# Safety Data Sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)

## Tributylmethylphosphonium bis(trifluoromethylsulfonyl)imide

Version number: GHS 2.0 | Date of compilation: 13.10.2023

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

### 1.1 Product identifier

| | |
|---|---|
| **Identification of the substance** | **Tributylmethylphosphonium bis(trifluoro-methylsulfonyl)imide** |
| **Registration number (REACH)** | unavailable |
| **EC number** | 672-621-0 |
| **CAS number** | 324575-10-2 |
| **Reference number (ECHA)** | 02-2120964023-61-0000 |
| **Alternative name(s)** | Phosphonium, tributylmethyl-, salt with 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide<br>TBMP NTf2<br>TBMP TFSI |
| **Alternative number(s)** | 00816.1000 |

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

| | |
|---|---|
| **Relevant identified uses** | Battery fluid<br>Product and process oriented research and develop-ment<br>Laboratory chemical |
| **Uses advised against** | Do not use for private purposes (household) |
| **HS code** | 29420000<br>. |

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

**proionic GmbH**
**Parkring 18, Trakt H/1**
**A-8074 Raaba-Grambach**
**Austria**

**Telephone: +43 (0) 316 4009-4200**
**e-mail: office@proionic.com**
**Website: www.proionic.com**

### 1.4 Emergency telephone number

| | |
|---|---|
| **Emergency telephone number** | Poisoning information center Austria: +43 (0) 1 406 43 43 |
| **Emergency information service** | This number is only available during office hours Austria<br>Mo-fr 8am-4pm (CET): +43 (0) 316/ 4009- 4200 |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Research chemical - research sample.

### Classification according to Regulation (EC) No 1272/2008 (CLP)

Self-classification. All information refers to analogy circuits.

| Section | Hazard class | Cat-egory | Hazard class and category | Hazard statement |
|---|---|---|---|---|
| 3.1O | acute toxicity (oral) | 3 | Acute Tox. 3 | H301 |
| 4.1C | hazardous to the aquatic environment - chronic hazard | 3 | Aquatic Chronic 3 | H412 |

For full text of abbreviations: see SECTION 16.

Spillage and fire water can cause pollution of watercourses.

### 2.2 Label elements

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

**- signal word** danger

**- pictograms**

**GHS06**

**- hazard statements**

**H301** Toxic if swallowed.
**H412** Harmful to aquatic life with long lasting effects.

**- precautionary statements**

**P264** Wash thoroughly after handling.
**P270** Do not eat, drink or smoke when using this product.
**P273** Avoid release to the environment.
**P301+P310** IF SWALLOWED: Immediately call a POISON CENTER/doctor.
**P330** Rinse mouth.
**P501** Dispose of contents/container to industrial combustion plant.

### 2.3 Other hazards

Not readily biodegradable.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

**Name of substance** Tributylmethylphosphonium bis(trifluoromethylsulf-onyl)imide

**Identifiers**

**CAS No** 324575-10-2

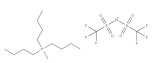
**EC No** 672-621-0

**Purity** >99 – <99,9 %

**Molecular formula** C15F6H30NO4PS2

**Molar mass** 497,5 $^{g}/_{mol}$

**Structural formula**



## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

#### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

#### Following skin contact

Wash with plenty of soap and water.

#### Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing.

#### Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

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

See SECTION 2.

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

None

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO2)

#### Unsuitable extinguishing media

Water jet

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

#### Hazardous combustion products

Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2), Phosphorus oxides (PxOy), Sulphur oxides (SOx), Hydrogen fluoride (HF)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

## SECTION 6: Accidental release measures

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

#### For non-emergency personnel

Remove persons to safety.

#### For emergency responders

Suitable protective equipment. Wear breathing apparatus if exposed to vapours/dust/spray/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

### 6.3 Methods and material for containment and cleaning up

#### Advice on how to contain a spill

Covering of drains

#### Advice on how to clean up a spill

Collect spillage. Wipe up with absorbent material (e.g. cloth, fleece). Sawdust. Kieselgur (diatomite). Sand. Universal binder.

#### Appropriate containment techniques

Use of adsorbent materials.

#### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Recommendations

Use local and general ventilation. Use only in well-ventilated areas.

#### Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

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

Store locked up. Keep container tightly closed and in a well-ventilated place. Keep away from other materials.

**- packaging compatibilities**

Only packagings which are approved (e.g. acc. to ADR) may be used.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

These information are not available.

### 8.2 Exposure controls

#### Appropriate engineering controls

General ventilation.

#### Individual protection measures (personal protective equipment)

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

#### Eye/face protection

Wear eye/face protection.

#### Skin protection

**- protective clothing - protection against liquid chemicals**

Wear suitable protective clothing. Chemical protective clothing.

**- hand protection**

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use.

**- other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

#### Body protection

Protective clothing against liquid chemicals.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

#### Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| **Physical state** | liquid |
| **Colour** | colourless |
| **Odour** | characteristic |
| **Melting point/freezing point** | not determined |
| **Boiling point or initial boiling point and boiling range** | not determined |

| | |
|---|---|
| **Flammability** | this material is combustible, but will not ignite readily |
| **Lower and upper explosion limit** | not determined |
| **Flash point** | not determined |
| **Auto-ignition temperature** | not determined |
| **pH (value)** | not determined |
| **Kinematic viscosity** | not determined |
| **Solubility(ies)** | |

### Partition coefficient

| | |
|---|---|
| **Partition coefficient n-octanol/water (log value)** | not determined |

| | |
|---|---|
| **Vapour pressure** | not determined |

### Density and/or relative density

| | |
|---|---|
| **Density** | not determined |
| **Relative vapour density** | not determined |

| | |
|---|---|
| **Particle characteristics** | not relevant (liquid) |

### Other information

| | |
|---|---|
| **Information with regard to physical hazard classes** | hazard classes acc. to GHS (physical hazards): not relevant |
| **Other safety characteristics** | there is no additional information |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

### 10.2 Chemical stability

Stable under normal conditions of use.

