

88-4938



ECP 2079-1F (8-79)

MATERIAL SAFETY DATA SHEET

SECTION I

PRODUCT NAME: Propionic Acid	SIZE: Bulk & 55-gallon drums
CHEMICAL NAME: Propionic Acid	CAS No. 79-09-4
FORMULA: $\text{CH}_3\text{CH}_2\text{COOH}$	
MANUFACTURER: Marketed by Eastman Chemical Products, Inc.	
ADDRESS: Kingsport, Tennessee 37662	
FOR INFORMATION ON HEALTH HAZARDS CALL: Monday thru Friday, 8 a.m.-5 p.m. (Eastern), (615) 229-3613; all other times (615) 229-4666	
FOR OTHER INFORMATION CALL: (615) 229-5114	INFORMATION EFFECTIVE AS OF: September 1982

SECTION II HAZARDOUS INGREDIENTS OF MIXTURES

PRINCIPAL HAZARDOUS COMPONENT (S)	%	TLV (Units)
Not applicable.		

SECTION III PHYSICAL DATA

BOILING POINT (°F.)	286°F (141.1°C)	SPECIFIC GRAVITY (H ₂ O = 1)	0.99 at 20°C
VAPOR PRESSURE (mm Hg.)	3.0 at 20°C	PERCENT VOLATILE BY VOLUME (%)	~ 100
VAPOR DENSITY (AIR = 1)	2.55	EVAPORATION RATE (— = 1)	Not determined.
SOLUBILITY IN WATER	Complete.		
APPEARANCE AND ODOR	Colorless, oily liquid; pungent disagreeable odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
126°F (52°C) Tag Closed Cup		3.04% at 148°F	14.9% at 244°F
EXTINGUISHING MEDIA	"Alcohol" foam, Water spray, Dry chemical, CO ₂		
SPECIAL FIRE FIGHTING PROCEDURES	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.		
UNUSUAL FIRE AND EXPLOSION HAZARDS	None known to Eastman.		



TOXICITY SUMMARY

Propionic Acid

<u>Test</u>	<u>Species</u>	<u>Result (2)</u>	<u>Toxicity Classification (1)</u>
Acute Oral LD ₅₀	Rat	4260 mg/kg	Slightly Toxic
Acute Oral LD ₅₀	Rat	2600 mg/kg	Slightly Toxic
Dermal LD ₅₀	Rabbit	496 mg/kg	
Skin Irritation	Rabbit	Corrosive	
Eye Irritation	Rabbit	Corrosive	

Propionic acid is a common ingredient in many foods, including dairy products (especially in swiss cheese). It is frequently utilized as a food additive due to its antimicrobial action. Propionic acid is rapidly absorbed through the gastrointestinal tract and is readily incorporated into the intermediary metabolism; it is utilized by most organs and tissues, and in man, it represents up to 4.0% of the total plasma fatty acid. When added to the feed of rats (750 mg/kg/day for 4 weeks followed by 2250 mg/kg/day for 3 weeks), it produced no evidence of systemic toxicity. (2)

References:

- H. C. Hodge and J. H. Sterner. Tabulation of toxicity classes. *American Industrial Hygiene Association Quarterly* 1949;10:93-6.
- G. D. Clayton, F. E. Clayton, Editors. *Patty's Industrial Hygiene and Toxicology*, 3rd Revised Edition, Volume 2C. New York, Wiley-Interscience, 1982, pp. 4911-13.

MSDS-5100-3 (9-82)

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE TWA: 10 ppm; STEL: 15 ppm; ACGIH 1981.

EFFECTS OF OVEREXPOSURE

Liquid causes severe skin and eye burns.
Vapor is irritating to eyes, nose, and throat.
(See attached Toxicity Summary.)

EMERGENCY AND FIRST AID PROCEDURES

Eye contact: immediately flush eyes with plenty of water for at least 15 minutes and get medical attention.
Skin contact: immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes and get medical attention.
Vapor irritation of eyes, nose, and throat: remove from exposure, treat symptomatically, and get medical attention if symptoms persist.

SECTION VI REACTIVITY DATA

STABILITY	UNSTABLE	X	CONDITIONS TO AVOID
	STABLE		Not applicable.

INCOMPATIBILITY
(Materials to avoid) Oxidizing materials can cause a vigorous reaction.

HAZARDOUS DECOMPOSITION PRODUCTS As with any other organic material, combustion will produce carbon dioxide and probably carbon monoxide.

HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID
May Occur	Will Not Occur X	
		Not applicable.

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Eliminate all ignition sources. Small spills may be collected with absorbent materials. For large spills, use water spray to dilute spill to a noncombustible mixture. Prevent run-off from entering drains, sewers or streams. Neutralize spill and/or washings with soda ash or lime.

WASTE DISPOSAL METHOD Incineration.
Observe all Federal, state and local laws concerning health and environment.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION
(Specify type) An appropriate NIOSH-approved respirator for organic vapor and/or mists should be worn as needed.

VENTILATION	LOCAL EXHAUST Recommended.	SPECIAL	None known to Eastman.
	MECHANICAL (general) Recommended.	OTHER	None known to Eastman.

PROTECTIVE GLOVES Should be worn. **EYE PROTECTION** Full-face respirator for vapor and mist protection if needed; otherwise, safety glasses should be worn.

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

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Material is classified as a Combustible Liquid. Keep away from heat and open flame. Keep container closed. Do not get in eyes, on skin, or on clothing. Avoid breathing vapor or mist. Use respirator in mists. Wash thoroughly after handling.

OTHER PRECAUTIONS Product residue may remain on or in "empty" package. All precautions for handling the product must be used in handling the "empty" package and residue. Clean before reusing or altering package. Wash contaminated clothing before reuse. Maintain workroom air concentrations below the specified TLVs. (See Section V)

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