



Material Safety Data Sheet

BAYER ADVANCED MOSQUITO KILLER CONCENTRATE

MSDS Number: 102000012174
 MSDS Version 2.1
 Revision Date: 06/24/2005

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name BAYER ADVANCED MOSQUITO KILLER CONCENTRATE
MSDS Number 102000012174
EPA Registration No. 72155-24
Product Use Insecticide which kills outdoor insects on contact.

Bayer Environmental Science
 2 T.W. Alexander Drive
 Research Triangle PK, NC 27709
 USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call 1-800-334-7577 (24 hours/day)
 For Product Information call 1-800-331-2867

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Cyfluthrin	68359-37-5	0.75

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview Caution! Harmful by inhalation and if swallowed. Causes eye irritation. Avoid contact with skin, eyes and clothing. Wash thoroughly with soap and water after handling.

Physical State liquid
Appearance off-white
Routes of Exposure Skin contact, Eye contact, Ingestion, Inhalation
Immediate Effects
Eye Do not get in eyes. Causes eye irritation.
Skin Avoid contact with skin.
Ingestion Do not take internally. Harmful if swallowed.
Inhalation Harmful if inhaled. Do not breathe vapours or spray mist.

SECTION 4. FIRST AID MEASURES



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General	Have the product container or label with you when calling a poison control center or doctor or going for treatment.
Eye	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.
Skin	Take off all contaminated clothing immediately. Rinse immediately with plenty of water for at least 15 minutes. Call a poison control center or doctor for treatment advice.
Ingestion	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 directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person.
Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
Notes to Physician Treatment	There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point	> 93 °C / > 199 °F
Suitable Extinguishing Media	dry chemical, foam, water spray
Fire Fighting Instructions	<p>Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Equipment or materials involved in pesticide fires may become contaminated.</p> <p>Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.</p>

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.
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Methods for Cleaning Up Take up with absorbent material (e.g. sand, earth or a proprietary absorbent material). Collect and contain contaminated absorbent and dike material for disposal. Place in a container for disposal. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

Additional Advice Use personal protective equipment. Do not allow material to enter streams, sewers, or other waterways.

SECTION 7. HANDLING AND STORAGE

Handling Procedures Food utensils such as teaspoons or measuring cups must not be used for food purposes after use in measuring pesticides. Keep away from food, drink and animal feeding stuffs.

Storing Procedures Store in a cool, dry secured storage area. Store in original container and out of the reach of children, preferably in a locked storage area.

Do not freeze.

Min/Max Storage Temperatures Do not transport or store below 0 °C / 32 °F

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection There are no known hazards associated with this product when used according to the label directions. At the same time, the following guidelines should be used.

Avoid inhalation of vapour or mist. Avoid contact with skin and eyes.

Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

Do not allow children and pets to enter the treated area until it has dried.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	off-white
Physical State	liquid
pH	3.5
Bulk Density	1.0 g/ml at 20 °C



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SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Conditions to Avoid	freezing

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity studies for this product have been bridged from other products containing the active ingredient, Cyfluthrin. The acute eye irritation study has been performed on a formulation containing 0.1% Cyfluthrin. All other acute toxicity data have been bridged from a formulation containing 24% Cyfluthrin. The non-acute information pertains to Cyfluthrin technical.

Acute Oral Toxicity	male rat: LD50: 647 mg/kg female rat: LD50: 695 mg/kg
Acute Dermal Toxicity	male/female rabbit: LD50: > 2,000 mg/kg
Acute Inhalation Toxicity	male rat: LC50: 0.716 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. (actual) female rat: LC50: 0.924 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. (actual) male/female rat: LC50: > 2.029 mg/l Exposure time: 1 h Determined in the form of liquid aerosol. (actual)
Skin Irritation	rabbit: Moderate skin irritation
Eye Irritation	rabbit: Minimally irritating. Irritation is transient.
Sensitization	guinea pig: Causes sensitization.
Subchronic Toxicity	In a 3 week dermal toxicity study in rats treated with cyfluthrin, effects observed included clinical signs of toxicity, as well as, topical and microscopic alterations in the treated tissue at the dose site. In a 13 week inhalation study in rats exposed to cyfluthrin, effects included reduced body weight gains and non-specific behavioral disturbances at the mid- and high concentrations (0.71 and 4.5 mg/m ³).



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Chronic Toxicity

In chronic dietary studies in rats treated with cyfluthrin, compound-related effects included decreased body weight gains and slight changes in clinical chemistries.

In chronic dietary studies in dogs treated with cyfluthrin, compound-related effects were observed at the higher concentrations (greater than or equal to 360 ppm). These effects included an increased incidence of vomiting, decreased body weights, soft feces and clinical neurological symptoms.

Assessment Carcinogenicity

In oncogenicity studies in rats and mice, cyfluthrin was not considered carcinogenic in either species.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Reproductive & Developmental Toxicity

REPRODUCTION: In reproduction studies in rats treated with cyfluthrin, reproductive effects occurred in conjunction with parental toxicity. These effects included reductions in viability, lactation, litter size, feed consumption and body weights. In addition, coarse tremors were observed in offspring at higher concentrations (greater than or equal to 125 ppm).

DEVELOPMENTAL TOXICITY: In developmental toxicity studies in rats treated with cyfluthrin, there were no embryotoxic or teratogenic effects via the oral route of exposure. When rats were exposed to cyfluthrin via inhalation, embryotoxic effects occurred in conjunction with maternal toxicity. In rabbits treated orally with cyfluthrin, there was an increased incidence of post-implantation losses at maternally toxic dose levels.

Neurotoxicity

In neurotoxicity studies with cyfluthrin, minimal nerve damage occurred in rats and hens treated by oral gavage. In dermal and inhalation studies, which are more relevant to field exposure, there was no evidence of delayed neurotoxicity in hens treated with cyfluthrin.

In a special investigative inhalation study with cyfluthrin in neonatal mice, effects observed included clinical signs of toxicity, mortality and neurobehavioral effects indicative of treatment-related hyperactivity. There were no correlating morphological changes in neural tissues in mice at 4 months of age.

Mutagenicity

Numerous in vitro and in vivo mutagenicity studies have been conducted on cyfluthrin, all of which are negative.

SECTION 12. ECOLOGICAL INFORMATION



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Environmental Precautions

Highly toxic to fish. Do not apply directly to water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.

This product is highly toxic to bees exposed to direct treatment or residues remaining on the treated areas. Do not apply this product or allow drift when bees are actively visiting the treatment area. Apply this product only as specified on the label.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance

It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow any applicable state or local guidelines. Never place unused product down any indoor or outdoor drain.

Container Disposal

Do not re-use empty containers. Rinse empty containers with water and use the rinse-water to prepare the working solution. Place empty container in trash.

SECTION 14. TRANSPORT INFORMATION

DOT CLASSIFICATION:

Not Regulated for Domestic surface Transportation

FREIGHT CLASSIFICATION:

Insecticides or Fungicides, N.O.I.; other than poison

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 72155-24

US Federal Regulations

TSCA list

None.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

Cyfluthrin

68359-37-5

1.0%

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.



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US State Right-To-Know Ingredients

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Canadian Regulations

Canadian Domestic Substance List

None.

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

Cyfluthrin 68359-37-5

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 1 Reactivity - 0 Others - none

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Revise: Re-numbered due to system update; update format.

Revision Date: 06/24/2005

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