



SAFETY DATA SHEET

SDS ID: 74530-84

1. PRODUCT AND COMPANY IDENTIFICATION

| | |
|---|--|
| Product name: | FEARLESS HERBICIDE |
| Product use / type: | Herbicide |
| Uses advised against / restrictions: | See label. |
| EPA Registration No.: | 74530-84 |
| Chemical name / synonym / active ingredient(s): | 2-Chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methylphenyl) acetamide; (Acetochlor) |
| Manufacturer / Registrant: | Helm Agro US, Inc. 401 E. Jackson St., Suite 1400 Tampa, FL 33602 |
| Manufacturer's Telephone: | 813-621-8846 |
| Email: | info@helmagro.com |
| Chemical emergencies: | 1-800-424-9300 (Chemtrec) |

2. HAZARDS IDENTIFICATION

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200).

Classification

| | |
|--|-------------|
| Acute toxicity – oral | Category 4 |
| Acute toxicity – inhalation | Category 4 |
| Eye damage / irritation | Category 2B |
| Skin sensitization | Category 1 |
| Aspiration toxicant | Category 1 |
| Carcinogenicity | Category 2 |
| Specific target organ toxicity – repeat exposure | Category 2 |

EMERGENCY OVERVIEW

Signal Word: **DANGER**

Pictogram:



Appearance: Blue – Purple

Physical state: Liquid

Odor: Mild Sweet

Hazard Statements:

- Harmful if swallowed.
- May be fatal if swallowed and enters airways.
- May cause an allergic skin reaction.

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- Causes eye irritation.
- Harmful if inhaled.
- Suspected of causing cancer.
- May cause damage to kidney or liver through prolonged or repeated exposure.

Precautionary Statements:

- Do not breathe mist/vapors/spray.
- Do not eat drink or smoke when using this product.
- Wash thoroughly after handling.
- Use only outdoors or in a well-ventilated area.
- Contaminated work clothing should not be allowed out of the workplace.
- Wear protective gloves/eye protection.
- IF SWALLOWED: Call a poison control center/doctor or if you feel unwell. Rinse mouth.
- 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.
- Call POISON CENTER or doctor/physician if you feel unwell.
- Do not induce vomiting.
- If eye irritation persists: Get medical attention/advice.
- Wash contaminated clothing before reuse.
- Store locked up.
- Dispose of contents/container in accordance with local/state/federal regulations.

Other Information / Potential Hazards:

May cause slight skin irritation.

Toxic to aquatic life.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | Weight % |
|--|-------------|----------|
| 2-Chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methylphenyl) acetamide; (Acetochlor) | 34256-82-1 | 75.9 |
| Aromatic hydrocarbon solvent | 64742-94-5 | <=6.0 |
| Furilazole (safener) | 121776-33-8 | <=2.5 |
| 2-Methylnaphthalene | 91-57-6 | <=3.0 |
| 1-Methylnaphthalene | 90-12-0 | <=2.0 |
| Naphthalene | 91-20-3 | <=2.0 |
| Other ingredients | - | <=8.0 |

**** Exact concentration of components withheld as a trade secret. Values are not product specifications.**

4. FIRST AID MEASURES

| | |
|----------------------|---|
| If swallowed: | <ul style="list-style-type: none">• 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 told to do so by a poison control center or doctor.• Do not give anything by mouth to an unconscious person. |
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| | <ul style="list-style-type: none">• |
| If inhaled: | <ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or get medical help, then give artificial respiration, preferably with the aid of a pocket mask equipped with a one-way valve.• Call a poison control center or doctor for further treatment advice. |
| | <ul style="list-style-type: none">• |
| If in Eyes: | <ul style="list-style-type: none">• Hold eye open and rinse 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. |
| | |
| If on skin or clothing: | <ul style="list-style-type: none">• Remove contaminated clothing and shoes.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice. Sensitized persons should avoid further contact and reuse of contaminated clothing. |
| | |
| First Aid Note: | <ul style="list-style-type: none">• Have the product container or label with you when calling a poison control center or doctor, or going for treatment. |
| | |
| Note to Physician: | Treatment is controlled removal of exposure followed by symptomatic and supportive care. |

