



Material Safety Data Sheet

BAYTHROID® XL

MSDS Number: 102000013617

MSDS Version 1.2

Revision Date: 03/15/2006

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name BAYTHROID® XL
MSDS Number 102000013617
Product Use Insecticide for control of certain insect pests on field, vegetable, tree and vine crops.

Bayer CropScience
 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: 1-866-99BAYER (1-866-992-2937)

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
beta-Cyfluthrin	68359-37-5	12.70
Cyclohexanone	108-94-1	20.00
Naphthalene	91-20-3	8.74

SECTION 3. HAZARDS IDENTIFICATION

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

Emergency Overview Warning! Causes substantial but temporary eye injury. May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Do not get in eyes, on skin, or on clothing. Do not breathe vapours or spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Extremely toxic to fish and aquatic invertebrates. Highly toxic to bees.

Physical State liquid, clear

Appearance yellow to amber

Routes of Exposure Ingestion, Eye contact, Inhalation, Skin Absorption, Skin contact

Immediate Effects

Eye Severe eye irritation. Do not get in eyes.

Skin Moderate skin irritation. This material has been shown to be a dermal sensitizer with the potential to cause allergic dermatitis in some individuals. Take appropriate precautions to avoid contact with the material. Contact with product may result in transient tingling and reddening of the skin.



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Ingestion	May be fatal if swallowed. Do not take internally.
Inhalation	Mists may cause respiratory tract irritation. Irritation of mucous membranes. Inhalation of high vapour concentrations can cause CNS-depression and narcosis. Avoid inhalation of vapour or mist.
Chronic or Delayed Long-Term	This product contains ingredients that are considered to be probable or suspected human carcinogens (see Section 11 - Chronic).

SECTION 4. FIRST AID MEASURES

General	When possible, 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 physician or poison control center immediately.
Skin	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse out mouth and give water in small gulps to drink. 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. Do not leave victim unattended.
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 physician or poison control center immediately.
Notes to Physician	
 Hazards	Risk of solvent pneumopathy. May pose an aspiration pneumonia hazard.
 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	62.8 °C / 145.0 °F Test Type: Setaflash testerer
Suitable Extinguishing Media	foam, dry chemical, water spray



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Fire Fighting Instructions

Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Dike area to prevent runoff and contamination of water sources. Equipment or materials involved in pesticide fires may become contaminated.

In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods for Cleaning Up

Take up with absorbent material (e.g. sand, diatomaceous earth or a proprietary absorbent material). Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional Advice

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

SECTION 7. HANDLING AND STORAGE

Handling Procedures

Read label carefully before use. Handle and open container in a manner as to prevent spillage.

Storing Procedures

Do not use, pour or store near heat or open flame.

Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Work/Hygienic Procedures

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

Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. As soon as practical, wash thoroughly and change into clean clothing.

Min/Max Storage Temperatures

Do not transport or store below -18 °C / -0 °F
30 day average not to exceed 38°C (100°F).

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection

Follow all label instructions. Train employees in safe use of the product.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash



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PPE separately from other laundry.

Engineering Controls Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

Eye/Face Protection safety glasses, in case of increased risk, also a face shield or goggles

Hand Protection Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)

Body Protection Wear long-sleeved shirt and long pants and shoes plus socks.

Respiratory Protection When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or Industry recommendations.

Exposure Limits

Cyclohexanone	108-94-1	ACGIH	TWA		20 ppm	
		ACGIH	STEL		50 ppm	
		NIOSH	REL	25 ppm		100 mg/m3
		OSHA Z1	PEL	50 ppm		200 mg/m3
		OSHA Z1A	TWA	25 ppm		100 mg/m3
		US CA OEL	TWA PEL	25 ppm		100 mg/m3
Naphthalene	91-20-3	ACGIH	TWA		10 ppm	
		ACGIH	STEL		15 ppm	
		NIOSH	REL	10 ppm		50 mg/m3
		NIOSH	STEL	15 ppm		75 mg/m3
		OSHA Z1	PEL	10 ppm		50 mg/m3
		OSHA Z1A	TWA	10 ppm		50 mg/m3
		OSHA Z1A	STEL	15 ppm		75 mg/m3
		US CA OEL	TWA PEL	10 ppm		50 mg/m3
		US CA OEL	STEL	15 ppm		75 mg/m3

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	yellow to amber
Physical State	liquid, clear
pH	4.5 (1 %) at 20 °C
Density	ca. 1.019 g/cm ³ at 20 °C

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable
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SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity studies have not been performed on Baythroid XL containing beta-cyfluthrin, the enriched isomer mixture of the active ingredient, cyfluthrin. Acute toxicity studies have been bridged from a similar cyfluthrin formulation containing approximately twice the percentage of active ingredient. The non-acute information pertains to technical-grade beta-cyfluthrin. Toxicology information on cyfluthrin technical can be obtained by calling the Product Use Information Number on Page 1.

