

Safety Data Sheet

according to Regulation (EC) No 1907/2006

1-Butylimidazole

Revision Date: 5/23/2025

Version: 3

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

1.1 Product identifier

Product name 1-Butylimidazole

Product code KI-0004

CAS 4316-42-1

EC-Number 224-335-9

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

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

Classification (REGULATION (EC) No 1272/2008)

Skin Irritation (Category 2)

Eye Damage (Category 1)

Specific target organ toxicity – Single exposure (Category 3)

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)



Pictogram

Signal word

Danger

H-phrases

H315

Causes skin irritation.

H318

Causes serious eye damage.

H335

May cause respiratory irritation.

P-phrases

P261

Avoid breathing dust / fume / gas / mist / vapours / spray.

P264

Wash skin thoroughly after handling.

P271

Use only outdoors or in well-ventilated area.

P280

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

P302 + P352

IF ON SKIN: Wash with soap and water.

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P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

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



Pictogram

Signal word

Danger

H-phrases

H318

Causes serious eye damage.

P-phrases

P280

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

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P305 + P351 + P338

IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P310

Immediately call a POISON CENTER or doctor/physician.

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:

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.

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3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

1-Butylimidazole

CAS: 4316-42-1

EC-Number: 224-335-9

Ingredient name	Contents	Classification
1-Butylimidazole	>98%	Skin Irrit. 2, Eye Dam. 1, STOT-SE3

4 FIRST AID MEASURES

4.1 Description of first aid measures

General

Take off contaminated clothing and wash before reuse. Immediately call a POISON CENTER or doctor.

Inhalation

If breathed in, move person into fresh air. If not breathing give artificial respiration. Get medical attention immediately.

Ingestion

Rinse mouth with water. Get medical attention.

Skin

Take off contaminated clothing. Wash skin with soap and water. Get medical attention.

Eyes

Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get medical attention immediately.

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

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5 FIRE FIGHTING MEASURES

5.1 Extinguishing media

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

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. Vapours may form explosive mixture with air.

5.3. Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

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. Ensure adequate ventilation. Evacuate personnel to safe areas.

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. 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.

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7 HANDLING AND STORAGE

7.1 Precautions for safe handling

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

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

[Store locked up](#). Handle and store under inert gas.

[Storage class \(TRGS 510\): 6.1C](#)

7.3 Specific end use(s)

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

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Eye/face protection

Safety goggles. Chemical resistant gloves. Protective clothing.

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

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Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of 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).

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance	Liquid
b) Color	Colorless to yellow
c) Odor/taste	No characteristic odor.
d) Melting point/freezing point	no data available
e) Initial boiling point	114 - 116 °C at 16 hPa
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	no data available
m) Water solubility	no data available
n) Partition coefficient	no data available
o) Vapor pressure	no data available
p) Density	0.945 g/cm ³
q) Relative vapor density	no data available
r) Particle characteristics	not relevant
s) Explosive properties	not relevant
t) Oxidizing properties	not relevant

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9.2 Other safety information

No data available

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

Avoid contact to acids and strong oxidizers.

10.5 Incompatible materials

Strong oxidizing agents and acids.

10.6 Hazardous decomposition products

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

11 TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes

Acute toxicity

No data available

Skin corrosion/irritation

Skin Irritation (Cat. 2)

Serious Eye Damage (Cat. 1)

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

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no data available

Germ cell mutagenicity

no data available

Carcinogenicity

No data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

Specific target organ toxicity – single exposure (Cat. 3)

Respiratory irritation

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

potential health effects

Inhalation May cause respiratory irritation.

Ingestion no data available

Skin Causes skin irritation.

Eyes Causes serious eye damage.

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

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

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RTECS: Not available.

12 ECOLOGICAL INFORMATION

12.1 Toxicity

No data available

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

No data available

12.6 Endocrine disrupting properties

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

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.

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14 TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 2690

IMDG: 2690

IATA: 2690

14.2 UN proper shipping name

ADR/RID: N,n-Butylimidazole

IMDG: N,n-Butylimidazole

IATA: N,n-Butylimidazole

14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

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.

15.2 Chemical safety assessment

no data available

Country specific information

Germany

WGK: 2

(Self-Classification)

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16 OTHER INFORMATION

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