



**Hangzhou Tianlong Biotechnology Co., Ltd.**

Add: Room 1906, Fengqi Times Tower, No.338, Fengqi East Road, Hangzhou, Zhejiang, China.

## MATERIAL SAFETY DATA SHEET

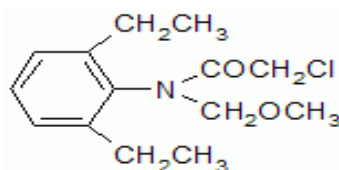
### 1. Chemical Product and company Identification

Product Name: Alachlor

Molecular Formula:  $C_{14}H_{20}ClNO_2$

Molecular Weight: 269.8

Structural Formula:



Chemical Name: 2-chloro-2'-diethyl-N-methoxymethylactanilide

CAS No.: 15972-60-8

Supplier: HANZHOU TIANLONG BIOTECHNOLOGY CO., LTD

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### 2. Composition / Information on Ingredients

Composition	CAS No.	Content %
Alachlor	15972-60-8	95.0
Other ingredients		5.0

### 3. Hazards Identification

Primary Route(s) of Exposure/Entry: Skin, Eyes and Mouth. Flush skin and eyes with large amounts of water. If ingested, seek prompt medical attention.

### 4. First Aid Measures

Inhalation: If inhaled seek prompt medical attention.

Skin Contact: In case of contact, immediately flush skin with large amounts of water.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids may be lifted occasionally, until no evidence of chemical remains. Call a physician.

Ingestion: The compound is toxic by ingestion. If sulfuric acid is ingested, do NOT induce vomiting.

## **5. Fire-Fighting Measures**

Extinguishing Media: Use media appropriate for surrounding material.

Special Fire Fighting Instructions: Firefighters must wear appropriate protective clothing and self – contained breathing apparatus.

## **6. Accidental Release Measures**

Spill, Leak, or Release: Review fire and explosion hazards and safety precautions before proceeding with clean up. Use appropriate personal protective equipment during clean up. Contain spill and collect in suitable waste container. Avoid contact of materials with skin or eyes. Use adequate ventilation. No special clean up practices are required.

Waste Disposal Dispose of as solid waste in accordance with any applicable federal, state, and local requirements.

## **7. Handling And Storage**

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Do not taste or swallow. Ensure adequate ventilation. When using do not eat, drink or smoke. Wash hands thoroughly after handling or contact. Wash contaminated clothing before re-use. Thoroughly clean equipment after use. Do not contaminate drains, sewers and water ways when disposing of equipment rinse water. Emptied containers retain vapour and product residue. Follow labeled warnings even after container is emptied. Do not cut, drill, grind or weld on or near this container.

Storage: Keep locked up and out of the reach of children; Keep away from living quarters; Keep away from food, drink and animal feed. Keep only in the original container; Keep away from sources of ignition (sparks, flame, etc.); Keep container tightly closed in a cool, well-ventilated place; Protect from frost; Partial crystallization may occur on prolonged storage below the minimum storage temperature; Minimum shelf life: 4 years; If froze, place in warm room and shake frequently to put back into solution.

## **8. Exposure Controls/Personal Protection**

Personal Protective Equipment: Respiratory Protection: None required.

Protective Gloves: Are highly recommended.

Eye Protection: Safety glasses are required.

## **9. Physical and Chemical Properties**

Form: Solid

Color: Yellow white to wine red

Odor: Odorless

Melting Point: 39.5-41.5°C

Boiling point :100°C@0.02mHg

Solubility: In water 242 mg/l (25 °C). Soluble in diethyl ether, acetone, benzene, chloroform, ethanol, and ethyl acetate. Slightly soluble in heptane.

Vapor pressure: 2.9 mPa (25°C)

specific gravity ; 1.133@25°C

Partition Coefficient: 2.8998

Adsorption Coefficient: 170

#### **10. Stability and Reactivity**

Conditions to avoid: fire or flame, heat and high temperature.

Products to avoid: not applicable

Thermal decomposition: not applicable

Hazardous reaction: none

#### **11. Toxicological Information**

Acute toxicity :

Oral LD<sub>50</sub>: Rat 930 - 1360 mg (technical)/kg b.w.

Dermal LD<sub>50</sub>: Rabbit 13,300 mg (technical)/kg b.w

Reproductive effects: High oral doses (150 or 400 mg/kg/day) fed to rats during gestation resulted in maternal and fetal toxicity, but there was no indication that reproduction was affected. Alachlor does not appear to cause reproductive effects.

Teratogenic effects: Doses of up to 150 mg/kg/day fed to rabbits on days 7 through 19 of pregnancy did not result in any birth defects. Similar studies in rats at doses up to 400 mg/kg/day did not result in birth defects, but toxic effects in the mothers and offspring were seen at the highest dose. These data indicate that alachlor is not likely to cause birth defects.

Mutagenic effects: Alachlor does not appear to be mutagenic. Mutagenicity assays with a variety of microbial strains at numerous concentrations of alachlor were all negative.

Carcinogenic effects: Rats given high doses of alachlor developed stomach, thyroid, and nasal turbinate tumors. An 18-month mouse study with doses from 26 to 260 mg/kg/day showed an increase of lung tumors at the highest dose for females but not males. Because of inconsistencies in these studies, the oncogenic potential of alachlor is uncertain.

Organ toxicity: Long-term studies in rats and dogs showed effects on the liver, spleen, and kidneys. The iris and lung have also been affected .

## **12. Ecological Information**

Effects on birds: slightly to practically nontoxic to wildfowl. The LD50 in other mallard ducks was greater than 2000 mg/kg and in pheasants is greater than 10,000 ppm.

Effects on aquatic organisms: moderately toxic to fish. The LC50 (96-hour) is 2.4 mg/L in rainbow trout, 4.3 mg/L in bluegill sunfish, 6.5 mg/L in catfish, and 4.6 mg/L in carp. It is only slightly toxic to crayfish, with a LC50 (96-hour) of 19.5 mg/L.

Effects on other organisms: not toxic to bees and earthworms.

## **13. Disposal Considerations**

Do not wash away into sewer. Vacuum spilled material. Carefully collect remainder, then remove to safe place.

## **14. Transport Information**

Class: 9

UN No.: 3077

Packing group: III

## **15. Regulatory Information**

R-phrases: Harmful if swallowed.

Possible risk of irreversible effects

May cause sensitization by skin contact

S-phrases: Keep out of reach of children.

Keep away from food, drink and animal feeding stuffs.

**16. Other Information**

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.