

AXIAL® BOLD HERBICIDE

Date: 5/3/2018
 Replaces: 4/19/2017

1. PRODUCT IDENTIFICATION

Product identifier on label: **AXIAL® BOLD HERBICIDE**

Product No.: A21996E

Use: Herbicide

Manufacturer: Syngenta Crop Protection, LLC
 Post Office Box 18300
 Greensboro NC 27419

Manufacturer Phone: 1-800-334-9481

Emergency Phone: 1-800-888-8372

2. HAZARDS IDENTIFICATION

Classifications: Skin Corrosion/Irritation: Category 2
 Inhalation: Category 3
 Skin Sensitizer: Category 1B
 Carcinogenicity: Category 2
 Aspiration Hazard: Category 1
 Eye Damage/Irritation: Category 2B

Signal Word (OSHA): Danger

Hazard Statements: May be fatal if swallowed and enters airways
 Causes skin irritation
 May cause an allergic skin reaction
 Causes eye irritation
 Toxic if inhaled
 Suspected of causing cancer

Hazard Symbols:



Precautionary Statements: Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Avoid breathing mist, vapors, spray.
 Wash hands and face thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing must not be allowed out of the workplace.
 Wear protective gloves, protective clothing, eye protection.
 If swallowed: Immediately call a poison center, doctor or Syngenta.

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If on skin: Wash with plenty of soap and water.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If exposed or concerned: Get medical advice/attention.
Call a poison center, doctor or Syngenta.
See Section 4 First Aid Measures.
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice.
If skin irritation or rash occurs: Get medical advice.
If eye irritation persists: Get medical advice.
Take off contaminated clothing and wash it before reuse.
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS Number	Concentration
Tetrahydrofurfuryl Alcohol	Tetrahydrofurfuryl Alcohol	97-99-4	<20.0%
Petroleum Solvent	Petroleum Solvent	Trade Secret	<30.0%
Surfactant	Surfactant	26264-06-2	<5.0%
Acetic acid, [(5-chloro-8-quinolinyl)oxy]-, 1-methylhexyl ester: cloquintocet-mexyl	Cloquintocet-Mexyl	99607-70-2	1.38%
(D+)-ethyl 2-(4-(6-chloro-2-benzoxazolylloxy)-phenoxy)propanoate	Fenoxaprop-P-Ethyl	71283-80-2	2.75%
Propanoic acid, 2,2-dimethyl-, 8-(2,6-diethyl-4-methylphenyl)-1,2,4,5-tetrahydro-7-oxo-7H-pyrazolo[1,2-d][1,4,5]oxadiazepin-9-yl ester	Pinoxaden	243973-20-8	5.51%

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

Have the product container, label or Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

Ingestion: If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Eye Contact: If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

Skin Contact: If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20

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minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

Inhalation: If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Most important symptoms/effects:

Eye irritation

Allergic skin reaction

Indication of immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Use dry chemical, foam or CO2 extinguishing media. If water is used to fight fire, dike and collect runoff.

Specific Hazards:

None known.

Special protective equipment and precautions for firefighters:

Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:

Follow exposure controls/personal protection outlined in Section 8.

Methods and materials for containment and cleaning up:

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Precautions for safe handling:

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Conditions for safe storage, including any incompatibilities:

Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

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Occupational Exposure Limits:

Chemical Name	OSHA PEL	ACGIH TLV	Other	Source
Tetrahydrofurfuryl Alcohol	Not Established	Not Established	0.5 ppm TWA	AIHA
Petroleum Solvent	Not Established	Not Established	100 ppm TWA	Manufacturer
Surfactant	Not Established	Not Established	Not Established	Not Applicable
Cloquintocet-Mexyl	Not Established	Not Established	5 mg/m ³ TWA	Syngenta
Fenoxaprop-P-Ethyl	Not Established	Not Established	0.1 mg/m ³ TWA	Manufacturer
Pinoxaden	Not Established	Not Established	0.1 mg/m ³ (ceiling)	Syngenta

Appropriate engineering controls:

Use effective engineering controls to comply with occupational exposure limits (if applicable).

Individual protection measures:

Ingestion:

Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact:

Where eye contact is likely, use splash-proof chemical goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin Contact:

Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear.

