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**MATERIAL
SAFETY
DATA SHEET**
No. 99

SECTION 1. PRODUCT INFORMATION

NAME: 1-Butene

TRADE NAME AND SYNONYMS: 1-Butene; Liquefied Petroleum Gas (D.O.T.)

APPEARANCE AND ODOR: Colorless liquid and vapor with a slight olefinic odor

CHEMICAL NAME AND SYNONYMS: 1-Butene; Butene-1

CAS #: 106-98-9

DOT I.D. No: UN 1075

DOT HAZARD CLASS: Division 2.1

CHEMICAL FORMULA: $\text{CH}_2\text{CHCH}_2\text{CH}_3$ or C_4H_8

CHEMICAL FAMILY: Monolefin

ISSUE DATE AND REVISIONS: Revised November 2005

SECTION 2. HEALTH HAZARD DATA

EMERGENCY OVERVIEW: 1-Butene is a flammable gas approximately 2 times heavier than air.

Inhalation: It has a very mild anesthetic effect which might cause lack of coordination or mental alertness; however, the major property is the exclusion of an adequate supply of Oxygen to the lungs.

It is mildly irritating to the skin and mucous membranes. Contact with the rapidly evaporating liquid could cause frostbite or cryogenic "burns".

TIME WEIGHTED AVERAGE EXPOSURE LIMIT: None listed. Should be considered a simple asphyxiant (ACGIH 2004). OSHA 2004 has no listing for 1-Butene.

Oxygen levels should be maintained at greater than 19.5 Molar percent at normal atmospheric pressure ($p\text{O}_2 > 148$ torr).

TOXICOLOGICAL PROPERTIES: Breathing high concentrations causes a very mild anesthetic effect. Frostbite effects are the change in the color of the skin to gray or white possibly followed by blistering. 1-Butene is not listed in the IARC, NTP or by OSHA as a carcinogen or potential carcinogen. Persons in ill health where such illness would be aggravated by exposure to 1-Butene should not be allowed to work with or handle this product.

RECOMMENDED FIRST AID TREATMENT: PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO 1-BUTENE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS AND BE COGNIZANT OF EXTREME FIRE AND EXPLOSION HAZARD.