

**Material Safety Data Sheet**

May be used to comply with OSHA's Hazard Communication Standard 29 CFR 1910.1200. Standard must be consulted for specific requirements.

**U.S. Department of Labor**

Occupational Safety and Health Administration (Non-Mandatory Form)  
Form Approved OMB No. 1218-0072

**Identity (As Used on Label and List)**  
LIGHTERS, containing flammable gas (UN# 1057)

*Note: Blank Spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.*

**SECTION I**

<b>Supplier's Name</b> Magna Industires, Inc.	<b>Emergency Telephone Number</b> 1-800-424-9300
<b>Address</b> <i>Number, Street, City and Zip Code</i>  2233 West 110th Street Cleveland, Ohio 44102	<b>Telephone Number for Information</b> 1-323-261-7293
	<b>Date Prepared</b> September 24, 2001
	<b>Signature of Preparer (Optional)</b>

**SECTION II - Hazardous Ingredients/ Identity Information**

Hazardous Components <i>Specific Chemical Identity, Common Name(s)</i>	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (Optional)
Butane (n-Butane) CAS #106-97-8	NA	800 PPM	NIOSH - 800 PPM	80
Propane (n-Propane, Propyl Hydride) CAS #74-98-6	1,000 PPM	1,000 PPM	NIOSH - 1,000 PPM	20

**NFPA Hazard Ratings**

Health - 1  
Flammability - 4  
Reactivity - 0

**HMIS Ratings**

Health - 0  
Flammability - 4  
Reactivity - 0

**SECTION III - Physical/Chemical Characteristics**

<b>Boiling Point</b>	10.9°F	<b>Specific Gravity (H<sub>2</sub>O = 1)</b>	0.56
<b>Vapor Pressure (mm Hg)</b>	1823	<b>Melting Point</b>	NA
<b>Vapor Density (Air = 1)</b>	2	<b>Evaporation Rate (Butyl Acetate = 1)</b>	>1
<b>Solubility in Water</b>	@ 77°C, 17cc per 1000 cc of Water		
<b>Appearance and Odor</b>	Clear, Odorless		

**SECTION IV - Fire and Explosion Hazard Data**

<b>Flash Point (Method Used)</b>	-120°F (O.C.)	<b>Flammable Limits</b>	NA	<b>LEL</b>	1.8	<b>UEL</b>	8.4
<b>Extinguishing Media</b>	Carbon dioxide, dry chemical, fog or water spray.						
<b>Special Fire Fighting Procedures</b>	Confine fire to immediate area. Disperse liquid or vapor if leaks occur.						
<b>Unusual Fire and Explosion Hazards</b>	Will form explosive mixtures in air. Vapors from liquified gas initially heavier than air and spread along ground. Vapors may travel to ignition source and flash back.						

**SECTION V - Reactivity Data**

<b>Stability</b>	Unstable		<b>Conditions to Avoid</b>
	Stable	X	Heat, Sparks, Open Flames.
<b>Incompatibility (Materials to Avoid)</b>	Strong acids, alkalis and oxidizers.		
<b>Hazardous Decomposition or Byproducts</b>	Combustion may produce carbon monoxide.		
<b>Hazardous Polymerization</b>	May Occur		<b>Conditions to Avoid</b>
	Will Not Occur	X	NA

**SECTION VI - Health Hazard Data**

<b>Route(s) of Entry</b>	<b>Inhalation?</b>	<b>Skin?</b>	<b>Ingestion?</b>
	Yes	Yes	Yes

**Health Hazards (Acute and Chronic)**

Extreme flammability; vapor clouds easily ignited; simple asphyxiation; frostbite to skin and eyes from contact with liquid gases.

<b>Carcinogenicity</b>	<b>NTP?</b>	<b>IARC Monographs?</b>	<b>OSHA Regulated?</b>
	No	No	No

**Signs and Symptoms of Exposure**

Drowsiness or dizziness possible at low concentrations of the gases.

**Medical Conditions**

Generally Aggravated by Exposure

Personnel with pre-existing chronic respiratory diseases should avoid exposure to these gases.

**Emergency and First Aid Procedures**

Remove affected personnel from contaminated area to fresh air. For respiratory distress, give air, oxygen, and administer cardio-pulmonary resuscitation as needed. For burns to eye, remove contact lenses and immediately flush with water for at least 15 minutes. Frozen skin should be flooded with warm water (105-115°F).

**SECTION VII - Precautions for Safe Handling and Use**

**Steps to be Taken in Case Material is Released or Spilled**

Remove all ignition sources. Ventilate area of leak to disperse the gas.

**Waste Disposal Method**

Discharge at moderate rate in well ventilated area without ignition sources.

**Precautions to be Taken in Handling and Storing**

Store in a cool, dry place. Keep away from heat, sparks and flame. Do not store in temperatures exceeding 120°F or in direct sunlight.

**Other Precautions**

Do not store with strong acids (e.g. hydrochloric acid, sulphuric acid), strong bases (e.g. sodium hydroxide, potassium hydroxide), oxidizing agents (e.g. perchlorates, peroxides, permanganates, chlorates, nitrates, chlorine, fluorine, bromine) and mixtures of nickel carbonyl and oxygen.

**SECTION VIII - Control Measures**

**Respiratory Protection (Specify Type)**

Not required for normal use. For excessive gas concentrations use NIOSH/MSHA approved SCBA.

Ventilation	Local Exhaust Maintain level below .25 LEL.	Special NA
	Mechanical (General) Maintain level below .25 LEL.	Other NA
Protective Gloves Rubber Gloves.	Eye Protection ANSI Approved Chemical Workers Goggles.	

**Other Protective Clothing or Equipment**

Not Required.

**Work/Hygenic Practices**

On skin contact with butane, immediately immerse the affected body part in warm water.

**SECTION IX - Shipping Information**

WHMIS Classification:		A - Compressed Gas	B-1 - Flammable Gas
Department of Transportation:	Proper Shipping Name Lighters, containing flammable gas	Hazard Classification 2.1	UN No. 1057