neutralize odor or acidity, cover contaminated surface with soda ash or sodium bicarbonate. Place leaking containers in a well-ventilated area with spill containment. If fire potential exists, blanket spill with alcohol-type aqueous film-forming foam. Cover spill with absorbent material and place in suitable container for disposal. Avoid runoff to sewers and ditches which lead to natural waterways.

Waste Disposal Method
Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only.

Preferred method of waste disposal are incineration or biological treatment in federal/state approved facility.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type) For laboratory use work in ventilation hood or wear a NIOSH/MSHA-approved respirator

Ventilation				
	Local Exhaust	Recommended	Special	No
	Mechanical (General)	Recommended	Other	No

Protective Gloves Rubber. **Eye Protection** Chemical safety goggles, face shield

Other Protective Equipment Goggles and shield, lab coat, apron, vented hood, proper gloves, fire extinguisher, eye wash station

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing
Keep container tightly closed when not in use

Store in a well-ventilated area away from heat, sparks and open flame. Keep in tightly closed container, at a temperature above 17°C (63°F). Store separate from oxidizing materials and combustible materials. Remove cap slowly.

Other Precautions Read label on container before using. Do not wear contact lenses when working with chemicals

Avoid contact with eyes, skin and clothing. Avoid breathing vapor. Use adequate ventilation. Wash thoroughly after handling. Remove and wash contaminated clothing. Protect against physical damage. If frozen, thaw by moving closed container to warm area.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Revision No. 3	Date 8/22/96	Approved Michael Raszeja	Chemical Safety Coordinator MR