



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

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

## MATERIAL SAFETY DATA SHEET

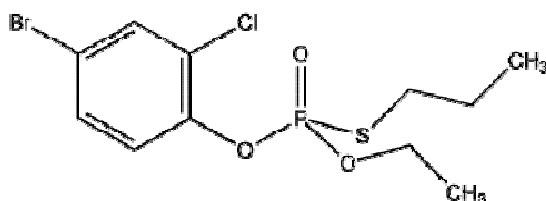
### 1. Chemical Product and company Identification

Product Name: Profenofos

Molecular Formula: C<sub>11</sub>H<sub>15</sub>BrClO<sub>3</sub>PS

Molecular Weight: 373.6

Structural Formula:



Chemical Name: O-4-bromo-2-chlorophenyl O-ethyl S-propyl phosphorothioate (IUPAC)

CAS No.: 41198-08-7

Supplier: HANZHOU TIANLONG BIOTECHNOLOGY CO., LTD

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### 2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Profenofos	41198-08-7	95.0
Other ingredients		5.0

### 3. Hazards Identification

Emergency Overview:

- Cholinesterase inhibitor may be fatal if swallowed.
- Harmful if absorbed through skin or inhaled.
- Causes slight eye irritation.
- Avoid breathing product vapors or spray mist.
- Avoid contact with eyes, skin or clothing.
- Keep out of reach of children.

Symptoms of over exposure are headaches, nausea, vomiting, cramps, weakness, blurred vision, pin point pupils, tightness in chest, labored breathing, nervousness, sweating, watering of eyes, drooling, muscle spasms and coma.

### 4. First Aid Measures

Swallowed: If swallowed, Do not induce vomiting. Give a glass of water. If swallowed give one atropine tablet every 5 minutes until dryness of the mouth occurs.

Eye: If product gets in eyes, hold eyes open, flush with running water for at least 15

minutes. If poisoning occurs give atropine tablets as above.

Skin: If skin contact occurs, remove contaminated clothing and wash affected areas thoroughly with soap and water. If poisoning occurs give atropine tablets as above. Wash contaminated clothing before re-use.

Inhaled: Move affected person to fresh air and keep at rest until recovered. If poisoning occurs give atropine tablets as above.

Advice to doctor: Treat as a cholinesterase inhibitor. Atropine sulphate is antidotal.

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

Flash point: 133°F

Extinguishing Media: Foam, CO<sub>2</sub>, dry chemicals or sandy soil

Unusual fire and explosion hazards: Not applicable

Special fire fighting procedures: Wear full face, self-contained clothing.

## **6. Accidental Release Measures**

Cover the spill with an absorbent material such as sweeping compound or lime. Sweep up material and place in an appropriate chemical waste container. Flush the spill area with water to remove any residue. Do not allow wash water or contaminate water supplies. Do not reuse container. Disposal of material must be by methods consistent with local, state and federal health and environmental regulations.

## **7. Handling And Storage**

HANDLING: Keep out of reach of children. Very dangerous. Poisonous if absorbed by skin contact, inhaled or swallowed. Avoid contact with eyes and skin. Do not touch or rub eyes, nose or mouth with hand when handling granules. Wear protective clothing and equipment as above. Keep away from volatile chemicals and sources of ignition. If product on skin, immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, respirator and contaminated clothing with detergent and warm water.

STORAGE: KEEP OUT OF REACH OF CHILDREN: Store in the closed, original container in a dry, cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Store in a locked room or place away from children, animals, food, feedstuffs, seed and fertilisers. DO NOT store in or around the home. Store below 45°C. Avoid extreme heat. Keep dry – moisture can increase handling hazards.

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

Personal Protective Equipment:

To avoid eye and skin contact, wearing the following personal protective clothing and equipment is recommended:

Eyes: Safety goggles or face shield

Clothing: Cotton overalls buttoned to the neck and wrist and a washable hat.

Gloves: Elbow length PVC gloves.

Respiratory: Respiratory protection is not normally required. If airborne concentrations are likely to exceed the exposure standard above, an AS/NZS 1715/1716 approved respirator should be worn.

Other: After use and before eating, drinking or smoking, wash hands, arms and face

thoroughly with soap and water. After each day's use wash gloves, goggles or face shield and contaminated clothing.

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

Appearance and odor: Amber-colored Oily liquid with Garlic-like odor

Solubility: 20mg/l (20°C) stable under neutral and slightly acid conditions, readily miscible with organic solvents.

Specific gravity (water=1): Not applicable

Bulk density: 1.455(20°C)

Vapour pressure: 9E-007 mm Hg 25 °C

Boiling point: 100 deg C (0.001mm Hg).

PH: 3.0-7.0 acidity

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

Stability: Stable

Conditions to avoid: None

Incompatibility (Materials to avoid): Bases

Hazardous polymerization: will not occur.

Hazardous decomposition: None

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

oral LD50 :rat 358mg/kg Acute

dermal LD50 : rat 3300mg/kg

Teratogenicity(Rat): None of the other doses tested produced changes in the pregnancy ratio, percentage of live or dead fetuses, number of resorptions, or live fetal weights or sex ratios. Similarly none of the dose appeared to affect embryonic or fetal development and no teratogenic effects were observed.

Reproduction: No compound related effects on body weight, mortality, behavior, or various parameters measuring fertility (fecundity index, male or female fertility index) in any of the parenteral animals.

#### **12. Ecological Information**

Available environmental fate studies show that profenofos is not persistent, particularly in neutral and alkaline soils. Hydrolysis is the major route of dissipation in neutral to alkaline environments. Photolysis is not a major pathway while biotic processes -- aerobic and anaerobic metabolism -- become important after the initial hydrolysis. Profenofos metabolizes rapidly in aerobic and anaerobic conditions and dissipates in neutral to alkaline soils with a half-life of several days. Little data exists for acid soils, although it can be inferred that profenofos dissipates at a slower rate. One of the major degradates, 4-bromo-2-chlorophenol, is persistent in the environment while the fate of another degradate, O-ethyl-S-propyl phosphorothioate, is not well known. Profenofos is not highly mobile and is not expected to leach to ground water under normal use. Because field dissipation studies were conducted under conditions that resulted in a moisture deficit, the leaching potential could not be reliably assessed in the studies. The mobility and leaching potential of the degradates is unknown. The chemical may reach surface waters through spray drift or runoff.

#### **13. Disposal Considerations**

WASTE: Pesticide wastes are toxic and hazardous. Dispose of in accordance with applicable and local laws and regulations. Do not discharge or pour into soil, drainage system or bodies of water.

CONTAINER: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning (plastic containers). If burned, stay out of smoke.

#### **14. Transport Information**

Class: 6.1

UN NO.: 3018

Packing group: III

#### **15. Reactivity data**

Risk Symbol: Xn: Harmful

Risk Phrase(s): R20/21/22Harmful by inhalation, in contact with skin and if swallowed.

**16. Other Information**

This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the

workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.