

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Tetrabutylphosphonium bromide

Revision Date: 5/21/2025

Version: 3

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

1.1 Product identifier

Product name	Tetrabutylphosphonium bromide
Product code	IN-0014
CAS	3115-68-2
EC-Number	221-487-8
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

Classification (REGULATION (EC) No 1272/2008)

Metal Corrosion (Category 1)

Acute Toxicity, Oral (Category 4)

Acute Toxicity, Dermal (Category 3)

Skin Sensitation (Category 1B)

Eye Damage (Category 1)

Reproductive Toxicity (Category 2)

Hazardous to the aquatic environment – Chronic (Category 2)

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)



Pictogram

Signal word

Danger

Additional labeling element

Restricted for professional users.

H-phrases

H290

May be corrosive to metals.

H302

Harmful if swallowed.

H311

Toxic in contact with skin.

H317

May cause an allergic skin reaction.

H318

Causes serious eye damage.

H361

Suspected of damaging fertility or the unborn child.

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H411 Toxic to aquatic life with long lasting effects.

P-phrases

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P234 Keep only in original container/packaging.

P261 Avoid breathing dust / fume / gas / mist / vapours / spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302 + P352 IF ON SKIN: Wash with soap and water.

P305 + P351 + P338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P310 Immediately call a POISON CENTER or doctor/physician.

P330 Rinse mouth.

P333 + P313 If skin irritation or a rash occurs: Get medical advice/attention.

P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.

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P390	Absorb spillage to prevent material damage.
P405	Store locked up.
P406	Store in a corrosion resistant container with a resistant inner liner.

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

Tetrabutylphosphonium bromide

CAS: 3115-68-2

EC-Number: 221-487-8

Ingredient name	Contents	Classification
Tetrabutylphosphonium bromide	>95%	Metal Corr. 1, Acute Tox. 3, Eye Dam. 1, Skin Sens. 1B, Repr. 2, Aquatic Chronic 2

4 FIRST AID MEASURES

4.1 Description of first aid measures

General

Immediately call a POISON CENTER or doctor/physician. Take off immediately all contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace.

Inhalation

Move the exposed person to fresh air at once. If respiratory problems, provide artificial respiration/oxygen. Immediately call a POISON CENTER or doctor/physician.

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. Immediately call a POISON CENTER or doctor/physician. If skin irritation or a rash occurs: Get medical advice/attention.

Eyes

Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse. Immediately call a POISON CENTER or doctor/physician.

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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.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective clothing and avoid inhalation of dust / fume / gas / mist / vapours / spray, skin or eye contact.

6.2 Environmental precautions

Avoid washing into water courses. Avoid contaminating public drains or water supply.
[Avoid release to the environment. Collect spillage.](#)

6.3 Methods and materials for containment and cleaning up

Avoid contact with skin or inhalation of spillage, dust or vapor. Avoid dust formation.

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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

Store at moderate temperatures in dry, well-ventilated area. Chemical storage. [Store locked up. Store in a corrosion resistant container with a resistant inner liner.](#)

[Storage class \(TRGS 510\): LGK 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 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

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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).

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance	Solid
b) Color	Colorless to yellow.
c) Odor/taste	No characteristic odor.
d) Melting point/freezing point	40 °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	no data available
m) Water solubility	no data available
n) Partition coefficient	no data available

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o) Vapor pressure	no data available
p) Density	no data available
q) Relative vapor density	no data available
r) Particle characteristics	not relevant
s) Explosive properties	not relevant
t) Oxidizing properties	not relevant

9.2 Other safety information

No data available

10 STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

No particular stability concerns.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Avoid contact to strong oxidizers.

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). Phosphorous oxides (PO_x).

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11 TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes

Acute toxicity

Acute Toxicity, Oral (Cat. 4)

Acute Toxicity, Dermal (Cat.3)

Skin corrosion/irritation

Not classified

Serious eye damage/eye irritation

Eye Damage (Cat. 1)

Respiratory or skin sensitization

Skin Sensitation (Cat. 1B)

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

Reproductive toxicity (Cat. 2)

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

Not classified

Potential health effects

Inhalation No data available.

Ingestion Harmful if swallowed.

Skin Toxic in contact with skin. May cause an allergic skin reaction.

Eyes Causes serious eye damage.

Signs and Symptoms of Exposure

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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

RTECS: Not available.

12 ECOLOGICAL INFORMATION

12.1 Toxicity

Hazardous to the aquatic environment, Chronic (Cat. 2)

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

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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

UN2811

14.2 UN proper shipping name

TOXIC SOLD, ORGANIC, N.O.S. (Tetrabutylphosphonium bromide)

14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

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

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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: 3

(Self-Classification)

16 OTHER INFORMATION

DISCLAIMER

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