



Material Safety Data Sheet

Section 1: Identification

Manufacturer: Devon Energy 20 North Broadway Oklahoma City, OK 73102	Emergency Phone Number: 1.800.424.9300 CHETREC	
	Telephone Number for Information 405.235.3611	
	HCL# 1201	
Product Identification: Butane	Trade Name or Synonyms: N-Butane, Normal Butane, Liquefied Butane	Date of Issue: 5/19/03

Section 2 Hazardous Ingredients

CAS #	Ingredient Name	Exposure Limit		Wt %
		TLV	PEL	
106-97-8	N-Butane	800 ppm	NE	50.53
75-28-5	Isobutane	800 ppm	NE	28.99
78-78-4	Iso-Pentane	120 ppm	1000 ppm	12.18
109-66-0	N-Pentane	600 ppm	1000 ppm	6.85
74-98-6	Propane	1000 ppm	1000 ppm	1.13
110-54-3	Hexane	50 ppm	500 ppm	0.22
74-82-8	Methane	NE	NE	0.04
142-82-5	Heptane	85 ppm	500 ppm	0.02
7727-37-9	Nitrogen	NE	NE	0.001
74-84-0	Ethane	NE	NE	0.008
NDA – No Data Available		NE – None Established		

Section 3 Physical Data

Boiling Point (F°)	32° F	Specific Gravity (water =1)	0.5850
Vapor Pressure (mm Hg.)	53 PSIA @100° F	Percent, Volatile by Volume (%)	100%
Vapor Density (air=1)	2.07	Molecular Weight	60.03
Solubility in Water	Slight	Evaporation Rate	>1
Appearance	Colorless	pH	N/A
Odor	Odorless		

Section 4 Fire and Explosion Data

Flash Point	-76° F	Flammable Limits	1.9% LEL 8.5% UEL
Auto Ignition Temp	761° F	NFPA 704 Rating	H-1 F-4 R-0
Extinguishing Media: Dry chemical, foam, CO ₂ , Halon, Water Spray for cooling containers			
Special Fire Fighting Procedures: Flammable liquid, Water stream spray may splash and spread flame. Water fog may not be effective in extinguishing but is of value in cooling adjacent material. Avoid downwind or confined space exposure without proper personal protective equipment			
Unusual Fire and Explosion Hazards: Extremely flammable; releases vapors at or below ambient temperature. These vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances along a surface to an ignition source and flash back.			
Hazardous Products of Combustion: Forms carbon monoxide and carbon dioxide emitting thick black smoke.			

Section 5 Health Hazard Data

Effects of Overexposure: Inhalation causes irritation to the upper respiratory tract, central nervous system, depression, dizziness, and headache and in extreme cases, coma and respiratory arrest. Irregular heartbeat may also occur. Vapors can irritate the eyes. Ingestion can cause irritation of the gastrointestinal tract and produce similar symptoms to inhalation hazards. Aspiration into the lungs can cause chemical pneumonia and pulmonary edema. Liquid absorption can cause skin irritation and dermatitis.	
Persons with pre-existing skin disorders, impaired liver/kidney function, central nervous disease and chronic respiratory dysfunction should avoid exposure to this material.	
Emergency First Aid Procedures	
Skin	Wash with soap and water immediately after contact. Remove contaminated clothing and launder before reuse
Eyes	Flush with large amounts of water for 15 minutes, getting under the eyelids. Contact physician if irritation persist
Inhalation	Remove to fresh air. Restore breathing if necessary. If breathing difficulty persist contact physician
Ingestion	Do not induce vomiting, contact a physician



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Section 6 Reactivity Data

Stability	Stable
Incompatibility	Strong oxidizers.
Hazardous Decomposition Products	Carbon Monoxide and Asphyxiants
Hazardous Polymerization	Does not occur

Section 7 Spill or Leak Procedures

Steps to be taken in case material is released or spilled:

Eliminate all ignition sources in the area. Safely stop flow, containing in the smallest possible area. Evacuate non-essential personnel. Use proper personal protective equipment. Use water fog to disperse vapors. Use absorbents on small spills. Material will float, resulting runoff may create fire or explosion hazard. Do not allow entering into sewers, drain, or waterways. Spills may need to be reported to the National Response Center. Maximize product recovery for reuse or recycling

Waste Disposal Method (Insure conformity with local disposal regulation):

Waste materials should be disposed of per Federal, State, and local disposal regulations.

Section 8 Personal Protection Information

Respiratory Protection	Use NIOSH approves respirator when vapor level exceeds exposure limits. Use organic vapor cartridges if below 600 ppm, and supplied air if above 600 ppm.
Ventilation	Use local exhaust or positive ventilation for enclosed areas. Use explosion proof electrical equipment Class 1, Group D.
Protective Gloves	Use neoprene or Nitrile gloves and protective clothing to prevent skin contact
Eye Protection	Chemical splash goggles should be worn to protect eyes from vapors and splashes
Other Equipment	Safety shower and eye wash station is recommended in the area of use.

Section 9 Special Precautions

Precautions to be taken in handling and storing:

Store outside if possible, in closed containers. No smoking in area. Containers may be electrically grounded/bonded for transfer of liquid.