



MATERIAL SAFETY DATA SHEET

Issue Date: 1 August 2011

Issued by: NUFARM MALAYSIA SDN BHD

Product Name:	Cypermethrin 5.5% EC
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1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY:

Product Name	Cypermethrin 5.5% EC
Company Name	NUFARM MALAYSIA SDN BHD (207731-P)
Company Address	L2.03 Wisma BU8, No. 11, Lebuhr Bandar Utama, Bandar Utama, 47800, Petaling Jaya, Selangor D.E., Malaysia
Tel/Fax Number	Tel: (+60 3) 7629 7233 Fax: (+60 3) 7629 7229
Email	sales.my@my.nufarm.com
Emergency Contact	National Poison Centre 1800 88 8099 (Normal Hour) (+60 12) 430 9499 (After Hour)
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:

<u>Emergency Overview:</u>	
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.
<u>Potential Health Effects:</u>	
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.
<u>Potential Environment Effects:</u>	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	5.5%, w/w
	Inert Ingredients		94.5%, 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
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Eye	unconscious person. 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 Poison Centre or 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 runoff 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.

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.



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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°C
Decomposition Temperature	Stable to boiling point of mixture
Relative Density	0.92 g/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	LD ₅₀ (rat) : 300 mg/kg
Acute Toxicity - Dermal	LD ₅₀ (rabbit) : > 3500 mg/kg
Acute Toxicity - Inhalation	LC ₅₀ (rat- 4 hr) : > 1.99 mg/L (normal conc.)
Eye Irritation	Slight irritant (rabbit).
Skin Irritation	Mild irritant (rabbit).
Skin Sensitization	Not a sensitizer (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	> 10,000 mg/kg
	Chicken Oral LD ₅₀	> 2000 mg/kg



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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.

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 rinsate 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 UN Number (Sea Transport)	Follow the precautions indicated in this MSDS, Section 7: HANDLING AND STORAGE. 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 (Malaysia Regulation)
Packaging and Labeling	HARMFUL KEEP AWAY FROM FOODSTUFF AND CHILDREN. READ THE LABEL BEFORE USE.

16. OTHER INFORMATION:

Contact Person / Point	Nufarm Malaysia Sdn Bhd Mr. PMG Pitchai Phone: (+60 3) 31761888 Ext 217 Position: Safety & Health Officer DOSH Reg No: JKKP IS 127/438/2/2294 Email: pmg.pitchai@my.nufarm.com
Date of preparation or last version of MSDS	Revised: 1 August 2011 Supersedes: November 2010

END OF MSDS ...

Note: While the information given herein is, to the best of our knowledge, correct and is given in good faith, we make no warranty, with respect hereto and disclaim all liability from reliance thereon. It is expected that individuals receiving the information will exercise their independent judgment in determining its appropriateness for a particular purpose.