



BAYTHROID® XL

Version 3 / USA
102000013617

1/13
Revision Date: 09/11/2013
Print Date: 04/21/2016

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name	BAYTHROID® XL
Product code (UVP)	05753952
SDS Number	102000013617
EPA Registration No.	264-840

Relevant identified uses of the substance or mixture and uses advised against

Use	Insecticide
Restrictions on use	See product label for restrictions.

Information on manufacturer

Bayer CropScience
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States

Emergency telephone no.

All Emergencies, 24hr/ 7 days 1-800-334-7577

Product Information Telephone No.

SDS Information or Request SDSINFO.BCS-NA@bayer.com

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

Aspiration hazard : Category 1
Skin sensitisation : Category 1B
Eye irritation : Category 2A
Carcinogenicity : Category 2
Acute toxicity (Inhalation): Category 3
Acute toxicity (Oral): Category 4
Flammable liquids : Category 4



Signal word: Danger

Hazard statements

May be fatal if swallowed and enters airways.
May cause an allergic skin reaction.
Causes serious eye irritation.
Suspected of causing cancer.



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Causes skin irritation.
Toxic if inhaled.
Harmful if swallowed.
Combustible liquid

Precautionary statements

Avoid breathing mist and spray.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wash thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
Do not eat, drink or smoke when using this product.
Keep away from open flames/hot surfaces. - No smoking.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
Do NOT induce vomiting.
Rinse mouth.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF EXPOSED or concerned: Get medical advice/attention.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or doctor/physician.
In case of fire: Use sand, dry chemical or alcohol-resistant foam for extinction.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Keep cool.
Dispose of contents/container in accordance with local regulation.

Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Average % by Weight
Beta-Cyfluthrin	68359-37-5	12.70
Cyclohexanone	108-94-1	20.00
Naphthalene	91-20-3	8.70
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	58.60



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SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
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.
Skin contact	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.
Eye contact	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.
Ingestion	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.

Most important symptoms and effects, both acute and delayed

Symptoms Irritation, Sensitising effects, CNS depression, Narcosis

Indication of any immediate medical attention and special treatment needed

Risks	Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard.
Treatment	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Foam, Dry chemical, Water spray
Unsuitable	None known.

Advice for firefighters

Special protective equipment for fire-fighters	Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
Further information	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.



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Flash point	62.8 °C
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Explosivity	not applicable

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

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

Methods and materials for containment and cleaning up

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

Precautions for safe handling

Advice on safe handling 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.

Advice on protection against fire and explosion Keep away from heat and sources of ignition.

Hygiene measures 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.

Conditions for safe storage, including any incompatibilities



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Requirements for storage areas and containers

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.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Beta-Cyfluthrin	68359-37-5	50 ug/m3 (ST ESL)	10 2003	TX ESL
Beta-Cyfluthrin (Particulate.)	68359-37-5	50 ug/m3 (ST ESL)	10 2003	TX ESL
Beta-Cyfluthrin (Particulate.)	68359-37-5	5 ug/m3 (AN ESL)	10 2003	TX ESL
Beta-Cyfluthrin	68359-37-5	5 ug/m3 (AN ESL)	10 2003	TX ESL
Beta-Cyfluthrin	68359-37-5	0.01 mg/m3 (TWA)		OES BCS*
Cyclohexanone	108-94-1	20 ppm (TWA)	02 2012	ACGIH
Cyclohexanone	108-94-1	50 ppm (STEL)	02 2012	ACGIH
Cyclohexanone	108-94-1	100 mg/m3 / 25 ppm (REL)	2010	NIOSH
Cyclohexanone	108-94-1	200 mg/m3 / 50 ppm (PEL)	02 2006	OSHA Z1
Cyclohexanone	108-94-1	100 mg/m3 / 25 ppm (TWA)	1989	OSHA Z1A
Cyclohexanone	108-94-1	100 mg/m3 / 25 ppm (TWA)	06 2008	TN OEL
Cyclohexanone	108-94-1	20 ppb (AN ESL)	07 2011	TX ESL
Cyclohexanone	108-94-1	80 ug/m3 (AN ESL)	07 2011	TX ESL
Cyclohexanone	108-94-1	480 ug/m3 (ST ESL)	07 2011	TX ESL
Cyclohexanone	108-94-1	120 ppb (ST ESL)	07 2011	TX ESL
Cyclohexanone	108-94-1	100 mg/m3 / 25 ppm (TWA PEL)	08 2010	US CA OEL
Naphthalene	91-20-3	10 ppm (TWA)		OES BCS*
Naphthalene	91-20-3	10 ppm (TWA)	02 2012	ACGIH
Naphthalene	91-20-3	15 ppm (STEL)	02 2012	ACGIH



