



MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Zippo Butane			
DATE: February 17, 2010			
TRADE NAME: Zippo Butane GENERAL USE: Lighter Fuel CHEMICAL FAMILY: PARAFFIN SERIES HYDROCARBON PRODUCT DESCRIPTION: CLEAR, COLORLESS, ODORLESS LIQUEFIED GAS.			
MANUFACTURED FOR: Zippo Manufacturing Company		DATE PREPARED: February 17, 2010	
		SUPERSEDES: 02/03/2010 issue.	
ADDRESS (NUMBER, STREET, P.O. BOX) 33 Barbour Street		TELEPHONE NUMBER FOR INFORMATION / Customer Service (814) 368-2700	
(CITY, STATE AND ZIP CODE) Bradford, PA 16701		COUNTRY USA	
		CHEMTEL 24-HOUR EMERGENCY TELEPHONE NUMBER  1-800-255-3924 01-813-248-0585 North America Toll Free International	

SECTION 2 - HAZARDOUS INGREDIENTS

Hazardous Components	MOL%	CAS #	EINECS #	Hazard Symbol	RISK PHRASES (Full Text Section 15)
Petroleum gases, liquefied, sweetened	100	68476-86-8	270-705-8	(+F)	R12

Notes: THIS PRODUCT IS DEFINED BY OSHA IN 29 CFR 1910.1200c AS A FLAMMABLE GAS. USE OF THIS PRODUCT MAY REQUIRE COMPLIANCE WITH 29 CFR 1910.119, PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
 Contact with evaporating liquid may cause frostbite. Under normal conditions of storage and use of this product will not constitute a health hazard. However if released, being heavier than air, this product may collect in any confined space and may reach concentrations presenting an asphyxiation or safety hazard and may be ignited by pilot lights, other flames, sparks, heaters electric motors, static discharge, or other sources of ignition.

POTENTIAL HEALTH EFFECTS

INHALATION:
 Inhalation of vapor may produce anesthetic effects and feeling of euphoria. Prolonged overexposure can cause rapid breathing, headache, dizziness, narcosis, unconsciousness, or death from asphyxiation, depending upon concentration and period of exposure.

SKIN:
 Direct contact of the skin with this product may cause frostbite or cold burns and containers may present a similar hazard when gas is being withdrawn, due to the cooling effect. Handling precautions should be strictly observed.

EYES:
 Liquid can cause severe irritation, redness, tearing, blurred vision, and possible freeze burns.

INGESTION:
 Aspiration Hazard.

CARCINOGENICITY:

NTP? No	IARC MONOGRAPHS? No	OSHA REGULATED? No
CALIFORNIA, Prop.65? No	ESIS?, (Europe) No	

SECTION 4 - FIRST AID MEASURES

INHALATION:
 Remove victim to fresh air. IF BREATHING HAS STOPPED, RESTORE BREATHING AT ONCE. Apply artificial respiration or oxygen if needed. Get medical attention immediately.

EYES:
 Immediately flush eyes with water for at least 15 minutes. Get medical attention if irritation persists. CONSULT PHYSICIAN IMMEDIATELY IF FROSTBITE OCCURS.

SKIN:
 For liquid contact, warm areas gradually and get medical attention. If there is evidence of tissue damage, flush area with plenty of water.

INGESTION:
 Do not induce vomiting unless directed to do so by a physician or poison control center. Get immediate medical attention.

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SECTION 5 - FIRE FIGHTING MEASURES

GENERAL HAZARDS:
 Highly Flammable Flash Point -132.23 to -156.0 F ,LEL=1.8% vol in air,UEL= 9.5% vol. in air.

EXTINGUISHING MEDIA:
 Dry Chemical (B-C), water.

FIRE FIGHTING PROCEDURES:
 Keep containers cool using water spray to avoid bursting. Evacuate area. Avoid accumulation of unburned materials. Remove personnel in general area. Observe maximum isolation when extinguishing fire. Expansion of liquid and change of state from liquid to vapor will allow combustible mixture to encompass a large area.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
 Vapors are heavier than air and may travel along the ground or may be moved by ventilation systems and ignited by pilot lights, open flames, sparks, heaters, smoking instruments, electric motors, static discharge, or other ignition sources at locations in proximity of the material handling point. If a fire occurs, the potential always exists for an explosion known as boiling liquid expanding vapor explosion (BLEVE)

HAZARDOUS COMBUSTION PRODUCTS:
 CO, CO2 and hydrocarbons.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Containment Procedures
 Stop leak if possible. Eliminate all sources of ignition. Prevent vapor from entering sewers, basements or confined areas.

Clean-Up Procedures
 Evacuate all personnel and remain upwind of leak.

Evacuation Procedures
 Evacuate the area promptly. Keep upwind of the spilled material and isolate exposure.

Special Procedures
 Wear appropriate personal protection equipment.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Handling Procedures
 Avoid high temperatures that may elevate component pressure above container rating. Do not get into eyes; prevent contact with skin and clothing. Do not breathe dust. If product is placed in solution, take precautions to avoid breathing mists. When using, do not eat, drink, or smoke. Remove all contaminated clothing and wash before reuse. Wash thoroughly after handling.

