

**Material Safety Data Sheet
(F301)**

FANCY HEAT

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REVISION NUMBER: 001
CHEMTREC:800-424-9300
PRODUCT NUMBER:17300-F301

SECTION I – PRODUCT IDENTIFICATION

PRODUCT NAME : Butane Fuel - F301
GENERAL OR GENERIC NAME: Liquefied Petroleum Gas (LPG)
(Mixture of n-butane, iso-butane and propane)

SECTION II – COMPOSITION / INFORMATION ON INGREDIENTS

TRADE NAME	CONCENTRATION(MOL %)	CAS NUMBER	EXPOSURE LIMITS/HEALTH HAZARDS
Propane	0 - 5	74-98-6	1000ppm 8-hour TWA (OSHA) Simple Asphyxiant(ACGIH)
Iso-Butane	20-40	75-28-5	800ppm 8-hour TWA (OSHA) 800ppm 8-hour TWA (ACGIH)
n-Butane	55-80	106-97-8	800ppm 8-hour TWA (ACGIH)

SECTION III – HAZARD IDENTIFICATION

HAZARDS RATINGS:

Key: 0 = Least, 1= Slight, 2 = Moderate, 3= High, 4 = Extreme

	<u>Health</u>	<u>Flammability</u>	<u>Reactivity</u>
NFPA	1	4	0

Extremely flammable - readily forms explosive air-vapor mixtures at ambient temperature (in concentrations ranging from 1.8% to 9.5%, approximately). Vapor is heavier than air and may travel to remote sources of ignition (e.g. along drainage systems, into basements etc.). Liquid leaks generate large volumes of flammable vapor (approximately 250: 1). Cold burns (frostbite) will result from skin/eye contact with liquid. Liquid release or vapor pressure jets present a risk of serious damage to the eyes.

Abuse involving willful inhalation of very high concentrations of vapor, even for short periods, can produce unconsciousness or might prove fatal. Inhalation may cause irritation to the nose and throat, headache, nausea, vomiting, dizziness and drowsiness.

Unconsciousness or asphyxiation may result in poorly ventilation or confined spaces.

SECTION IV – FIRST AID MEASURES

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EYE CONTACT: Immediately flush eyes with plenty of cool water for at least 15 minutes. Hold eyelids apart while flushing to rinse entire surface of eye and lids with water. Get immediate medical attention.

SKIN CONTACT: In case of cold burns, immediately place affected area in warm water (41°C) and keep immersed until circulation returns. Get immediate medical advice.

INGESTION: N/A.

INHALATION: If exposure causes drowsiness, headache, blurred vision or irritation, remove to fresh air. Keep warm and at rest and seek medical attention. If unconscious, place in recovery position and immediately obtain medical assistance. While awaiting assistance, monitor pulse and breathing and administer mouth to mouth resuscitation if necessary. Severe inhalation over exposure to LPG may sensitize the heart to catecholamine-induced arrhythmic. Do not administer catecholamine to overexposed individuals. Contact the Poisons Information Service and/or seek further medical advice.

ADVICE TO DOCTOR: Advice to Doctor Severe inhalation, overexposure to this material may sensitize the heart to catecholamine-induced arrhythmias. Do not administer catecholamine to overexposed individuals. Contact a Poison Control Center for further treatment information.

SECTION V – FIRE AND EXPLOSION DATA

FLASH POINT: -60 °C (ABEL)

IGNITION TEMPERATURE: Not determined

FLAMMABLE LIMITS (% by volume): 1.8% (lower) – 9.5% (upper)

FIRE EXTINGUISHING AGENTS: Do not extinguish flame because of possibility of explosive reignition. Shut off source of fuel if possible, and allow fire to burn out. Use water fog to cool fire-exposed surfaces. Extinguish small residual fires with dry chemical or carbon dioxide.

EXPLOSION HAZARDS: Explosive air-vapor mixtures may form. Vapors may travel, be ignited at remote locations and flash back. Containers may explode in fire. Full body flame-resistant clothing and/or turn-out gear recommended for persons attempting leak or spill control and for fire-fighting.

SECTION VI – ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL: Shut off flow of gas if possible. Eliminate all sources of ignition, including internal combustion engines. Deenergize electrical equipment and systems. Isolate area and keep people away. Stay upwind and warn of possible downwind explosion hazard. Use supplied-air respirator and protective clothing as discussed in this MSDS. Water spray may be effective in dispersing vapors.

SECTION VII – HANDLING AND STORAGE

HANDLING: Follow instructions indicated on the container. Use only in a well ventilated area. DO NOT SMOKE. Use only with appliances recommended on the container label. Always use with containers in an upright position. In workshops, ground equipment to prevent the buildup of electrostatic charges. Never look for a leak with a naked flame. Only soapy water should be used. Do not puncture or incinerate container.

STORAGE: Store in a well ventilated area, well away from all sources of heat and ignition. Do not expose containers to temperatures over 120°F (50°C).

Do not store below floor level, such as a basement or cellar, for example. Store away from low-level places where gas can accumulate.

Do not store in a vehicle, such as a car trunk or trailer. Heat from the sun can cause the temperature to rise to unsafe levels. Keep out of reach of children.