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

Do not allow contact with air.

### 10.5 Incompatible materials

There is no additional information.

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Classification according to GHS (1272/2008/EC, CLP)

Data on similar substances were used.

#### Acute toxicity

Toxic if swallowed.

| Exposure route | Endpoint | Value | Species |
|---|---|---|---|
| oral | LD50 | 300 $^{mg}/_{kg}$ | rat |

#### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

#### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

#### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

#### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

#### Carcinogenicity

Data are not available.

#### Reproductive toxicity

Data are not available.

#### Specific target organ toxicity - single exposure

Data are not available.

#### Specific target organ toxicity - repeated exposure

Data are not available.

#### Aspiration hazard

Data are not available.

### 11.2 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Harmful to aquatic life with long lasting effects.

#### Aquatic toxicity (acute)

No data available. Data on similar substances were used.

### 12.2 Persistence and degradability

Data are not available.

### 12.3 Bioaccumulative potential

Bioaccumulation is not expected.

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

Not carried out yet.

### 12.6 Endocrine disrupting properties

Information on this property is not available.

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Dispose of contents/container to industrial combustion plant.

#### Waste treatment-relevant information

Incineration.

#### Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment.

#### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

#### Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

## SECTION 14: Transport information

| | |
|---|---|
| **14.1 UN number or ID number** | 2810 |
| **ADR/RID/ADN** | UN 2810 |
| **IMDG-Code** | UN 2810 |
| **ICAO-TI** | UN 2810 |

## 14.2 UN proper shipping name

| | |
|---|---|
| **ADR/RID/ADN** | TOXIC LIQUID, ORGANIC, N.O.S. |
| **IMDG-Code** | TOXIC LIQUID, ORGANIC, N.O.S. |
| **ICAO-TI** | Toxic liquid, organic, n.o.s. |
| **Technical name** | Tributylmethylphosphonium bis(trifluoromethylsulfonyl)imide |

## 14.3 Transport hazard class(es)

| | |
|---|---|
| **ADR/RID/ADN** | 6.1 |
| **IMDG-Code** | 6.1 |
| **ICAO-TI** | 6.1 |

## 14.4 Packing group

| | |
|---|---|
| **ADR/RID/ADN** | II |
| **IMDG-Code** | II |
| **ICAO-TI** | II |

## 14.5 Environmental hazards

Non-environmentally hazardous acc. to the dangerous goods regulations

## 14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

## 14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

### Information for each of the UN Model Regulations

**Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - additional information**

| | |
|---|---|
| **Classification code** | T1 |
| **Danger label(s)** | 6.1 |

| | |
|---|---|
| **Special provisions (SP)** | 274, 614, 802(ADN) |
| **Excepted quantities (EQ)** | E4 |
| **Limited quantities (LQ)** | 100 ml |
| **Transport category (TC)** | 2 |
| **Tunnel restriction code (TRC)** | D/E |
| **Hazard identification No** | 60 |

### International Maritime Dangerous Goods Code (IMDG) - additional information

| | |
|---|---|
| **Marine pollutant** | - |
| **Danger label(s)** | 6.1 |

| | |
|---|---|
| **Special provisions (SP)** | 274 |
| **Excepted quantities (EQ)** | E4 |
| **Limited quantities (LQ)** | 100 mL |
| **EmS** | F-A, S-A |
| **Stowage category** | B |

### International Civil Aviation Organization (ICAO-IATA/DGR) - additional information

| | |
|---|---|
| **Danger label(s)** | 6.1 |

| | |
|---|---|
| **Special provisions (SP)** | A3, A4, A137 |
| **Excepted quantities (EQ)** | E4 |
| **Limited quantities (LQ)** | 1 L |

## 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. Not relevant.

### Additional information

Substance is listed in the following national inventories:
TCSI (Taiwan)
VNECI (Vietnam)
C&L Inventory (Europe)

### 15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance.

## SECTION 16: Other information

### Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|---|---|
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) |
| ADR | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road) |
| ADR/RID/ADN | Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN) |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| CLP | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures |

| Abbr. | Descriptions of used abbreviations |
|---|---|
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| EC No | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| HS | Harmonized Commodity Description and Coding System (Harmonized System, drawn up by the World Customs Organisation) |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| ICAO-TI | Technical instructions for the safe transport of dangerous goods by air |
| IMDG | International Maritime Dangerous Goods Code |
| IMDG-Code | International Maritime Dangerous Goods Code |
| LD50 | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval |
| NLP | No-Longer Polymer |
| PBT | Persistent, Bioaccumulative and Toxic |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| vPvB | Very Persistent and very Bioaccumulative |

## Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

## Classification procedure

Self-classification. Data on similar substances were used.

## List of relevant phrases

| Code | Text |
|---|---|
| H301 | Toxic if swallowed. |
| H412 | Harmful to aquatic life with long lasting effects. |

## Disclaimer

The data contained in this safety data sheet are based on the current knowledge and experience of proionic GmbH and do not purport to be all inclusive. The safety data sheet shall be used only as a guide. The data do not describe the products properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose, except as mentioned, be deduced from the data contained in this safety data sheet. It is the responsibility of the recipient of the product to ensure that any proprietary rights and existing laws and legislation are observed.
Proionic GmbH shall not be held liable for any damage resulting from handling or from contact with the above product.
This safety data sheet has been compiled and is solely intended for this product – it may not be valid for this product used in combination with any material or any process
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