STORAGE PRECAUTIONS: Store in a cool well ventilated area. Do not store at temperatures above 120°F which may cause container to burst. Do not puncture or incinerate containers. Keep out of the reach of children. Small containers e.g. cylinders of approved design, properly sealed and in good condition, should be stored outdoors or in well ventilated storerooms, at no lower than ground level and must be quickly removable in an emergency. Eliminate all sources of ignition from the storage area.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

HAZARDOUS COMPONENTS	NIOSH				ACGIH		OSHA	
	TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3	TLV/TWA ppm	TWA mg/m3	PEL ppm	PEL mg/m3
Petroleum gases, liquefied,sweetened	800	1900			800		800	NE

PERSONAL PROTECTION

RESPIRATORY PROTECTION:
 For exposures above PEL Limits, use NIOSH or EN-149 (European) approved respirator to control exposure when TWA exceeded. Maintain adequate ventilation.

PROTECTIVE GLOVES:
 Chemical resistant ,impervious, and insulated.

EYE PROTECTION:
 Faceshield or Goggles.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
VENTILATION
MECHANICAL: Provide as needed to keep concentration in air below TLV and LEL.
LOCAL EXHAUST: Continuous ventilation recommended.
SPECIAL: Explosion proof fans and motors.

WORK / HYGIENIC PRACTICES:
 Comply with state and local regulations covering liquefied petroleum gases. Comply with NFPA Pamphlet #58. Store small containers in well-ventilated areas, away from heat or sources of ignition. Prohibit smoking in areas of storage or use.

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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR CLEAR, COLORLESS, ODORLESS LIQUEFIED GAS.	VAPOR PRESSURE 70 DEG F: 31 - 40 PSIG
pH NA	SPECIFIC GRAVITY (WATER = 1) 0.56
BOILING POINT / BOILING RANGE (-4.46 to -11.95 deg. F @ 1 ATM).	SOLUBILITY IN WATER 70 °F: 0.008%
FLASH POINT (-132.23 to -156.0 deg. F) Closed Cup.	VISCOSITY NA
FLAMMABLE LIMITS LEL: 1.8% Vol UEL: 9.5%Vol	VAPOR DENSITY (AIR = 1) 1.7237 - 1.952
AUTOIGNITION TEMPERATURE VOC Content: 100%	EVAPORATION RATE Ethyl Ether = 1) >1

SECTION 10 - STABILITY AND REACTIVITY

STABILITY	STABLE X	CONDITIONS TO AVOID: High heat, sparks, and open flames
INCOMPATIBILITY (MATERIALS TO AVOID): Strong Oxidizers		
HAZARDOUS DECOMPOSITION OR BYPRODUCTS:	CO, Hydrocarbon Vapors.	
HAZARDOUS POLYMERIZATION: Will not occur.	CONDITIONS TO AVOID: None related to polymerization.	

SECTION 11 - TOXICOLOGICAL INFORMATION

Hazardous Components	CAS # EINECS #	LD50 of Ingredient (Specify Species and Route)	LC50 of Ingredient (Specify Species)
No toxicological information is available for this product.			
None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.			

SECTION 12 - ECOLOGICAL INFORMATION

No ecological data specific to this product is available ,however based on the components used in its manufacture, it is considered biodegradable. Product should not be allowed to enter sewers or other enclosed spaces or waterways.

STATEMENT OF BIODEGRADABILITY
 The degradation of the NGL propellants does not take place by way of biological organisms. These are gases at atmospheric pressure and ambient temperature and their atmospheric life is measured in a matter of days. The degradation of the NGL propellants is accomplished via photolysis.


SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:
 (1) MECHANICAL RECOVERY
 (2) FLARE-OFF AT SAFE LOCATION (VAPORS)
 (3) EXHAUST TO ATMOSPHERE IN SAFE LOCATION (NO OPEN FLAMES)

Component Waste Numbers
 No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions
 All wastes must be handled in accordance with local, state and federal regulations.
 See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

SECTION 14 - TRANSPORT INFORMATION

PROPER SHIPPING NAME:	PETROLEUM GASES, LIQUEFIED, 2.1, FLAMMABLE GAS, UN 1075		
DOT HAZARD CLASS / Pack Group:	2.1, FLAMMABLE GAS, UN1075	IATA HAZARD CLASS / Pack Group: UN 1075 Cargo Aircraft Only 150kg max net wt. ERG code 10L ("Danger " logo required).	
REFERENCE:	49 CFR.	IMDG HAZARD CLASS: 2.1, FLAMMABLE GAS, UN1075 Gas Code B	
UN / NA IDENTIFICATION NUMBER:	UN 1075	RID/ADR Dangerous Goods Code: NE	
LABEL:	LABELED / PLACARDED FLAMMABLE GAS	UN TDG Class / Pack Group: UN 1075/Flammable Gas.	
HAZARD SYMBOLS:		Hazard Identification Number (HIN): 23	

Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