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SECTION VIII – EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS: ACGIH Threshold Limit Value (TLV) for LPG IS 100 PPM for a daily 8 hour exposure.

VENTILATION SYSTEM: Simple asphyxiants have poor warning properties and can displace air causing oxygen deficiency. Oxygen levels should be at least 19.5% in confined spaces or other work areas. Use explosion proof equipment to maintain adequate ventilation, prevent accumulation of explosive air-gas mixture, and avoid significant oxygen displacement.

EYES: Avoid eye contact. The wearing of chemical safety goggles or face shield is recommended.

SKIN : Protective clothing should be worn. Petroleum resistant gloves and boots recommended. Insulated gloves required if contact with liquid-cooled product or equipment is expected.

INHALATION: Use approved supplied air respiratory protection for cleaning large spills or upon entry into tanks, vessels or other confined spaces. Wear approved respiratory protection such as air-supplied respirator unless ventilation is adequate.

SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

Item	Measurement environment	Propane	iso-butane	n-butane	Unit
Molar Mass	N/A	0.044097	0.058124	0.058124	Kg
Specific Volume	@ 21.1 °C, 101.325 kPa	530.6	405.8	399.5	d ³ /kg
Absolute Density	Gas @ 101.325 kPa @ 20°C	1.868	2.487	2.544	kg/d ³
Relative Density	Gas @ 101.325 kPa @ 20°C	1.55	2.064	2.11	
Density	Liquid@ Saturated pressure@ 25 °C	0.5005	0.551	0.5788	kg/l
Vapor Pressure	@ 21.1°C, 101.325 kPa	853	310	213.7	KPa
Boiling Point	@ 101.325 kPa	-42.1	-11.7	-0.5	°C
Freezing Point	@ 101.325 kPa	N/A	-159.6	-138.4	°C
Latent Heat of Fusion	@ -159.6 °C	80.142	78.195	80.23	kJ/kg
Flammable Limits in Air	N/A	2.2-9.5	1.8-8.4	1.8-8.4	%
Vapor Pressure of Portable butane gas cartridge	Mixture gas (less than 13.2bar at 50°C)	7.0	7.0	7.0	Bar

SECTION X – STABILITY AND REACTIVITY

REACTIVITY: In use: Stable in normal conditions. Explodes or catches fire when exposed to heat or a source of ignition.

CONDITIONS TO AVOID: Heat. Strong oxidizers.

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HAZARDOUS REACTIONS/ DECOMPOSITION PRODUCTS: Combustion may produce CO_x, NO_x, SO_x, reactive hydrocarbons and irritating vapors.

SECTION XI – TOXICOLOGICAL INFORMATION

No information on product is available at this time.

SECTION XII – ECOLOGICAL INFORMATION

No specific toxicology data on this product is available.

SECTION XIII DISPOSAL CONSIDERATIONS

NOTE: It is the responsibility of the use of products to determine, at the time of disposal, whether the product meets criteria for hazardous waste. Product uses, transformations, mixture and processes, may render the resulting material hazardous.

Remarks :

Do not allow to enter drains or sewers. Can cause explosion

SECTION XIV - TRANSPORTATION DATA

PROPER SHIPPING NAME: LP gas cartridges. (MIXTURE Butane/Propane)

IDENTIFICATION NUMBER: UN2037 .

HAZARD CLASS: DOT 2.1

LABEL: Flammable gas.

SECTION XV - REGULATORY INFORMATION

RESPIRATOR INFORMATION: In the absence of local approval authorities/standards, follow US NIOSH/MSHA, UK BSI regulations. Respirators must meet either the above or local standard for approved respirators.

SECTION XVI - OTHER INFORMATION

The information on this sheet is limited to the material identified and is believe by Fancy Heat Corporation to be correct based on its knowledge and information as of the date noted. Fancy Heat Corporation makes no representation, guarantee or warrantee, expressed or implied, as to the accuracy, reliability or completeness of the information and assumes no responsibility for injury, damage or loss resulting from the use of the material.

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DANGER: EXTREMELY FLAMMABLE. DO NOT USE NEAR FIRE OR FLAME. PROTECT FROM DIRECT SUNLIGHT

WARNING:

- . Valve stem may break if can is dropped and cause uncontrolled release of flammable gas.
- . Keep cap on when not in use.
- . DO NOT REFILL

Changing the cartridge:

- . perform this operation in a well ventilated area, free from ignition sources.
- . Close the appliance valve.
- . Remove the appliance from the cartridge.
- . Replace the connection seal if it is damaged or lost.

REMARK:

- . Keep out of reach of children.
- . Do not puncture/pierce or incinerate, even after use.
- . Do not expose to heat or store at temperature above 50_
- . Keep contents at temperature above 32_/0_ before using.
- . Not recommended for any other appliances.
- . Overheating may cause release of contents from top rim of the can.
- . Container is not refillable.
- . Manufactured for use in portable butane gas cooker.
- . An odorant has been added to help detect any possible leakage.
- . Do not place a hot plate or pan over cartridge compartment cover of portable gas cooker.
- . Follow the instructions for use supplied with the appliances.
- . Detach container when not in use.
- . Always close burner valve before removing cylinder.