- 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: 0.7 mg/l
 Exposure time: 4 h
 Determined in the form of liquid aerosol.
 (actual)
 female rat: LC50: 0.9 mg/l
 Exposure time: 4 h
 Determined in the form of liquid aerosol.
 (actual)
 rat: LC50: > 2.0 mg/l
 Exposure time: 1 h
 Determined in the form of liquid aerosol.
 (actual)
- Skin Irritation** rabbit: Moderate skin irritation.
- Eye Irritation** rabbit: Severe eye irritation.
- Sensitization** guinea pig: Causes sensitization.
- Subchronic Toxicity** Beta-cyfluthrin produced general signs of toxicity (e.g., decreased body weights) and/or neurobehavioral effects (e.g., uncoordinated gait) in subchronic dietary studies (rats, dogs) and in a 4-week inhalation study (rats).

Assessment Carcinogenicity

ACGIH

Cyclohexanone	108-94-1	Group A4
Naphthalene	91-20-3	Group A4

NTP

Naphthalene	91-20-3
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IARC

Cyclohexanone	108-94-1	Overall evaluation: 3
Naphthalene	91-20-3	Overall evaluation: 2B

OSHA



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None.

Reproductive & Developmental Toxicity

DEVELOPMENTAL TOXICITY: Beta-cyfluthrin was not a primary developmental toxicant in a developmental toxicity study in rats. Developmental effects (e.g., delayed ossifications) were observed at the high-dose but were considered secondary to maternal toxicity.

Neurotoxicity

Beta-cyfluthrin produced slight transient neurobehavioral effects at the highest dose tested in acute and subchronic neurotoxicity screening studies in rats. There were no correlating compound-related morphological changes in the neural tissues in either study.

In a one-generation developmental neurotoxicity screening study in rats, offspring exposed to beta-cyfluthrin exhibited a reduction in startle response amplitude at the highest dose tested in conjunction with maternal toxicity. There were no compound-related morphological changes observed in the neural tissues.

Mutagenicity

Beta-cyfluthrin was not mutagenic or genotoxic in a battery of in vitro and in vivo mutagenicity studies.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions

Extremely toxic to fish and aquatic invertebrates. For terrestrial uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below mean high water mark. Do not apply when weather conditions favor runoff or drift. Drift and runoff from treated areas may be hazardous to fish/aquatic organisms in adjacent sites. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.

Cover or remove any fish or aquatic organism tank within structures being treated. Disconnect any air supply sources to such tanks before applications are made and re-connect after any possibility of contamination has passed. Apply this product only as specified on the label.

Highly toxic to bees. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.



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SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use 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 Non-refillable Container: Triple rinse containers. 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.

Refillable Container: Refer to the product label for other disposal instructions.

RCRA Classification: The RCRA Classifications may be on the individual component(s) and not necessarily on the product as a whole.

108-94-1 Cyclohexanone
US. EPA Resource Conservation and Recovery Act (RCRA) U List of Hazardous Wastes (40 CFR 261.33(f) and 40 CFR 302 [CERCLA]): U057

108-94-1 Cyclohexanone
US. EPA Resource Conservation and Recovery Act: (RCRA) D List of Characteristic Hazardous Wastes (40 CFR 261.21-24): D001

91-20-3 Naphthalene
US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261): U165

91-20-3 Naphthalene
US. EPA Resource Conservation and Recovery Act (RCRA) U List of Hazardous Wastes (40 CFR 261.33(f) and 40 CFR 302 [CERCLA]): U165



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SECTION 14. TRANSPORT INFORMATION

TRANSPORTATION CLASSIFICATION:
NON-BULK:
Not regulated for Domestic Surface Shipment

BULK:
Combustible liquid, N.O.S.(Xylene, Cyclohexanone) // Combustible // NA1993 // PG III
Cyclohexanone RQ= 5,000 lbs. or 12,500 lbs. of product, Xylenes RQ= 100 lbs. or 666 lbs. of product

Note: It is the shipper's responsibility to comply with ICAO/IATA regulations for AIR shipment

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

SECTION 15. REGULATORY INFORMATION

US Federal Regulations

TSCA list

Cyclohexanone	108-94-1
Naphthalene	91-20-3

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

Naphthalene	91-20-3
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SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

beta-Cyfluthrin	68359-37-5	1.0%
Naphthalene	91-20-3	0.1%

US States Regulatory Reporting

CA Prop65

This product contains a chemical known to the State of California to cause cancer.

Naphthalene	91-20-3
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This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

beta-Cyfluthrin	68359-37-5	NJ
Cyclohexanone	108-94-1	CA, CT, IL, MN, PA, RI
Naphthalene	91-20-3	CA, CT, IL, MN, NJ, PA, RI

Canadian Regulations

Canadian Domestic Substance List

Cyclohexanone	108-94-1
Naphthalene	91-20-3

Environmental



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CERCLA

Cyclohexanone	108-94-1	5,000 lbs
Naphthalene	91-20-3	100 lbs

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

beta-Cyfluthrin	68359-37-5
Cyclohexanone	108-94-1
Naphthalene	91-20-3

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

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

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

Reason to Revise: Updated Section 3: Hazard Identification; Section 14 - Transportation Information

Revision Date: 03/15/2006

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