MATERIAL SAFETY DATA SHEET

Cypermethrin 10% EC

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product Name: Cypermethrin
Active Ingredient: Cypermethrin
Chemical Formula: C_{22}H_{19}Cl_{2}NO_{3}
Recommended use: Agricultural insecticide
Formulation: Emulsifiable concentrate
Supplier: Shanghai Tenglong Agrochem Co., Ltd.
Telephone: +86-21-5506 3225  FAX: +86-21-5506 3699

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Harmful if inhaled, swallowed or absorbed through the skin. Causes moderate eye irritation.
Avoid breathing vapor or spray mist. Avoid contact with skin, eyes and clothing. The active
ingredient may produce sensations (burning, numbing and tingling) in some individuals. Wash
thoroughly with soap and water after handling and before eating, drinking, chewing gum or using
tobacco. Remove contaminated clothing and wash before reuse.

POTENTIAL HEALTH EFFECTS: Effects from overexposure result from inhalation or contact
with the eyes or skin. Symptoms of overexposure include decreased activity, tremors, and
convulsions, loss of bladder control, in coordination, and increased sensitivity to sound. Contact
with cypermethrin may produce skin sensations such as numbing, burning and tingling. These skin
sensations are reversible and usually subside within 12 hours.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:
None known

3. COMPOSITION

Cypermethrin CAS No: 52315-07-8 10% min
Other Ingredients: <90%

4. FIRST AID MEASURES

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice.
Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so
by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove
contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control
center or doctor for treatment advice.
IF INHALED: Move person to fresh air. If person is not breathing, call an ambulance, then give
artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or
doctor for further treatment advice. 

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. 

**NOTE TO PHYSICIAN:** Cypermethrin G-Pro is a pyrethroid insecticide containing the active ingredient cypermethrin. Oral toxicity is low, but because cypermethrin is lipophilic, do not administer milk, cream or other substances containing vegetable or animal fats, which enhance absorption. Treatment is otherwise symptomatic and supportive.

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**5. FIRE FIGHTING MEASURES**

Flash point: 94°C (201°F) (CC)

Fire and Explosion Hazards: Slightly combustible. This material may support combustion at elevated temperatures.

Suitable Extinguishing Media: Foam, CO2, or Dry Chemical. Soft stream water fog only if necessary. Contain all runoff.

Fire Fighting Instructions: Isolate fire. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapors generated.

Hazardous Combustion Products: Heat and fire may result in thermal decomposition and the release of carbon dioxide, hydrogen cyanide, chlorine and hydrogen chloride.

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**6. ACCIDENTAL RELEASE MEASURES**

Isolate and post spill area. Wear protective clothing and personal protective equipment as prescribed in Section 8 “Exposure Controls/Personal Protection”. Keep unprotected persons and animals out of area.

Keep material out of lakes, streams, ponds, and sewer drains. Dike to confine the spill and absorb with a noncombustible absorbent such as clay, sand or soil.

Vacuum, shovel or pump waste into a drum and label contents for disposal.

To clean and neutralize spill area, tools and equipment, wash with a suitable solution of caustic or soda ash, and an appropriate alcohol (i.e., methanol, ethanol, or isopropanol).

Follow this by washing with a strong soap and water solution. Absorb, as above, any excess liquid and add to the drums of waste already collected. Repeat if necessary. Dispose of drummed waste according to the method outlined in Section 13 “Disposal Considerations”.

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**7. HANDLING AND STORAGE**

Store in a cool, dry, well-ventilated place. Do not use or store near heat, open flame or hot surfaces. Store in original container only. Keep out of reach of children and animals.

Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal. Wash thoroughly after handling this product.

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**8. PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** Use local exhaust at all process locations where vapor or mist
may be emitted. Ventilate all transport vehicles prior to unloading.

**Personal Protective Equipment:**

Eyes and Face: All pesticide handlers must wear protective eyewear when working in a non-ventilated space or when applying termiteicide by rodding or sub-slab injection. Respiratory Protection: When working in a non-ventilated space, all pesticide handlers must wear either a NIOSH approved respirator with any R, P or HE filter or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P or HE prefilter. Respirator use and selection must be based on airborne concentrations.

Protective Clothing: All pesticide handlers must wear a long-sleeved shirt and long pants, socks, shoes. After the product is diluted in accordance with label directions for use and/or when mixing and loading using a closed spray tank transfer system, or an in-line injector system, shirt, pants, socks and shoes are sufficient.

Gloves: All pesticide handlers must wear chemical-resistant gloves made of materials such as butyl rubber, nitrile rubber. After the product is diluted in accordance with label directions for use and/or when mixing and loading using a closed spray tank transfer system, waterproof gloves are sufficient. Inspect gloves regularly for leaks. Thoroughly wash the outside of gloves with soap and water prior to removing.

Work Hygiene Practices: Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking or using tobacco. Shower at the end of the workday when handling this product.

Additional information on personal protective clothing for mixers and applicators of this product may be found on the product label.

