

NATIONAL REFRIGERANTS™

Material Safety Data Sheet

R600 n-BUTANE

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: n-BUTANE
CHEMICAL FAMILY: Paraffin Series Hydrocarbon
DISTRIBUTOR: National Refrigerants, Inc.
661 Kenyon Avenue
Bridgeton, New Jersey 08302

FOR MORE INFORMATION CALL:
(Monday-Friday, 8:00am-5:00pm)
1-800-262-0012

IN CASE OF EMERGENCY CALL:
CHEMTREC: 1-800-424-9300

2. COMPOSITION / INFORMATION ON INGREDIENTS

| <u>INGREDIENT NAME</u> | <u>% VOLUME</u> | <u>TLV-ACGIH</u> | <u>CAS NUMBER</u> |
|-------------------------|-----------------|------------------|-------------------|
| Liquefied Petroleum Gas | 100 | 1000 ppm | 106-97-8 |

*** Physical Hazard Due to Flammable Nature. Flammable When Combined With Air ***

3. HAZARDS IDENTIFICATION

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.

4. FIRST AID MEASURES

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.

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n-Butane

EYE CONTACT: For liquid contact, irrigate with running water for minimum of 15 minutes. Consult physician immediately if frostbite occurs.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT (METHOD): -101 F (Open Cup)
UPPER EXPLOSIVE LIMIT (vol.) gas in air): 8.5%
LOWER EXPLOSIVE LIMIT (vol.) gas in air): 1.9%

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.

6. ACCIDENTAL RELEASE MEASURES

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.

7. HANDLING AND STORAGE

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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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.

RESPIRATORY PROTECTION: NIOSH approved self-contained breathing apparatus

PROTECTIVE GLOVES: Impervious, insulated gloves recommended

EYE PROTECTION: Face shield or goggles recommended

OTHER: Impervious clothing for prolonged or repeated contact



n-Butane

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|---|
| ODOR & APPEARANCE | Clear, Colorless liquefied gas with sweet petroleum odor. |
| SOLUBILITY IN WATER @ 70 Deg. F | 0.008% |
| SPECIFIC GRAVITY (H₂O=1.00): | 0.584 |
| BOILING RANGE: | 31.1 Deg. F |
| PRESENT VOLATILE BY VOLUME: | 100% |
| VAPOR PRESSURE @ 70 Deg. F: | 17 psig |
| VAPOR DENSITY (air = 1.00): | 2.006 |
| EVAPORATION RATE: | > 1 (Ethyl Ether = 1.0) |

10. STABILITY AND REACTIVITY

STABILITY:

This product is stable.

INCOMPATIBILITY (Material to Avoid):

None

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon Monoxide, Volatile Hydrocarbon Vapors

HAZARDOUS POLYMERIZATION:

Can not occur.

CONDITIONS TO AVOID:

High Heat, Sparks & Open Flames

11. ECOLOGICAL INFORMATION

No data given

12. DISPOSAL CONSIDERATIONS

- (1) Mechanical recovery
- (2) Flare-Off at safe location (Vapors)
- (3) Exhaust to atmosphere in safe location (No open flames)

OTHER DISPOSAL CONSIDERATIONS:

Disposal must comply with federal, state, and local disposal laws.

13. TRANSPORT INFORMATION

| | |
|-------------------------------------|----------------------------|
| US DOT PROPER SHIPPING NAME: | Petroleum Gases, Liquefied |
| US DOT HAZARD CLASS: | 2.1 |
| US DOT ID NUMBER: | UN 1075 |
| LABELED/PLACARDED | Flammable Gas |



n-Butane

14. REGULATORY INFORMATION

The ingredients listed in section 2 are reported/included in the U.S. TSCA inventory and Canadian domestics substance list.

The 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.

15. OTHER INFORMATION

OTHER INFORMATION: HMIS Classification: Health – 1, Flammability – 4, Reactivity – 0

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