



TCI (Shanghai) DEVELOPMENT CO., LTD.

Revision number: 2

Revision date: 09/05/2019

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## SAFETY DATA SHEET

### 1. IDENTIFICATION

**Product name:** Chlorambucil  
**Product code:** C2939  
**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  
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**Emergency telephone:** 0532-83889090  
**Revision number:** 2

### 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

#### PHYSICAL HAZARDS

Not classified

#### HEALTH HAZARDS

**Acute toxicity (Oral)** Category 3  
**Skin corrosion/irritation** Category 2  
**Serious eye damage/eye irritation** Category 2A  
**Germ cell mutagenicity** Category 2  
**Carcinogenicity** Category 1A  
**Reproductive toxicity** Category 1A  
**Specific target organ toxicity** Nervous system  
**- Single exposure [Category 1]**  
**Specific target organ toxicity** Bone marrow Nervous system Immune system  
**- Repeated exposure [Category 1]**

#### ENVIRONMENTAL HAZARDS

Not classified

Label elements

Pictograms or hazard symbols



**Signal word**  
**Hazard statements**

Danger  
Toxic if swallowed  
Causes skin irritation  
Causes serious eye irritation  
Suspected of causing genetic defects  
May cause cancer  
May damage fertility or the unborn child  
Causes damage to organs : Nervous system  
Causes damage to organs through prolonged or repeated exposure : Bone marrow Nervous system Immune system

**Precautionary statements**  
**[Prevention]**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe dust, fume, mist, vapors or spray.  
Do not eat, drink or smoke when using this product.  
Wash hands and face thoroughly after handling.  
Wear protective gloves, protective clothing, face protection.

**[Response]**

IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth.  
 IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse.  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

**[Storage]**  
**[Disposal]**

If exposed or concerned: Call a POISON CENTER or doctor.  
 Store locked up.  
 Dispose of contents and container in accordance with local, regional, national regulations.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance/mixture:** Substance  
**Components:** Chlorambucil  
**Percent:** >98.0%(GC)(T)  
**CAS RN:** 305-03-3  
**Synonyms:** 4-[4-[Bis(2-chloroethyl)amino]phenyl]butyric Acid  
**Chemical Formula:** C<sub>14</sub>H<sub>19</sub>Cl<sub>2</sub>NO<sub>2</sub>

**4. FIRST AID MEASURES**

**Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.  
**Skin contact:** Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. 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. Call a POISON CENTER or doctor/physician.  
**Ingestion:** Immediately call a POISON CENTER or doctor/physician. Rinse mouth.  
**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, foam, water spray, carbon dioxide.  
**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.

## 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 all contact!

### Conditions for safe storage, including any incompatibilities

**Storage conditions:** Keep container tightly closed. Store in a refrigerator.  
Store locked up.  
Store away from incompatible materials such as oxidizing agents.  
Heat-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 - Slightly pale yellow  
**Odour:** No data available  
**pH:** No data available  
**Melting point/freezing point:** 67°C  
**Boiling point/range:** No data available  
**Flash point:** No data available  
**Flammability or explosive limits:**  
**Lower:** No data available  
**Upper:** No data available  
**Vapour pressure:**  $1.2 \times 10^{-7}$  kPa/25°C  
**Relative density:** No data available  
**Solubility(ies):**  
**[Water]** Very slightly soluble (7.5g/L, 25°C)  
**[Other solvents]**  
**Soluble:** Ether, Benzene  
**Slightly soluble:** Acetone, Chloroform, Ethanol  
**Log Pow:** 1.70

## 10. STABILITY AND REACTIVITY

**Chemical stability:** Stable under proper conditions.

**Possibility of hazardous reactions:** No special reactivity has been reported.

**Incompatible materials:** Oxidizing agents

**Hazardous decomposition products:** Carbon dioxide, Carbon monoxide, Nitrogen oxides (NO<sub>x</sub>), Hydrogen chloride

**11. TOXICOLOGICAL INFORMATION**

<b>Acute Toxicity:</b>	orl-rat LD50:76 mg/kg ipr-rat LD50:14 mg/kg scu-mus LD50:26 mg/kg
<b>Skin corrosion/irritation:</b>	No data available
<b>Serious eye damage/irritation:</b>	No data available
<b>Germ cell mutagenicity:</b>	dlt-mus-ipr 5 mg/kg cyt-hmn-lym 250 ug/L trn-mus-ipr 6 mg/kg mnt-rat-ipr 30 mg/kg
<b>Carcinogenicity:</b>	orl-man TDLo:84 mg/kg/2.5Y-C ipr-rat TDLo:120 mg/kg/26W-I skn-mus TDLo:108 mg/kg/9W-I Group 1 (Carcinogenic to humans) a (Known to be carcinogens)
<b>IARC =</b>	
<b>NTP =</b>	
<b>Reproductive toxicity:</b>	orl-wmn TDLo:5160 ug/kg (33-75D preg) unr-man TDLo:5857 ug/kg (30W male) orl-rat TDLo:8 mg/kg (15D preg) ipr-rat TDLo:4 mg/kg (13D preg)
<b>RTECS Number:</b>	ES7525000

**12. ECOLOGICAL INFORMATION**

<b>Ecotoxicity:</b>	
<b>Fish:</b>	No data available
<b>Crustacea:</b>	No data available
<b>Algae:</b>	No data available
<b>Persistence / degradability:</b>	No data available
<b>Bioaccumulative potential(BCF):</b>	3
<b>Mobility in soil</b>	
<b>Log Pow:</b>	1.70
<b>Soil adsorption (Koc):</b>	11
<b>Henry's Law (PaM<sup>3</sup>/mol):</b>	1.73 x 10 <sup>-5</sup>

**13. DISPOSAL CONSIDERATIONS**

Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

**14. TRANSPORT INFORMATION**

<b>Hazards Class:</b>	6.1: Toxic substance.
<b>UN-No:</b>	2811
<b>Proper shipping name:</b>	Toxic solid, organic, n.o.s.
<b>Packing group:</b>	III

**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  
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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.