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Naphthalene	91-20-3	10 ppm (TWA)	02 2013	ACGIH NIC
Naphthalene	91-20-3	50 mg/m ³ / 10 ppm (REL)	2010	NIOSH
Naphthalene	91-20-3	75 mg/m ³ / 15 ppm (STEL)	2010	NIOSH
Naphthalene	91-20-3	50 mg/m ³ / 10 ppm (PEL)	02 2006	OSHA Z1
Naphthalene	91-20-3	75 mg/m ³ / 15 ppm (STEL)	1989	OSHA Z1A
Naphthalene	91-20-3	50 mg/m ³ / 10 ppm (TWA)	1989	OSHA Z1A
Naphthalene	91-20-3	75 mg/m ³ / 15 ppm (STEL)	06 2008	TN OEL
Naphthalene	91-20-3	50 mg/m ³ / 10 ppm (TWA)	06 2008	TN OEL
Naphthalene	91-20-3	10 ppb (AN ESL)	07 2011	TX ESL
Naphthalene	91-20-3	38 ppb (ST ESL)	02 2013	TX ESL
Naphthalene	91-20-3	50 ug/m ³ (AN ESL)	07 2011	TX ESL
Naphthalene	91-20-3	200 ug/m ³ (ST ESL)	02 2013	TX ESL
Naphthalene	91-20-3	75 mg/m ³ / 15 ppm (STEL)	08 2010	US CA OEL
Naphthalene	91-20-3	50 mg/m ³ / 10 ppm (TWA PEL)	08 2010	US CA OEL
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	2560 ug/m ³ 3460 ppm (ST ESL)	10 2003	TX ESL
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	256 ug/m ³ 346 ppm (AN ESL)	10 2003	TX ESL

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

Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

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.

Hand protection

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

Eye protection

Safety glasses, in case of increased risk, also a face shield



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Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	yellow to brown
Physical State	liquid, clear
Odor	characteristic
Odour Threshold	no data available
pH	4.5 (1 %) at 20 °C
Vapor Pressure	no data available
Vapor Density (Air = 1)	no data available
Density	1.02 g/cm ³ at 20 °C
Evaporation rate	no data available
Boiling Point	no data available
Melting / Freezing Point	no data available
Water solubility	dispersible
Minimum Ignition Energy	no data available
Decomposition temperature	not applicable
Partition coefficient: n-octanol/water	no data available
Viscosity	no data available
Flash point	62.8 °C
Autoignition temperature	no data available
Lower explosion limit	no data available



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Upper explosion limit	no data available
Explosivity	not applicable

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Thermal decomposition not applicable

Chemical stability Stable under recommended storage conditions.

Possibility of hazardous reactions No hazardous reactions when stored and handled according to prescribed instructions.

Conditions to avoid Heat, flames and sparks.

Incompatible materials no data available

Hazardous decomposition products no data available

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes Ingestion, Eye contact, Inhalation, Skin Absorption, Skin contact

Immediate Effects

Eye Severe eye irritation.

Skin Moderate skin irritation. Contact with product may result in transient tingling and reddening of the skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Ingestion May be fatal if swallowed.

Inhalation Mists may cause respiratory tract irritation. Irritation of mucous membranes. Inhalation of high vapour concentrations can cause CNS-depression and narcosis.

Information on toxicological effects

Acute oral toxicity LD50 (male rat) 647 mg/kg

LD50 (female rat) 695 mg/kg



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Acute inhalation toxicity LC50 (male rat) 0.7 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.
(actual)

LC50 (female rat) 0.9 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.
(actual)

LC50 (rat) > 2.0 mg/l
Exposure time: 1 h
Determined in the form of liquid aerosol.
(actual)

Acute dermal toxicity LD50 (male/female combined rabbit) > 2,000 mg/kg

Skin irritation Moderate skin irritation. (rabbit)

Eye irritation Severe eye irritation. (rabbit)

Sensitisation Sensitising (guinea pig)

Assessment repeated dose toxicity

The toxic effects of beta-Cyfluthrin are related to transient hyperactivity typical for pyrethroid neurotoxicity.

Assessment Mutagenicity

beta-Cyfluthrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity

beta-Cyfluthrin was not carcinogenic in lifetime feeding studies in rats and mice.

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.

Assessment toxicity to reproduction

beta-Cyfluthrin caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with beta-Cyfluthrin is related to parental toxicity.



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Assessment developmental toxicity

beta-Cyfluthrin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with beta-Cyfluthrin are related to maternal toxicity.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Rainbow trout (<i>Oncorhynchus mykiss</i>)) 0.000068 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient beta-cyfluthrin.
Toxicity to aquatic invertebrates	EC50 (Water flea (<i>Daphnia magna</i>)) 0.00029 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient beta-cyfluthrin.
Toxicity to aquatic plants	IC50 (<i>Desmodosmus subspicatus</i>) > 0.01 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient beta-cyfluthrin. No acute toxicity was observed at its limit of water solubility.
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 contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. 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 apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product 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.

Contaminated packaging 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.



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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	1993
Packaging group	III
Proper shipping name	COMBUSTIBLE LIQUID, N.O.S. (BETA-CYFLUTHRIN, CYCLOHEXANONE, NAPHTHALENE)
RQ	Reportable Quantity is reached with 1,149 lb of product.

IMDG

UN number	3082
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BETA-CYFLUTHRIN, CYCLOHEXANONE SOLUTION)

IATA

UN number	3082
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	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.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 264-840



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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)

None.

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, MN
Naphthalene	91-20-3	CA, CT, MN, NJ

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

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

EPA/FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification



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criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word: Warning!

Hazard statements: 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.

SECTION 16: OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 2 Instability - 1 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 2 Flammability - 2 Physical Hazard - 1 PPE -

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

Reason for Revision: Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

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