Inhalation:

A combination particulate/organic vapor respirator should be used until effective engineering controls are installed to comply with occupational exposure limits, or until exposure limits are established. Use a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P or HE filter.

Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Beige brown clear liquid

Odor: Aromatic

Odor Threshold: Not Applicable

pH: 4-6 @ 1 wt/wt%

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Applicable

Flash Point (Test Method): 183°F

Flammable Limits (% in Air): Not Available

Flammability: Not Available

Vapor Pressure: Cloquintocet-Mexyl 4.0 x 10(-8) mmHg @ 77°F (25°C)
 Fenoxaprop-P-Ethyl 1.4 x 10(-6) mmHg @ 68°F (20°C)

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Pinoxaden 3.5 x 10⁻⁹ mmHg @ 77°F (25°C)

Vapor Density: Not Available

Relative Density: 0.995 g/ml

Solubility (ies): Cloquintocet-Mexyl Insoluble
 Fenoxaprop-P-Ethyl 0.7 - 0.8 mg/l @ 77°F (25°C)
 Pinoxaden 200 mg/l @ 77°F (25°C)

Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: Not Available

Decomposition Temperature: Not Available

Viscosity: 1.4mPa @ 68°F (20°C)

Other: None

10. STABILITY AND REACTIVITY

Reactivity: Not reactive.

Chemical stability: Stable under normal use and storage conditions.

Possibility of hazardous reactions: Will not occur.

Conditions to Avoid: None known.

Incompatible materials: None known.

Hazardous Decomposition Products: Not Available

11. TOXICOLOGICAL INFORMATION

Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Eye irritation, Rash, redness or itching

Delayed, immediate and chronic effects of exposure: Possible carcinogenicity, Eye irritation, Allergic skin reaction

Numerical measures of toxicity (acute toxicity/irritation studies (finished product))

Ingestion:	Oral (LD50 Rat) :	5000 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 5000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	.53 - 2.48 mg/l
Eye Contact:	Moderately Irritating (Rabbit)	
Skin Contact:	Moderately Irritating (Rabbit)	
Skin Sensitization:	A skin sensitizer.	

Reproductive/Developmental Effects

Cloquintocet-Mexyl: Mutagenic Potential: Negative.

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Teratogenicity: Not teratogenic.

Fenoxaprop-P-Ethyl : In developmental studies, effects were seen in the mother and the pups in the high dose groups. The manufacturer does not consider these results as being significant. However, the compound has been reviewed by the European Food Safety Authority (EFSA), and the classification "Toxic to reproduction", category 3 (R63) has been proposed to the European Chemicals Agency (ECHA).

Pinoxaden: Teratogenicity: Not teratogenic in rats or rabbits.
Reproduction: No reproductive effects observed.

Chronic/Subchronic Toxicity Studies

Cloquintocet-Mexyl: Anemia, kidney, thyroid, thymus changes.

Fenoxaprop-P-Ethyl : Not Available

Pinoxaden: Subchronic: Predominantly kidney and liver effects at high doses.

Chronic: Predominantly kidney and liver effects at high doses.

Neurotoxicity: No neurotoxic effects (acute or subchronic).

Carcinogenicity

Cloquintocet-Mexyl: None observed.

Fenoxaprop-P-Ethyl : In vitro and in vivo mutagenicity tests to not indicate genotoxic activity. Did not show carcinogenic effects in animal experiments.

Pinoxaden: No compound-related tumors in rats or mice.

Chemical Name	NTP/IARC/OSHA Carcinogen
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Tetrahydrofurfuryl Alcohol	No
Petroleum Solvent	No
Surfactant	No
Acetic acid, [(5-chloro-8-quinolinyl)oxy]-, 1-methylhexyl ester: cloquintocet-mexyl	No
(D+)-ethyl 2-(4-(6-chloro-2-benzoxazolyloxy)-phenoxy)propanoate	No
Propanoic acid, 2,2-dimethyl-,8-(2,6-diethyl-4-methylphenyl)-1,2,4,5-tetrahydro-7-oxo-7H-pyrazolo[1,2-d][1,4,5]oxadiazepin-9-yl ester	No

Other Toxicity Information

Not Available

Toxicity of Other Components

Petroleum Solvent

Supplier states that inhalation of vapors at high concentrations can cause central nervous system effects (dizziness, headache) and irritation to eyes or respiratory tract. Skin exposure can cause defatting with resulting dermatitis.

