MATERIAL SAFETY DATA SHEET

OF CYPERMETHRING 5% EC

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY:

Product Name ： Cypermethrin 5.0% EC

Company Name ： ANHUI FENGLE AGROCHEMICAL CO., LTD.

Company Address ： Hefei Circular Economy Demonstration Park, Feidong County, Hefei City, Anhui Province, China

Product Type: Insecticide

Product Use: Non-systemic insecticide with contact and stomach action. Also exhibits anti-feeding action. Control of a wide range of insects pests in mango, chili, tomato, brinjal, choy sam, cabbage, beans, corns and cucumber.

Other Information: This MSDS describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe.

2. HAZARDS IDENTIFICATION:

Emergency Overview:

Appearance and Odour: Pale yellow to light brown liquid with mild odour

Warning Statements: Keep out of reach of children. CAUTION. May irritate the eye. Mild irritant to skin. Avoid breathing vapour or spray mist. Avoid contact with eyes, skin and clothing.

Potential Health Effects:

Ingestion: Harmful if swallowed. Ingestion in large amount can result in headache, nausea, lethargy, motor weakness and in-coordination.

Eye Contact: Irritant to eyes.

Skin Contact : Mild irritant in contact with skin.

Inhalation: Breathing vapour can result in headaches, dizziness and nausea. Breathing in high concentration of vapours can produce central nervous system depression, which can lead to loss of coordination, impaired judgement and if exposure is prolonged, unconsciousness.

Potential Environment Effects:

This product is toxic to fish and aquatic organisms.

3. COMPOSITION / INFORMATION ON INGREDIENTS:

Type of Formulation: Emulsifiable Concentrate, (EC)

Ingredients	Name	CAS	Proportion
	Cypermethrin	52315-07-8	5.0%, w/w
	Inert Ingredients		95.0%, w/w

4. FIRST AID MEASURES:

Ingestion: Contact the doctor or National Poison Centre immediately. Do NOT induce vomiting unless told to do so by doctor or National Poison Centre. DO not give anything by mouth to an unconscious person. These instructions are suitable for ingestion of spray solution and small amounts of concentrate; however, if SUBSTANTIAL AMOUNTS of the concentrate have been swallowed (more than about 20ml or one

tablespoon) AND if medical assistance is more than 30 minutes away, the induction of vomiting should be CONSIDERED, preferably based on MEDICAL ADVICE if a physician can be contacted by phone. All care must be taken to prevent vomit from being inhaled. Do not give anything by mouth to a semi-conscious or unconscious person.

Eye : Hold eyelids open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call National Poison Centre or doctor for treatment advice.

Skin: Remove contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Wash affected area with soap and water. Call National PoisonCentreor doctor for treatment advice.

Inhalation: Remove affected person to fresh air until recovered. If the person is not breathing, call 999 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.Call National Poison Centre or doctor for further treatment advice.

Advice to Doctor: Treat symptomatically.

If vomiting occurs, solvent present may cause pulmonary oedema.

In cases of skin contact, application of Vitamin E cream has been found to have very high therapeutic value.

5. FIRE FIGHTING MEASURES:

Extinguishing Media: Water fog, foam,halon,carbon dioxide or dry chemical.Do not use high volume water jet.

Special Fire Fighting Procedures: Fire-fighters should wear NIOSH/MHSA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent run off and contamination of water sources. Dispose of fire control water later.

Hazardous Decomposition Products:

If involved in a fire, it will emit carbon monoxide and possibly hydrogen chloride.

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6. ACCIDENTAL RELEASE MEASURES:

Spills and Disposal: Contain spill using absorbent or impervious materials such as earth, sand or clay or proprietary absorbent (such as vermiculite). If large liquid spills occur, attempt to recover as much spilt material from sumps and bunded areas before absorbing remaining material into vermiculite or other absorbent. Collect and contain contaminated absorbent and dike material for disposal.Dispose of at a landfill in accordance with local regulations.Final clean up with degreasing agent or detergent is advised.

Environmental Precaution: Prevent material from entering public sewer systems or any waterways. Do not flush to drains.

7. HANDLING AND STORAGE:

Handling : Avoid breathing vapour or spray mist. Users should wash hands before eating, chewing gum, using tobacco, or using the toilet. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Storage: Store in the closed, original container in a dry, well ventilated area out of direct sunlight. Store in a safe place away from foodstuffs, seeds or fertilizers. Store out of the reach of children. Do not contaminate water, food, or feed by storage or disposal.

