



TCI (Shanghai) DEVELOPMENT CO., LTD.

Revision number: 1

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SAFETY DATA SHEET

1. IDENTIFICATION

Product name: Tetrabutylammonium Borohydride [Reducing Reagent]
Product code: T0917
Company: TCI (Shanghai) DEVELOPMENT CO., LTD.
Address: No.96 Pu Gong Road, Shanghai Chemical Industry Park, Shanghai 201507 China
Responsible Department: Sales Department
Telephone: +86-(0)21-67121386
Fax: +86-(0)21-67121385
e-mail: Sales-CN@TCIchemicals.com
Emergency telephone: 0532-83889090
Revision number: 1

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

PHYSICAL HAZARDS

Substances and mixtures which, in contact with water, emit flammable gases Category 2

HEALTH HAZARDS

Skin corrosion/irritation Category 1B

Serious eye damage/eye irritation Category 1

ENVIRONMENTAL HAZARDS

Not classified

Label elements

Pictograms or hazard symbols



Signal word

Danger

Hazard statements

In contact with water releases flammable gases

Causes severe skin burns and eye damage

Precautionary statements

[Prevention]

Do not allow contact with water.

Handle under inert gas. Protect from moisture.

Do not breathe dusts or mists.

Wash hands and face thoroughly after handling.

Wear protective gloves, protective clothing, face protection.

[Response]

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Brush off loose particles from skin. Immerse in cool water or wrap with wet bandages.

In case of fire: Use dry chemical or dry sand to extinguish.

[Storage]

Store in a dry place. Store in a closed container.

Store locked up.

[Disposal]

Dispose of contents and container in accordance with local, regional, national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture:	Substance
Components:	Tetrabutylammonium Borohydride [Reducing Reagent]
Percent:	>96.0%(T)
CAS RN:	33725-74-5
Chemical Formula:	C ₁₆ H ₄₀ BN

4. FIRST AID MEASURES

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
Skin contact:	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
Ingestion:	Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting.
Protection of first-aiders:	A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Dry chemical, dry sand.
Unsuitable extinguishing media:	Water
Specific hazards arising from the chemical:	Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.
Precautions for firefighters:	Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Remove movable containers if safe to do so.
Special protective equipment for firefighters:	When extinguishing fire, be sure to wear personal protective equipment

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.
Environmental precautions:	Prevent product from entering drains.
Methods and materials for containment and cleaning up:	Sweep dust to collect it into an airtight container, taking care not to disperse it. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
Prevention of secondary hazards:	Do not allow contact with water. Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment. Since there is a possibility of igniting behind when removal of a leakage thing is imperfect, it is careful enough.

7. HANDLING AND STORAGE

Precautions for safe handling

- Technical measures:** Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent dispersion of dust. Wash hands and face thoroughly after handling.
Use a closed system if possible. Use a local exhaust if dust or aerosol will be generated.
- Advice on safe handling:** Avoid contact with skin, eyes and clothing.
Keep away from any possible contact with water, because of violent reaction and possible flash fire.
Use well-dried equipment.
Handle under inert gas.
Don't leave used equipment or rag. This product may ignite if it is left stuck on combustibles such as paper, rags, etc.

Conditions for safe storage, including any incompatibilities

- Storage conditions:** Keep container tightly closed. Store in a cool and dark place.
Store under inert gas.
Protect from moisture.
Store locked up.
Store away from incompatible materials such as oxidizing agents.
Moisture-sensitive, Air-sensitive
- Packaging material:** Comply with laws.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Engineering controls:** Install a closed system or local exhaust. Also install safety shower and eye bath.
- Personal protective equipment**
- Respiratory protection:** Dust respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.
- Hand protection:** Impervious gloves.
- Eye protection:** Safety goggles. A face-shield, if the situation requires.
- Skin and body protection:** Impervious protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state (20°C):** Solid
- Form:** Crystal - Powder
- Colour:** White - Almost white
- Odour:** No data available
- pH:** No data available
- Melting point/freezing point:** 126°C
- Boiling point/range:** No data available
- Flash point:** No data available
- Flammability or explosive limits:**
- Lower:** No data available
- Upper:** No data available
- Relative density:** No data available
- Solubility(ies):**
- [Water]** No data available
- [Other solvents]**
- Soluble:** Dichloromethane
- Insoluble:** Ether

10. STABILITY AND REACTIVITY

Chemical stability:	Stable under proper conditions.
Possibility of hazardous reactions:	May spontaneously ignite or release flammable gases when in contact with water.
Conditions to avoid:	Moisture
Incompatible materials:	Oxidizing agents, Water
Hazardous decomposition products:	Carbon dioxide, Carbon monoxide, Nitrogen oxides (NO _x), Boron oxides

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	No data available
Skin corrosion/irritation:	No data available
Serious eye damage/irritation:	No data available
Germ cell mutagenicity:	No data available
Carcinogenicity:	
IARC =	No data available
NTP =	No data available
Reproductive toxicity:	No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity:	
Fish:	No data available
Crustacea:	No data available
Algae:	No data available
Persistence / degradability:	No data available
Bioaccumulative potential(BCF):	No data available
Mobility in soil	
Log Pow:	No data available
Soil adsorption (Koc):	No data available
Henry's Law (PaM³/mol):	No data available

13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. Take precautions against ignition. Observe all federal, state and local regulations when disposing of the substance

14. TRANSPORT INFORMATION

Hazards Class:	4.3: Substance which, in contact with water, emit flammable gases.
Subsidiary risk:	8: Corrosive.
UN-No:	3131
Proper shipping name:	Water-reactive solid, corrosive, n.o.s.
Packing group:	II

15. REGULATORY INFORMATION

Regulations on the Control over Safety of Dangerous Chemicals (State Council announces on January 26, 2002 and revised on February 16,2011): Safe use and production, the storage of a dangerous chemical, transport, loading and unloading were prescribed.

16. OTHER INFORMATION

The reference company name of written contents

Company: TCI (Shanghai) DEVELOPMENT CO., LTD.
Address: No.96 Pu Gong Road, Shanghai Chemical Industry Park, Shanghai 201507 China
Department: Technical Information Department
Emergency telephone: 0532-83889090
Fax: +86-(0)21-67121385

This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.