

WALL LENK CORPORATION

Swift Science #31

MATERIAL SAFETY DATA SHEET

Butane
LBF-15, 65F FUEL

REVISION DATE: Nov-2004

EMERGENCY TELEPHONE NUMBERS: (800) 424-9300 CHEMTREC

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PRODUCT NAME: **LBF-15, 65F BUTANE FUEL**

SECTION I PRODUCT IDENTIFICATION

CAS REGISTRY #: 75-28-5
CHEMICAL FAMILY: PARAFFIN SERIES HYDROCARBON
CHEMICAL NAME: ISOBUTANE (2-METHYLPROPANE)
CHEMICAL FORMULA: C₄H₁₀

SECTION II HAZARDOUS COMPONENTS

INGREDIENT	PERCENT	TLV (PPM)
LIQUEFIED PETROLEUM GAS	100	1000

*** PHYSICAL HAZARD DUE TO FLAMMABLE NATURE. FLAMMABLE WHEN COMBINED WITH AIR. ***

SECTION III PHYSICAL DATA

BOILING RANGE:	10.9 F	SPECIFIC GRAVITY (H ₂ O = 1.00):	0.564
VAPOR PRESSURE @ 70 DEG F:	31 PSIG	PERCENT VOLATILE BY VOLUME:	100%
VAPOR DENSITY (AIR = 1.00):	2.006	SOLUBILITY IN WATER @ 70 °F:	0.008%

EVAPORATION RATE: > 1 (ETHYL ETHER = 1.0)

APPEARANCE & ODOR: CLEAR, COLORLESS LIQUEFIED GAS WITH SWEET PETROLEUM ODOR.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD):	-117 F (OPEN CUP)
LOWER EXPLOSION LIMIT:	1.8% (VOL.) GAS IN AIR
UPPER EXPLOSION LIMIT:	8.4% (VOL.) GAS IN AIR
EXTINGUISHING MEDIA:	DRY CHEMICAL EXTINGUISHER (B-C), WATER

SPECIAL FIRE FIGHTING PROCEDURES

STOP THE RELEASE OF MATERIALS IF POSSIBLE. COOL THE VAPOR SPACE OF THE STORAGE CONTAINER WITH WATER SPRAY. 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, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

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SECTION V HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE

INGESTION- ASPIRATION HAZARD!

INHALATION- INHALATION OF VAPOR MAY PRODUCE ANESTHETIC EFFECTS AND FEELING OF EUPHORIA. PROLONGED OVEREXPOSURE CAN CAUSE RAPID BREATHING, HEADACHE, DIZZINESS, NARCOSIS, UNCONSCIOUSNESS, AND DEATH FROM ASPHYXIATION, DEPENDING ON CONCENTRATION AND TIME OF EXPOSURE.

SKIN CONTACT- CONTACT WITH EVAPORATING LIQUID CAN CAUSE FROSTBITE.

EYE CONTACT- LIQUID CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, BLURRED VISION, AND POSSIBLE FREEZE BURNS.

EMERGENCY FIRST AID PROCEDURES

INGESTION- DO NOT INDUCE VOMITING. CONTACT A PHYSICIAN IMMEDIATELY.

INHALATION- REMOVE TO FRESH AIR. IF BREATHING HAS STOPPED, RESTORE BREATHING AT ONCE. ADMINISTER OXYGEN AND GET MEDICAL HELP.

SKIN CONTACT- FOR LIQUID CONTACT, WARM AREAS GRADUALLY AND GET MEDICAL ATTENTION IF THERE IS EVIDENCE OF TISSUE DAMAGE. FLUSH AREA WITH PLENTY OF WATER.

EYE CONTACT- FOR LIQUID CONTACT, IRRIGATE WITH RUNNING WATER FOR MINIMUM OF 15 MINUTES. CONSULT PHYSICIAN IMMEDIATELY IF FROSTBITE OCCURS.

SECTION VI REACTIVITY DATA

STABILITY:	STABLE
HAZARDOUS POLYMERIZATION:	CAN NOT OCCUR
INCOMPATIBILITY (MATERIALS TO AVOID):	NONE.
HAZARDOUS DECOMPOSITION PRODUCTS:	CARBON MONOXIDE, VOLATILE HYDROCARBON VAPORS
CONDITIONS TO AVOID:	HIGH HEAT, SPARK, AND OPEN FLAMES

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

AVOID SOURCES OF IGNITION - VENTILATE AREA. USE WATER FOG TO EVAPORATE OR VENTILATE. PROTECT BODY AGAINST CONTACT WITH LIQUID. IF CONFINED SPACE - USE SELF CONTAINED BREATHING APPARATUS. CONSULT LOCAL FIRE AUTHORITIES.

WASTE DISPOSAL

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

**** COMPLY WITH ALL STATE AND LOCAL REGULATIONS ****

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SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS.
PROTECTIVE GLOVES: IMPERVIOUS, INSULATED GLOVES RECOMMENDED
EYE PROTECTION: FACESHIELD OR GOGGLES RECOMMENDED
OTHER: IMPERVIOUS CLOTHING FOR PROLONGED OR REPEATED CONTACT

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

SECTION IX SPECIAL PRECAUTIONS

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.

SECTION X MISCELLANEOUS INFORMATION

TRANSPORT INFORMATION

65F FUEL
PETROLEUM GASES, LIQUEFIED
2.1, FLAMMABLE GAS, UN1075
LABELED / PLACARDED FLAMMABLE GAS

LBF-15 FUEL

ORM-D CONSUMER COMMODITY (*CONTINENTAL US GROUND*)

NPCA - HMIS RATINGS

HEALTH	1	
FLAMMABILITY	4	
REACTIVITY	0	
PERSONAL PROTECTION	-	(PERSONAL PROTECTION INFORMATION TO BE SUPPLIED BY THE USER)

REGULATORY INFORMATION

THE INGREDIENTS LISTED IN SECTION 2 ARE REPORTED/INCLUDED IN THE U.S. TSCA INVENTORY AND CANADIAN DOMESTICS SUBSTANCE LIST.

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.

THIS FUEL, AND BYPRODUCTS OF COMBUSTION OF THIS FUEL, CONTAIN CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, AND OTHER REPRODUCTIVE HARM.