Surfactant

A severe eye irritant. May be mildly irritating to skin and mucous membranes. Low acute inhalation and oral toxicity.

Tetrahydrofurfuryl Alcohol

Acute exposure causes slight irritation of the skin. Prolonged exposure may cause mild nervous system effects, liver and kidney damage.

Target Organs

Active Ingredients

Cloquintocet-Mexyl:	Thyroid, kidney, bone marrow, thymus
Fenoxaprop-P-Ethyl :	Liver, eye
Pinoxaden:	Kidney

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Inert Ingredients

Petroleum Solvent: CNS, respiratory tract, skin
 Surfactant: Eye, skin
 Tetrahydrofurfuryl Alcohol: Skin, central nervous system, liver, kidney

12. ECOLOGICAL INFORMATION

Eco-Acute Toxicity

Cloquintocet-Mexyl:

Fish (Rainbow Trout) 96-hour LC50 > 0.97 ppm
 Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 > 0.82 ppm
 Bird (Bobwhite Quail) 14-day LD50 > 2000 mg/kg

Fenoxaprop-P-Ethyl :

Fish (Bluegill Sunfish) 96-hour LC50 0.31 - 0.58 mg/l
 Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 > 1.058 mg/l
 Bird (Bobwhite Quail) LD50 > 2000 mg/kg

Pinoxaden:

Fish (Rainbow Trout) 96-hour LC50 10.3 mg/l (Dynamic conditions)
 Green Algae 72-hour ErC50 41 mg/l
 Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 52 mg/l

Environmental Fate

Cloquintocet-Mexyl:

Environmental Persistence/Mobility: Stable in sterile water, in the dark at pH 5 (t1/2 = 4.4 yr.); degrades slowly at pH 7 (t1/2 = 134 d) and rapidly at pH 9 (t1/2 = 6.6 d). Degrades rapidly in the light, both in water and soil (t1/2 ~< 10 hr). Degrades very rapidly in aerobic or anaerobic soil or aquatic environments (t1/2 ~ <2 d). Immobile in various soils (Koc >5000). Bioaccumulation in fish moderate (BCF = 621X; whole fish).

Fenoxaprop-P-Ethyl :

The information presented here is for the active ingredient, fenoxaprop-p-ethyl.
 Slightly soluble in water, absorbs strongly to soils, and has low mobility.

Pinoxaden:

The information presented here is for the active ingredient, pinoxaden.
 Compound degrades rapidly in the environment with a DT50 of less than 5 days in field and laboratory studies.

13. DISPOSAL CONSIDERATIONS

Disposal:

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

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14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA
<119 GA
Not regulated

>119 GA

Proper Shipping Name: Compounds, Weed Killing, Liquid (Tetrahydrofurfuryl Alcohol)
Hazard Class: Class 3
Identification Number: NA 1993
Packing Group: PG III

Comments

Water Transport - International
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Cloquintocet-Mexyl) Marine Pollutant
Hazard Class: Class 3
Identification Number: UN 3082
Packing Group: PG III

Air Transport

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Cloquintocet-Mexyl)
Hazard Class: Class 9
Identification Number: UN 3082
Packing Group: PG III

15. REGULATORY INFORMATION

Pesticide Registration:

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

Warning: Contains petroleum distillates. Causes skin irritation. Harmful if swallowed. Causes moderate eye irritation. Harmful if inhaled. Do not get on skin or on clothing. Wear long-sleeved shirt and long pants, socks, chemical-resistant footwear, and gloves. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Avoid contact with eyes or clothing. Wear protective eyewear.

EPA Registration Number(s):

100-1632

EPCRA SARA Title III Classification:

Section 311/312 Hazard Classes: See Section 2 Hazards

Section 313 Toxic Chemicals: None

CERCLA/SARA 304 Reportable Quantity (RQ):

Not Applicable

RCRA Hazardous Waste Classification (40 CFR 261):

Not Applicable

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TSCA Status:
 Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 2
 Flammability: 1
 Instability: 0

HMIS Hazard Ratings

Health: 2
 Flammability: 1
 Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme
*	Chronic

Syngenta Hazard Category: D,S

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 4/19/2017
 Revision Date: 5/3/2018 Replaces: 4/19/2017
 Section(s) Revised: 1,2,11,15

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