



TCI (Shanghai) DEVELOPMENT CO., LTD.

Revision number: 5

Revision date: 11/11/2021

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SAFETY DATA SHEET

1. IDENTIFICATION

Product name: Butyllithium (ca. 15% in Hexane, ca. 1.6mol/L)
Product code: B0396
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: 5

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

PHYSICAL HAZARDS

Flammable liquids Category 2
Pyrophoric liquids Category 1
Substances and mixtures which, in contact with water, emit flammable gases Category 1

HEALTH HAZARDS

Skin corrosion/irritation Category 1B
Serious eye damage/eye irritation Category 1
Reproductive toxicity Category 2
Specific target organ toxicity - Single exposure [Category 3] Narcotic effects
Specific target organ toxicity - Repeated exposure [Category 1] Nervous system
Aspiration hazard Category 1

ENVIRONMENTAL HAZARDS

Acute aquatic hazard Category 2

Label elements

Pictograms or hazard symbols



Signal word

Hazard statements

Danger

Highly flammable liquid and vapour
Catches fire spontaneously if exposed to air
In contact with water releases flammable gases which may ignite spontaneously
Causes severe skin burns and eye damage
Suspected of damaging fertility or the unborn child
Causes damage to organs through prolonged or repeated exposure : Nervous system
May cause drowsiness or dizziness
May be fatal if swallowed and enters airways
Toxic to aquatic life

Precautionary statements
[Prevention]

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.
 Keep away from heat, sparks, open flames and hot surfaces. -No smoking.
 Do not allow contact with air.
 Do not allow contact with water.
 Handle under inert gas. Protect from moisture.
 Keep container tightly closed.
 Ground and bond container and receiving equipment.
 Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.
 Do not breathe mist, vapors or spray.
 Use only outdoors or in a well-ventilated area.
 Avoid release to the environment.

[Response]

Do not eat, drink or smoke when using this product.
 Wash hands and face thoroughly after handling.
 Wear protective gloves, protective clothing, face protection.
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.
 IF ON SKIN: Immerse in cool water or wrap with wet bandages. 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.
 IF exposed or concerned: Get medical advice or attention.
 Brush off loose particles from skin. Immerse in cool water or wrap with wet bandages.

[Storage]

In case of fire: Use dry chemical or dry sand to extinguish.
 Store in a dry place. Store in a closed container.
 Store contents under inert gas.
 Store in a well-ventilated place. Keep container tightly closed.
 Store locked up.

[Disposal]

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture: Mixture
Components: Butyllithium (ca. 15% in Hexane, ca. 1.6mol/L)
Percent:
CAS RN: 109-72-8
Chemical Formula: C₄H₉Li

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
- 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: Keep containers cool by spraying with water but NO direct contact with water. Eliminate all ignition sources 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 extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Ensure adequate ventilation. 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:** Absorb spilled material in dry sand or inert absorbent before recovering it into an airtight container. In case of large amount of spillage, contain a spill by bunding. 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 generation of vapour or mist. Keep away from heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated.
- Advice on safe handling:** Avoid all contact!
Keep away from any possible contact with water, because of violent reaction and possible flash fire.
Use well-dried equipment.
Handle under inert gas.
Do not allow contact with air.
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 an explosion-proof refrigerator. Store under inert gas. Protect from moisture. Store locked up. Store away from incompatible materials such as oxidizing agents. Heat-sensitive, 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.
Exposure limits: (Hexane)
 ACGIH TLV(TWA):400 ppm (skin)
 OSHA PEL(TWA):500 ppm

Personal protective equipment

Respiratory protection: Half or full facepiece 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): Liquid
Form: Clear - Cloudy
Colour: Slightly pale yellow - Yellow
Odour: No data available
pH: No data available
Melting point/freezing point: No data available
 (Hexane) -95°C
Boiling point/range: No data available
 (Hexane) 68°C
Flash point: -12°C
Flammability or explosive limits:
Lower: No data available
Upper: No data available
Relative density: 0.69
Solubility(ies):
[Water] No data available
[Other solvents] No data available
Log Pow: (Hexane) 3.9

10. STABILITY AND REACTIVITY

Chemical stability: Stable under proper conditions.
Possibility of hazardous reactions: May spontaneously ignite on contact with air.
 May spontaneously ignite or release flammable gases when in contact with water.
Conditions to avoid: Spark, Open flame, Static discharge, Air, Moisture
Incompatible materials: Oxidizing agents, Acids, Water, Alcohols, Amines
Hazardous decomposition products: Carbon monoxide, carbon dioxide etc

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	No data available (Hexane) ori-rat LD50:25 g/kg ihl-rat LC50:48000 ppm/4H ipr-rat LDLo:9100 mg/kg
Skin corrosion/irritation: Serious eye damage/irritation:	No data available No data available (Hexane) eye-rbt 10 mg MLD
Germ cell mutagenicity:	No data available (Hexane) cyt-ham-fbr 500 mg/L cyt-rat-scu 7.5 mL/kg/12W-I
Carcinogenicity:	
IARC =	No data available
NTP =	No data available (Hexane) ihl-rat TCLo:1000 ppm/4H/59W-I
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:	4.2: Substance liable to spontaneous combustion .
Subsidiary risk:	4.3: Substance which, in contact with water, emit flammable gases.
UN-No:	3394
Proper shipping name:	Organometallic substance, liquid, pyrophoric, water-reactive

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.

This product is included in the list of dangerous chemicals(2015)/Serial No.: 2828

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 obtain, 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.