

Taian Green Industry Co., Ltd.

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Safety Data Sheet

Tetrabutyl Ammonium Tetrafluoroborate ,98%

(According to Regulation (EC) No. 1907/2006)

Version: 1.0-English

Preparation date: 2018-06-15

Revision date: 2018-06-15

Section 1 - Chemical Product and Company Identification

1.1 Product identifier:

Product name: Tetrabutyl Ammonium Tetrafluoroborate,98%

Trade name: TBATFB

CAS No. : 429-42-5

1.2 Uses of the chemical product:

Intended use: Laboratory chemicals, Manufacture of substances.

Limited use: No information available.

1.3 Supplier identifier:

Company name: Taian Green Industry Co.,Ltd

Address: Room921, Building2, Dream Valley E-commerce Industrial Park,
Lingshan Street, Taishan District, Taian City, Shandong Province,
China

Postcode: 271000

E-mail: greenindustry@163.com

Telephone: +86 156 6659 0861

1.4 Emergency telephone:

Emergency Phone #: +86 156 6659 0861

Section 2 - Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral: Category 4 H302

Skin corrosion/irritation: Category 2 H315

Serious eye damage/eye irritation: Category 1 H318

Specific target organ toxicity, single exposure: Category 3, Respiratory system H335

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008



Pictogram:

Signal word: Danger

Hazard statement(s)

H302 Harmful if swallowed.

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H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

Precautionary statement(s)

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

P280 Wear protective gloves/protective clothing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements None

2.3 Other hazards

None

Section 3 - Composition/information on ingredients

3.1 Substances

Formula: C₁₆H₃₆NBF₄

Molecular weight: 329.27 g/mol

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Tetrabutyl ammonium tetrafluoroborate		
CAS No. 429-42-5 EC No. 207-058-8	Acute Tox. 4; Skin Irrit.2; Eye Irrit. 1; STOT SE 3; H302, H315, H318, H335	≤100%

Section 4 - First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. Hydrofluoric (HF) acid burns require immediate and specialized first aid and medical treatment. Symptoms may be delayed up to 24 hours depending on the concentration of HF. After decontamination with water, further damage can occur due to penetration/absorption of the fluoride ion. Treatment should be directed toward binding the fluoride ion as well as the effects of exposure. Skin exposures can be treated with a 2.5% calcium gluconate gel repeated until burning ceases.

More serious skin exposures may require subcutaneous calcium gluconate except for digital areas unless the physician is experienced in this technique, due to the potential for tissue injury from increased pressure. Absorption can readily occur through the subungual areas and should be considered when undergoing decontamination. Prevention of absorption of the fluoride ion in cases of ingestion can be obtained by giving milk, chewable calcium carbonate tablets or Milk of Magnesia to conscious victims. Conditions

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such as hypocalcemia, hypomagnesemia and cardiac arrhythmias should be monitored for, since they can occur after exposure.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician. First treatment with calcium gluconate paste.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

Section 5 - Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

Section 6 - Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

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For disposal see section 13.

Section 7 - Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

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

Hygroscopic.

7.3 Specific end use(s)

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

Section 8 - Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters.

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses 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

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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).

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Control of environmental exposure

Do not let product enter drains.

Section 9 - Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State: Solid

Appearance: White to Off-white

Odor: No data available

pH: No data available

Melting point/freezing point: Melting point/range: 157 – 162 °C (315 - 324 °F)

Initial boiling point and boiling range: No data available

Flash point: > 93 °C (> 199 °F)

Evaporation rate: No data available

Flammability (solid, gas) : No data available

Upper/lower flammability or explosive limits: No data available

Vapour pressure: No data available

Vapour density: 0.4 - 0.5 g/cm³

Relative density: No data available

Water solubility: Slightly soluble, Decomposes in contact with water.

Partition coefficient: octanol/water: log Pow: 1

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: No data available

Oxidizing properties: No data available

9.2 Other safety information

No data available

Section 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

Hygroscopic

10.5 Incompatible materials

Strong oxidizing agents, Acids

10.6 Hazardous decomposition products

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Hazardous decomposition products formed under fire conditions. - Carbon oxides,
Nitrogen oxides (NOx), Hydrogen fluoride, Borane/boron oxides.
Other decomposition products - No data available

Section 11 - Toxicological information

11.1 Information on toxicological effects

Acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Potential health effects

Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.

Ingestion: Harmful if swallowed.

Skin: Harmful if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

Signs and Symptoms of Exposure

Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcemia.

Additional Information

RTECS: Not available

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

Section 12 - Ecological information

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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

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

No data available

Section 13 - Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product

Section 14 - Transport information

14.1 UN number

ADR/RID: 2923

IMDG: 2923

IATA: 2923

14.2 UN proper shipping name

ADR/RID: CORROSIVE SOLID, TOXIC, N.O.S. (Tetrabutyl ammonium tetrafluoroborate)

IMDG: CORROSIVE SOLID, TOXIC, N.O.S. (Tetrabutyl ammonium tetrafluoroborate)

IATA: CORROSIVE SOLID, TOXIC, N.O.S. (Tetrabutyl ammonium tetrafluoroborate)

14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID: NO

IMDG: NO

IATA: NO

Marine pollutant: NO

14.6 Special precautions for user

No data available

Section 15 - Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

WHMIS Classification

D2B Toxic Material Causing Other Toxic Effects

Moderate skin irritant

Moderate respiratory irritant

Severe eye irritant

This product has been classified in accordance with the hazard criteria of the Controlled Products

Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

Section 16 - Further information

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