



**Material Safety Data Sheet**

**BAYTHROID® XL**

MSDS Number: 102000013617

MSDS Version 2.1

Revision Date: 05/27/2010

**SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION**

**Product name** BAYTHROID® XL  
**MSDS Number** 102000013617  
**EPA Registration No.** 264-840

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. 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.

**Physical State** liquid, clear

**Appearance** yellow to amber

**Exposure routes** 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. Do not get on skin.

**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. Do not breathe vapours or spray mist.

**Chronic or Delayed Long-Term**

This product contains ingredients that are considered to be probable or suspected human carcinogens (see Section 11 - Chronic).



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**Potential Environmental Effect**      Highly toxic to bees. Extremely toxic to fish and aquatic invertebrates.

**SECTION 3. 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	8.56
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	

**SECTION 4. FIRST AID MEASURES**

<b>General</b>	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Eye</b>	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.
<b>Skin</b>	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips 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.
<b>Inhalation</b>	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.
<b>Notes to physician</b>	
<b>Hazards</b>	Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard.
<b>Treatment</b>	Treat symptomatically. There is no specific antidote.

**SECTION 5. FIRE FIGHTING MEASURES**

<b>Flash point</b>	62.8 °C / 145.0 °F Test type: Setaflash testerer
<b>Suitable extinguishing media</b>	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. Do not allow run-off from fire fighting to enter drains or water courses.

Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

**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**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**Additional advice**

Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

**SECTION 7. HANDLING AND STORAGE**

**Handling procedures**

Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

Keep away from heat and sources of ignition.

**Storing Procedures**

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

The 30-day storage temperature average must not exceed the recommended maximum.

**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. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

**Min/Max Storage Temperatures**

Recommended minimum transport/storage temperature: -18 °C / -0 °F  
 Recommended maximum transport/storage temperature: 38 °C / 100 °F



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**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 PPE separately from other laundry.
- 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**

beta-Cyfluthrin	68359-37-5	TX ESL	ST ESL	50 ug/m3
		TX ESL	ST ESL	50 ug/m3
		TX ESL	AN ESL	5 ug/m3
		TX ESL	AN ESL	5 ug/m3
		OES BCS*	TWA	0.01 mg/m3
Cyclohexanone	108-94-1	ACGIH	TWA	20 ppm
		ACGIH	STEL	50 ppm
		NIOSH	REL	25 ppm
		OSHA Z1	PEL	50 ppm
		OSHA Z1A	TWA	25 ppm
		US CA OEL	TWA PEL	25 ppm
		TX ESL	ST ESL	480 ug/m3
		TX ESL	AN ESL	48 ug/m3
			TWA	25 ppm
Naphthalene	91-20-3	ACGIH	TWA	10 ppm
		ACGIH	STEL	15 ppm
		NIOSH	REL	10 ppm
		NIOSH	STEL	15 ppm
		OSHA Z1	PEL	10 ppm
		OSHA Z1A	TWA	10 ppm
		OSHA Z1A	STEL	15 ppm
		US CA OEL	TWA PEL	10 ppm
		US CA OEL	STEL	15 ppm
		TX ESL	ST ESL	440 ug/m3
		TX ESL	AN ESL	44 ug/m3
Solvent Naphtha	64742-94-5	OES BCS*	TWA	10 ppm
		TX ESL	ST ESL	460 ppm



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(petroleum), heavy aromatic

TX ESL

AN ESL

46 ppm

\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	yellow to amber
<b>Physical State</b>	liquid, clear
<b>pH</b>	4.5 (1 %) at 20 °C
<b>Density</b>	ca. 1.02 g/cm <sup>3</sup> at 20 °C

**SECTION 10. STABILITY AND REACTIVITY**

**Chemical Stability** Stable under recommended storage conditions.

**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.

<b>Acute oral toxicity</b>	male rat: LD50: 647 mg/kg
	female rat: LD50: 695 mg/kg
<b>Acute dermal toxicity</b>	male/female combined rabbit: LD50: > 2,000 mg/kg



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**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.

**Sensitisation** guinea pig: Sensitising

**Assessment Carcinogenicity**

**ACGIH**

Cyclohexanone	108-94-1	Group A3
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**

None.

**Reproductive toxicity** DEVELOPMENTAL TOXICITY: Beta-cyfluthrin was not a primary developmental toxicant in rats. Developmental effects were observed but were considered secondary to maternal toxicity.

**Neurotoxicity** Beta-cyfluthrin produced slight transient neurobehavioral effects in acute, subchronic and developmental neurotoxicity screening studies in rats. These effects occurred at the highest dose tested and without correlating morphological changes in the neural tissues.

**Mutagenicity** Beta-cyfluthrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

**SECTION 12. ECOLOGICAL INFORMATION**



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**Environmental precautions**

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor runoff or drift. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

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

**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**

Triple rinse containers. Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke. Follow advice on product label and/or leaflet.

**RCRA Information**

Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

**SECTION 14. TRANSPORT INFORMATION**

**49CFR**

NA-Number	<b>1993</b>
Packaging group	III
Description of the goods	COMBUSTIBLE LIQUID, N.O.S. (BETA-CYFLUTHRIN, CYCLOHEXANONE, NAPHTHALENE)
RQ	Reportable Quantity is reached with 714 lb of product.

**IMDG**

UN-Number	<b>3082</b>
Class	9
Packaging group	III
Marine pollutant	Marine Pollutant
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BETA-CYFLUTHRIN, CYCLOHEXANONE SOLUTION)

**IATA**

UN-Number	<b>3082</b>
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Class 9  
Packaging group III  
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(BETA-CYFLUTHRIN, CYCLOHEXANONE SOLUTION )

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

**SECTION 15. REGULATORY INFORMATION**

EPA Registration No. 264-840

**US Federal Regulations**

**TSCA list**

Cyclohexanone 108-94-1  
Naphthalene 91-20-3  
Solvent Naphtha (petroleum), heavy aromatic 64742-94-5

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

Naphthalene 91-20-3

**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

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  
Solvent Naphtha (petroleum), heavy aromatic 64742-94-5

**Environmental**

**CERCLA**

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





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#### Clean Water Section 307 Priority Pollutants

None.

#### Safe Drinking Water Act Maximum Contaminant Levels

None.

#### International Regulations

##### European Inventory of Existing Commercial Substances (EINECS)

Cyclohexanone	108-94-1
Naphthalene	91-20-3
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5

## 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: The following sections have been revised: Section 14: Transport Information. Updated for general editorial purposes.

Revision Date: 05/27/2010

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