



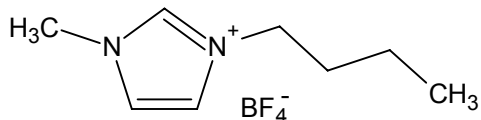
MATERIAL SAFETY DATA SHEET

Product name 1-Butyl-3-methylimidazolium tetrafluoroborate
MSDS code BMITFB
Revision date 29/04/2007
Supersedes 06/10/2004

Revision: 3

1. Identification of the substance & the company

Chemical name 1-Butyl-3-methylimidazolium tetrafluoroborate



Synonym(s) bmim [BF₄], 1-Butyl-3-methyl-1H-imidazolium tetrafluoroborate

Chemical formula C₈H₁₅N₂. BF₄

CAS number 174501-65-6

Manufacturer Chemada Fine Chemicals Ltd.
Nir Itzhak, D.N. HaNegev 85455, Israel.
Tel: +972-8-9983421/2

Supplier
- For Europe ICL-IP Europe bv.
Fosfaatweg 48, 1013 BM Amsterdam, Netherlands
Tel: +31 20 8005800

- For USA ICL-IP America, Inc.
95 MacCorkle Avenue SW, South Charleston, WV 25303-1411, USA.
Tel: 304-720-3950

- For Japan ICL-IP Japan Ltd.
Izurni Shinkawa Building, 7th floor, 5-18, 1-chome Shinkawa, Chuo-ku,
Tokyo 104-0033, Japan
Tel: 03-3552-1611

Emergency telephone number:
- For Europe (+ 31) 115 689000
- For USA Chemtrec (800) 424-9300
- For Asia - Pacific ALERT-SGS
24 hr Toll Free Number : +800 ALERTSGS (+800-2537-8747)
24 hr Singapore Exchange Number : +65 6542-9595

2. Hazards identification

Important hazards Harmful if swallowed.
Irritant to eyes

NFPA Ratings (Scale 0-4)

- Health 2
- Fire 1
- Instability 0



3. Composition / information on ingredients

(Not Specifications)

Components	Weight %	-EEC No.	EU Classification	Annex No.
1-Butyl-3-methylimidazolium tetrafluoroborate 174501-65-6	98% min	Not Listed	Xn: R22 Xi: R36	None

This material is intended primarily for use as a solvent in the Pharmaceutical and other Fine Chemical Industries. Its use however is not limited to those stated.

4. First-aid measures

Eye contact Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention immediately.

Skin contact Wash thoroughly with copious flowing water for at least 15 minutes. Wash clothing before reuse. Get medical attention immediately.

Inhalation Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.

Ingestion DO NOT INDUCE VOMITING
If swallowed, wash mouth thoroughly with plenty of water and give water to drink. Get medical attention immediately.

NOTE: Never give an unconscious person anything to drink.

After handling, wash before eating, drinking or smoking.

5. Fire - fighting measures

Flash point Not available

Flammable/Explosion limits

- Lower (% vol)	Not Determined
- Upper (% vol)	Not Determined
Auto-ignition temperature	Not available
Suitable extinguishing media	Carbon dioxide, dry chemicals, foam, water spray (fog).
Fire fighting procedure	Stay upwind. Avoid any bodily contact. Wear self-contained breathing apparatus in positive pressure mode and appropriate protective clothing. Wear full chemical protective suit if contact with material or dense fumes smoke anticipated.
Unusual fire and explosion hazards	None known

6. Accidental release measures

Personal precautions	Use approved respirator, chemical safety goggles, PVC gloves, boots and protective clothes.
Methods for cleaning up	Absorb on sand or vermiculite and place in closed container for disposal. Ventilate area and wash spill site after material pickup is complete.

7. Handling and storage

Handling	Handle in accordance with good industrial hygiene and safety procedures.
Storage	Store in a dry, cool, well-ventilated area

8. Exposure controls / personal protection

Exposure Limits :

Components	Weight %	ACGIH-TLV Data
1-Butyl-3-methylimidazolium tetrafluoroborate 174501-65-6	98% min	Not determined

Ventilation requirements Mechanical ventilation is recommended. Use local exhaust at source of vapour.

Personal protective equipment:

- Respiratory protection	Respirator with cartridge providing protection against acid gas-organic vapour or self-contained breathing apparatus. For short term exposure to low concentrations, an approved combination acid gas-organic vapour gas mask is suitable.
- Hand protection	PVC gloves
- Eye protection	Chemical safety goggles or face shield with safety glasses.
- Skin and body protection	Protective PVC clothing and boots

Hygiene measures Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

9. Physical and chemical properties

Physical state	Liquid
Molecular weight	226.02
Density	1.22
Melting point/range	-71°C
Boiling point/range	Not available
Vapour pressure	Not available
Flash point	Not available
Solubility:	
- Solubility in water	Miscible
- Solubility in other solvents	Insoluble in most common organic solvents
Appearance	Clear, colourless viscous liquid

10. Stability and reactivity

Stability	Stable at normal conditions
Materials to avoid	No data available
Conditions to avoid	No data available
Hazardous decomposition products	No data available
Hazardous polymerization	Will not occur

11. Toxicological information

Acute toxicity:	
- Rat oral LD50	300 - 500 mg/Kg
- Rat dermal LD50	> 2000 mg/Kg
- Dermal irritation (rabbit)	Not irritant
- Dermal sensitization (LLNA)	Not a sensitizer
- Eye irritation (rabbit)	Mild irritant
Effects of overexposure:	Irritant to eyes
Chronic toxicity	No data available
Mutagenicity	Not mutagenic by the Ames Test

Carcinogenicity Not classified as a carcinogen by USA OSHA
Not classified by NTP
Not classified by IARC

12. Ecological information

Aquatic toxicity No information available

Mobility This material is expected to have a low vapour pressure and air is not expected to be a major factor in its dispersal.

Persistence and degradability This material is relatively stable under normal conditions

13. Disposal considerations

Waste from residues / unused products Observe all federal, state and local environmental regulations when disposing of this material.
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

14. Transportation information

UN No. Not regulated

IMO Not regulated

ICAO/IATA Not regulated

ADR/RID Not regulated

UK Not regulated

DOT Not regulated

15. Regulatory information

Components	Weight %	-EEC No.	Annex No.
1-Butyl-3-methylimidazolium tetrafluoroborate 174501-65-6	98% min	Not Listed	None

- Indication of danger Harmful, symbol required (Xn)



- R Phrases	R 22 :Harmful if swallowed. R 36 :Irritating to eyes.
- S Phrases	S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 39 :Wear eye/face protection.
USA	Not reported in the EPA TSCA Inventory
Brussels Tarrif No. (EU)	2933-29-90

16. Other information

Sources of key data used

Toxic Substances Control Act (TSCA) Inventory, Pub: EPA, U.S.Government Printing Office, Washington, U.S.A. (Through STN Data Base).
The European Inventory of Existing Chemical Substances, Pub: EEC, Office des Publications Officielles des Communautés Europeennes, Boite Postale 1003, L-1351, Luxembourg. (Through STN Data Base)
Handbook of Existing & New Chemical Substances, Editor: Chemical Products Safety Division, Basic Industries Bureau, Ministry of International Trade & Industries, Tokyo, Japan. (Through STN Data Base)

This data sheet contains changes 14 from the previous version in section(s)

MSDS valid until 30/04/2010

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Prepared by TRU Chemada in ISRAEL
Tel: +972-(8)-9983330
Fax: +972-(8)-9983330
Email: msds@chemada.com
<http://www.chemada.com>

End of safety data sheet