### 9. PHYSICAL & CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Amber liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Soapy</td>
</tr>
<tr>
<td>pH</td>
<td>5.5 as a 5% emulsion</td>
</tr>
<tr>
<td>Melting Point</td>
<td>0°C (32°F)</td>
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<tr>
<td>Specific Gravity</td>
<td>0.96 at 20°C</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Emulsifies</td>
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### 10. STABILITY & REACTIVITY

**CONDITIONS TO AVOID:** Excessive heat and fire.

**CHEMICAL STABILITY:** Stable

**HAZARDOUS DECOMPOSITION PRODUCTS:** Heat and fire may result in thermal decomposition and the release of carbon monoxide, carbon dioxide, hydrogen cyanide, chlorine and hydrogen.

**POLYMERIZATION:** Will not occur.

### 11. TOXICOLOGICAL INFORMATION

**ACUTE ORAL TOXICITY**
Oral LD50 (rat): 1,085 mg/kg

**ACUTE DERMAL TOXICITY**

Dermal LD50 (rabbit): > 2000 mg/kg

**ACUTE INHALATION TOXICITY**

Inhalation LC50 (rat): 12.35 mg/L (1 hr.) (max. attainable concentration, zero mortalities)

**EFFECTS OF ACUTE EXPOSURE:** This product has low oral, dermal and inhalation toxicity. It is expected to be moderately irritating to the skin and to eyes. Large doses of cypermethrin ingested by laboratory animals produced signs of toxicity including loss of motor control, tremors, decreased activity, urinary incontinence, incoordination, increased sensitivity to sound and convulsions.

Experience to date indicates that contact with cypermethrin may produce skin sensations such as numbing, burning or tingling. These sensations are reversible and usually subside within 12 hours. Contact with phenylsulfonate may be corrosive to the skin and severely irritating to the eyes. Exposure to butanol vapors may produce headaches, drowsiness and irritation of the nose and throat. Excessive exposures to butanol liquid or vapors may result in contact dermatitis and irritation of the mucous membranes.

**EFFECTS OF CHRONIC EXPOSURE:** No data are available for this formulation. In studies with laboratory animals, cypermethrin did not cause reproductive toxicity, teratogenicity, neurotoxicity or carcinogenicity in male and female rats and male mice. Cypermethrin caused an increase in benign lung tumors in female mice at 1600 ppm in the diet. The EPA concluded on a weight of evidence approach that cypermethrin represents a low oncogenic potential to female mice at this dose level (approximately 228 mg/kg/day). Liver enlargement is often noted in laboratory animals that have ingested large doses of cypermethrin during their life span. An overall absence of genotoxicity has been demonstrated in tests of mutagenicity, DNA damage and chromosome aberrations. Disturbances in hearing and balance have been reported in workers exposed to butanol vapors.

**CARCINOGENICITY:**

IARC: Not listed
NTP: Not listed
OSHA: Not listed
OTHER: (ACGIH) Not listed

**12. ECOLOGICAL INFORMATION**

**ENVIRONMENTAL DATA:** When applied at agricultural use rates, cypermethrin has a moderate rate of degradation in the soil with a half-life of 2 – 4 weeks. At termiticide use rates, cypermethrin degrades at a slower rate which is governed by soil characteristics (e.g., pH). The rate of cypermethrin hydrolysis is somewhat faster under alkaline conditions than at neutral or acidic pH. Cypermethrin has a high affinity for organic matter and a Log Pow of 5.0, but has demonstrated a low potential for bioconcentration (BCF = 17). Cypermethrin is not mobile in soil.

**ECOTOXICOLOGICAL INFORMATION:** Cypermethrin is considered highly toxic to fish and aquatic arthropods (LC50 values that range from 0.004 µg/L to 3.6 µg/L) with aquatic arthropods tending to be the more sensitive species. Care should be taken to avoid contamination of the aquatic environment. Cypermethrin is slightly toxic to birds with oral LD50 values greater than 10,248 mg/kg.
13. DISPOSAL INFORMATION

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: 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. If burned, stay out of smoke.

14. TRANSPORT INFORMATION

When transported by vessel (bulk or non-bulk packaging) or by air, rail or highway in bulk packaging greater than 119 gallons:

U.S. DOT PROPER SHIPPING NAME: Environmentally Hazardous Substances, Liquid, n.o.s. (cypermethrin)

HAZARD CLASS OR DIVISION: 6

UN/NA NUMBER: UN3352

PACKING GROUP: III

REPORTABLE QUANTITY: None

MARINE POLLUTANT: Severe Marine Pollutant (cypermethrin)

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

FIFRA –

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act. The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide.

SARA Title III – Section 302 Extremely Hazardous Substances Not listed

SARA Title III – Section 311 Hazardous Categories Immediate, Delayed

SARA Title III – Section 312 Threshold Planning Quantity

The threshold planning quantity (TPQ) for this product treated as a mixture is 10,000 lbs. This product contains no ingredients with a TPQ of less than 10,000 lbs.

SARA Title III – Section 313 Reportable Ingredients

None

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.