

**1-Butyl-3-Methylimidazolium  
Tetrafluoroborate  
CAS No 174501-65-6**

**MATERIAL SAFETY DATA SHEET  
SDS/MSDS**

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifiers**

Product name : **1-Butyl-3-Methylimidazolium Tetrafluoroborate**

CAS-No. : 174501-65-6

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Laboratory chemicals, Industrial & for professional use only.

**1.3 Details of the supplier of the safety data sheet**

Company : Central Drug House (P) Ltd  
7/28 Vardaan House  
Ansari Road Daryaganj  
New Delhi-110002  
INDIA

Telephone : +91 11 49404040

Email : [care@cdhfinechemical.com](mailto:care@cdhfinechemical.com)

**1.4 Emergency telephone number**

Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

Acute toxicity, Oral (Category 3), H301

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Chronic aquatic toxicity (Category 2), H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 Label elements**

**Labelling according Regulation (EC) No 1272/2008**

Pictogram



Signal word

Danger

Hazard statement(s)

H301

Toxic if swallowed.

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H411

Toxic to aquatic life with long lasting effects.

Precautionary statement(s)	
P273	Avoid release to the environment.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor. IF IN
P305 + P351 + P338	EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

### 2.3 Other hazards - none

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Formula	:	C <sub>8</sub> H <sub>15</sub> BF <sub>4</sub> N <sub>2</sub>
Molecular weight	:	226.02 g/mol
CAS-No.	:	174501-65-6

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
<b>1-Butyl-3-methylimidazolium tetrafluoroborate</b>		
CAS-No. 174501-65-6	Acute Tox. 3; Skin Irrit. 2; Eye Irrit. 2; Aquatic Chronic 2; H301, H315, H319, H411	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Hydrofluoric (HF) acid burns require immediate and specialized first aid a hours depending on the concentration of HF. After decontamination with wa penetration/absorption of the fluoride ion. Treatment should be directed exposure. Skin exposures can be treated with a 2.5% calcium gluconate gel exposures may require subcutaneous calcium gluconate except for digital a technique, due to the potential for tissue injury from increased pressure and should be considered when undergoing decontamination. Prevention of a obtained by giving milk, chewable calcium carbonate tablets or Milk of Ma hypocalcemia, hypomagnesemia and cardiac arrhythmias should be monitored

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician. First treatment with calcium gluconate paste.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### **5.2 Special hazards arising from the substance or mixture**

Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Hydrogen fluoride, Borane/boron oxides

### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

### **5.4 Further information**

No data available

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

Evacuate personnel to safe areas.

For personal protection see section 8.

### **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### **6.3 Methods and materials for containment and cleaning up**

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### **6.4 Reference to other sections**

For disposal see section 13.

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.2.

### **7.2 Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Store under inert gas. Moisture sensitive.

Storage class (TRGS 510): Combustible liquids, toxic

### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## **SECTION 8: Exposure controls/personal protection**

### **8.1 Control parameters**

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### **Personal protective equipment**

##### **Eye/face protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

### **Body Protection**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

a) Appearance	Form: liquid, clear, viscous Colour: dark brown
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	-71.0 °C
f) Initial boiling point and boiling range	No data available
g) Flash point	288 °C
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	< 0.000125 hPa
l) Vapour density	No data available
m) Relative density	1.21 g/mL at 20 °C
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	log Pow: -0.31 at 25 °C
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

### **9.2 Other safety information**

No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Hydrogen fluoride, Borane/boron oxides  
Other decomposition products - No data available  
In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - > 50 - < 300 mg/kg(1-Butyl-3-methylimidazolium tetrafluoroborate)

LD50 Dermal - Rat - > 2,000 mg/kg(1-Butyl-3-methylimidazolium tetrafluoroborate)

#### Skin corrosion/irritation

Skin - Rabbit(1-Butyl-3-methylimidazolium tetrafluoroborate)

Result: Skin irritation

#### Serious eye damage/eye irritation

Eyes - Rabbit(1-Butyl-3-methylimidazolium tetrafluoroborate)

Result: Eye irritation

#### Respiratory or skin sensitisation

No data available(1-Butyl-3-methylimidazolium tetrafluoroborate)

#### Germ cell mutagenicity

No data available(1-Butyl-3-methylimidazolium tetrafluoroborate)

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### Reproductive toxicity

No data available(1-Butyl-3-methylimidazolium tetrafluoroborate)

#### Specific target organ toxicity - single exposure

No data available(1-Butyl-3-methylimidazolium tetrafluoroborate)

#### Specific target organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available(1-Butyl-3-methylimidazolium tetrafluoroborate)

**Additional Information**  
RTECS: Not available

Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcemia.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(1-Butyl-3-methylimidazolium tetrafluoroborate)

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish LC50 - Danio rerio (zebra fish) - < 99.0 mg/l - 96.0 h(1-Butyl-3-methylimidazolium tetrafluoroborate)  
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 5.2 mg/l - 48 h(1-Butyl-3-methylimidazolium tetrafluoroborate)  
(OECD Test Guideline 202)

Toxicity to bacteria (1-Butyl-3-methylimidazolium tetrafluoroborate)  
Remarks: No data available

### 12.2 Persistence and degradability

Biodegradability Result: - Not readily biodegradable.

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available(1-Butyl-3-methylimidazolium tetrafluoroborate)

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

Toxic to aquatic life with long lasting effects.

No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 3082

IMDG: 3082

IATA: 3082

### 14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-Butyl-3-methylimidazolium tetrafluoroborate)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-Butyl-3-methylimidazolium tetrafluoroborate)

IATA: Environmentally hazardous substance, liquid, n.o.s. (1-Butyl-3-methylimidazolium tetrafluoroborate)

<b>14.3 Transport hazard class(es)</b>		
ADR/RID: 9	IMDG: 9	IATA: 9
<b>14.4 Packaging group</b>		
ADR/RID: III	IMDG: III	IATA: III
<b>14.5 Environmental hazards</b>		
ADR/RID: yes	IMDG Marine pollutant: no	IATA: yes
<b>14.6 Special precautions for user</b>		

**Further information**

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**15.2 Chemical safety assessment**

For this product a chemical safety assessment was not carried out

**SECTION 16: Other information**

**Full text of H-Statements referred to under sections 2 and 3.**

H301	Toxic if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.

**Further information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.cdhfinechemical.com](http://www.cdhfinechemical.com) for additional terms and conditions of sale.