Other Information : Always read the label and any attached leaflet before use.

8. EXPOSURE CONTROLS /PERSONAL PROTECTION:

Engineering Controls : Handle in well ventilated area, generally natural ventilation is adequate.

Personal Protective Equipment

Eye/ Face Protection: To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash or water supply should be readily accessible to the work area.

Skin Protection: To avoid contact with skin, wear cotton overalls buttoned to the neck and wrist and washable

hat, and elbow length PVC gloves. An emergency shower or water supply should be readily accessible to the work area.

Respiratory Protection: Not normally required. If vapours or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

General Hygiene Considerations:

Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this materials: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Physical State: Liquid

Appearance : Pale yellow to light brown liquid

Boiling Point/Range : >150℃

Decomposition Temperature: Stable to boiling point of mixture

Relative Density: 0.90g/cm^3 (approx.)

Solubility in Water: Form an emulsion in the water

Vapour Pressure ： Not determined

Viscosity： Not determined

10. STABILITY AND REACTIVITY:

Storage Stability： This material is stable under normal handling and storage conditions.

Material to Avoid： Keep away from strong oxidizing agents

Hazardous Polymerization ： Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION:

Toxicology Information： No harmful effects are expected if the precautions on the label and this MSDS are followed.

Acute Toxicity- Oral： LD50(rat) : 350 mg/kg

Acute Toxicity- Dermal： LD50 (rabbit) : > 3500 mg/kg

Acute Toxicity-Inhalation： LC50(rat- 4 hr) : > 1.99 mg/L (normal conc.)

Eye Irritation： Slight irritant (rabbit).

Skin Irritation： Mild irritant (rabbit).

Skin Sensitization ： Not asensitizer (guinea pig).

Carcinogenicity ： Data indicates no carcinogenic effects

Reproductive Toxicity： Data indicates no teratogenic effects.

Mutagenicity： Non-mutagenic

12. ECOLOGICAL INFORMATION

Acute Toxicity- Fish： The following data is for the active ingredient, cypermethrin:

96–hour LC_{50} Rainbow Trout 0.69 µg/l

96–hour LC_{50} Sheepshead minnows 2.73 µg/l

Acute Toxicity- Daphnia： 48-hour LC_{50} Daphnia 0.15 µg/l

Acute Toxicity- Other Organisms

24-hour LD_{50} Bee 0.035 µg/bee (Highly toxic to honey bee in laboratory test, but field applications at recommend dosage do not put hives at risk)

Mallard Duck Oral LD_{50} > 10,000mg/kg

Chicken Oral LD_{50} > 2000 mg/kg

Persistence/Degradability :Average field half-life of cypermethrin is 14-28 days.
Other Precautions: DO NOT contaminate dams, rivers or streams with pesticide or used containers.
Environmental Protection: Spray drift can cause damage, read the label for more information. Marine pollutant.

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13. DISPOSAL CONSIDERATIONS:

Product Disposal: Pesticides wastes are acutely hazardous. Dispose of product only by using according to the label, or at an approved landfill.
Container Disposal : Do not use this container for any other purpose. Triple rinse containers, add rin sate to the spray tank, then offer for recycling / reconditioning or puncture top, sides and bottom and dispose of in landfill in accordance with local Regulations.
If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION:

Transport Information: It is a good practice to separate this product from food, food related materials, animal feedstuffs, seed or fertilizers during transport.
Storage and Transport : Follow the precautions indicated in this MSDS, Section 7: HANDLING AND STORAGE.
UN Number (Sea Transport): 3351
IMO Class/Packing Group: Class 6; Packing Group III
IMO Marine Pollutant : Marine Pollutant
IMO Proper Shipping Name: Pyrethroid pesticide, liquid, toxic, flammable

15. REGULATORY INFORMATION

Risk Phrase: R36/38 Irritating to eyes and skin
Safety Phrase: S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S57 Use appropriate containment to avoid environment contamination.
Hazard Category : Class III
Packaging and Labeling HARMFUL
KEEP AWAY FROM FOODSTUFF AND CHILDREN.
READ THE LABEL BEFORE USE

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.