

Safety Data Sheet

according to Regulation (EC) No 1907/2006

1-Hexyl-3-methylimidazolium tetrafluoroborate

Revision Date: 5/6/2025

Version: 4

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name	1-Hexyl-3-methylimidazolium tetrafluoroborate
Product code	IL-0019
CAS	244193-50-8
EC-Number	680-100-4
REACH No.	A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Identified uses	Laboratory chemicals, Manufacture of substances
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1.3 Details of the supplier of the safety data sheet

Supplier	IoLiTec Ionic Liquids Technologies GmbH Im Zukunftspark 9 D – 74076 Heilbronn Germany
Telephone	+49 (0)7131-89839-0
Fax	+49 (0)7131-89839-109
Email	msds@iolitec.de

1.4 Emergency telephone number

Emergency telephone	+49 (0)151-41255671
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2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Caution! Substance not yet fully tested. Risks cannot be excluded if the product is handled inappropriately. For laboratory use only!

Classification (REGULATION (EC) No 1272/2008)

Aquatic toxicity, Chronic (Category 2)

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)



Pictogram

Signal word

No signal word required

H-phrases

H411

Toxic to aquatic life with long lasting effects.

P-phrases

P202

Do not handle until all safety precautions have been read and understood.

P262

Do not get in eyes, on skin, or on clothing.

P271

Use only outdoors or in a well-ventilated area.

P273

Avoid release to the environment.

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection.

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P308 + P313

IF exposed or concerned: Get medical advice/
attention.

P391

Collect spillage.

Reduced labelling for bottles < 125 mL (according to Art. 29.2)



Pictogram

Signal word

No signal word required

H-phrases

No Hazard Statement required.

P-phrases

P202

Do not handle until all safety precautions have
been read and understood.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

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The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

1-Hexyl-3-methylimidazolium tetrafluoroborate

CAS: 244193-50-8

EC-Number: 680-100-4

Ingredient name	Contents	Classification
1-Hexyl-3-methylimidazolium tetrafluoroborate	>99%	Aquatic Chronic 2

4 FIRST AID MEASURES

4.1 Description of first aid measures

General

Contaminated clothing should be removed and washed before being reused.

Contaminated clothing should not be allowed out of the work place.

Inhalation

Move the exposed person to fresh air at once. If respiratory problems, provide artificial respiration/oxygen. [Get medical attention if you feel unwell.](#)

Ingestion

Immediately rinse mouth and provide fresh air. Do not induce vomiting. Get medical attention immediately.

Skin

Wash the skin immediately with soap and water. [Get medical attention if you feel unwell.](#)

Eyes

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Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. [Get medical attention if you feel unwell.](#)

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

5 FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use: Water spray, fog or mist. Carbon dioxides (CO₂). Dry chemicals, sand, dolomite etc.

5.2. Special hazards arising from the substance or mixture

Avoid water in straight hose stream, will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control. Fire causes formation of toxic gases

5.3. Advice for firefighters

Wear self-contained breathing apparatus as combustion may produce hazardous fumes

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6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective clothing and avoid inhalation of vapor, skin or eye contact

6.2 Environmental precautions

Avoid washing into water courses. Avoid contaminating public drains or water supply

6.3 Methods and materials for containment and cleaning up

Avoid contact with skin or inhalation of spillage, dust or vapor. Avoid dust formation. Collect and reclaim or dispose in sealed containers in license waste. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate.

6.4 Reference to other sections

For disposal see section 13.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep away from heat, sparks and open flame. Do not use in confined spaces without adequate ventilation and/or respirator

7.2 Conditions for safe storage, including any incompatibilities

Storage Conditions:

Store at moderate temperatures in dry, well ventilated area. Chemical storage

Storage class

(TRGS 510): LGK 10-13

7.3 Specific end use(s)

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

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8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Eye/face protection

Safety glasses with side-shields conforming to EN166 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it

Body Protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Physical state	Liquid
b) Color	Colorless to slightly yellow.
c) Odor	no characteristic odor
d) Melting point/freezing point	-82 °C
e) Initial boiling point	no data available
f) Flammability	no data available
g) Upper/lower explosive limits	no data available
h) Flash point	no data available
i) Autoignition temperature	no data available
j) Decomposition temperature	no data available
k) pH	no data available
l) Viscosity, kinematic	250.43 mm ² /s
m) Water solubility	not soluble; decomposition in presence of water
n) Partition coefficient	no data available
o) Vapor pressure	no data available
p) Density	1.15 g/cm ³
q) Relative vapor density	no data available
r) Particle characteristics	no data available
s) Explosive properties	no data available
t) Oxidizing properties	no data available

9.2 Other safety information

No data available

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10 STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Avoid contact with water, might lead to hydrogen fluoride formation (HF).

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Avoid contact to strong oxidizers and bases.

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

High temperatures generate: Corrosive gases/vapor/fumes of: Carbon dioxide (CO₂).
Carbon monoxide (CO). Nitrous gases (NO_x). Hydrogen fluoride (HF).

11 TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes

Acute toxicity

Not classified

Skin corrosion/irritation

Not classified

Serious eye damage/eye irritation

Not classified

Respiratory or skin sensitization

Not classified

Germ cell mutagenicity

Not classified

Carcinogenicity

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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

Not classified

Specific target organ toxicity - single exposure

Not classified

Specific target organ toxicity - repeated exposure

Not classified

Aspiration hazard

Not classified

Potential health effects

Inhalation no data available

Ingestion no data available

Skin no data available

Eyes no data available

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU)2018/605 at levels of 0.1% or higher.

Additional Information

RTECS: Not available

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12 ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic Chronic Cat. 2

IC₅₀ (Daphnia magna): 3.4 mg/L (Green Chem, 2005, 7, 9).

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

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13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Contact specialist disposal companies. Dispose of in accordance with Local Authority requirements. Recover and reclaim or recycle, if practical.

Do not dispose in communal waste water.

14 TRANSPORT INFORMATION

14.1 UN number

UN3082

14.2 UN proper shipping name

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

14.3 Transport hazard class(es)

ADR/RID: 9

IMDG: 9

IATA: 9

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID: Yes

IMDG Marine pollutant: Yes

IATA: Yes

14.6 Special precautions for user

No data available

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.

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15.2 Chemical safety assessment

no data available

Country specific information

Germany

WGK: 3

(Self-Classification)

16 OTHER INFORMATION

DISCLAIMER

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