5. FIRE-FIGHTING MEASURES

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|---|---|
| Flammable properties: | Not flammable. |
| Extinguishing media: | Water fog, dry chemical, foam, carbon dioxide (CO ₂) |
| Unsuitable extinguishing media: | High pressure water streams. |
| Specific material hazards | Under fire conditions, may emit irritating vapors, carbon dioxide, carbon monoxide and hydrogen chloride. |
| Firefighting measures: | Use extinguishing media appropriate for surrounding fire. Use minimal water to prevent environmental contamination. Prevent contaminated firefighting waters and spillage from entering sewers, drains and waterways. |
| Protective equipment and precautions for firefighters: | Wear full protective firefighting gear including self-contained breathing apparatus pressure demand (MSHA/NIOSH approved or equivalent). Decontaminate equipment after use. |

6. ACCIDENTAL RELEASE MEASURES

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- Personal precautions:** Isolate and post spill area. Wear protective gloves / clothing and eye protection. Avoid contact with eyes, skin and clothing. Ensure adequate ventilation.
- Environmental precautions:** Prevent further spillage if safe to do so. Prevent entry into waterways, lakes, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. If spill is on soil near desirable trees or plants remove contaminated soil after initial clean-up.
- Methods for containment:** Dike to contain spill with inert material (e.g. sand, silica gel, or binder) for transfer to disposal containers.
- Methods for cleanup:** Pick up and transfer to properly labeled containers for disposal. Thoroughly clean tools and contaminated surfaces with detergent and water. Place rinse waters into disposal containers. Place leaking containers in oversize drums for transport and disposal.

7. HANDLING AND STORAGE

- Precautions for safe handling:** Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mists. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product. Thoroughly clean equipment after use.
- Precautions for safe storage:** Store and handle in accordance with good industrial hygiene practices. Keep container tightly closed. Store in a cool and well-ventilated place. Store only in original labeled container. Keep out of reach of children.
- Incompatible storage situations:** Do not store in unlined mild steel or polyvinyl chloride (PVC) containers. Separate pesticides during storage to prevent cross-contamination of other pesticides, fertilizers, food, and feed.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Guidelines:

Commercial applicators and/or on-farm applications should refer to the product label for personal protection equipment.

Control Parameters:

| | |
|----------------------|--|
| Furilazole (Safener) | New Chemical Exposure Limit (NECL) 0.1 mg/m ³ TWA |
| 2-Methylnaphthalene | TLV (ACGIH): 3.0 mg/m ³ ; (TWA) 0.5 ppm; (TWA): skin Skin absorption of material may contribute to the overall exposure. |
| 1-Methylnaphthalene | TLV (ACGIH): 3.0 mg/m ³ ; (TWA) 0.5 ppm; (TWA): skin Skin absorption of material may contribute to the overall exposure. |

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| Naphthalene | TLV (ACGIH): 10 ppm; skin. Skin absorption of material may contribute to the overall exposure. PEL (OSHA): 10 ppm |
| Engineering controls: | Emergency eye wash/drench. Shower or suitable water supply near the work area. Ensure adequate ventilation, or provide local exhaust. |
| Personal protective equipment | |
| Eye / face protection: | Safety glasses with side-shields. If potential for contact to occur, wear chemical tight goggles. |
| Body / skin protection: | Long sleeved shirt, long pants, shoes plus socks. Applicators must wear chemical resistant clothing and footwear plus socks. Wash work clothing before reuse. Launder separately from other laundry. |
| Hand protection: | Wear chemical resistant gloves / hand protection. |
| Respiratory protection: | If handling without sufficient ventilation or excess airborne exposure, wear a dust / mist filtering respirator with organic cartridge(s) or pesticide rated filters. Consult personal protective equipment manufacturers recommendations for cleaning and maintenance. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|----------------------------------|--------------------------------|
| Physical state: | Liquid |
| Appearance: | Blue - purple |
| Odor: | Mild, sweet |
| pH: | Not applicable |
| Melting point: | Not applicable |
| Boiling point: | No information available |
| Flash point: | >200° F / 93.3° C (Closed cup) |
| Explosive properties: | No information available |
| Autoignition temperature: | No information available |
| Oxidizing properties: | No information available |
| Relative density: | 1.107 g/ml at 20° C |
| Water solubility: | Emulsifies |
| Vapor pressure: | No significant volatility |
| Viscosity: | No information available |
| Partition coefficient: | log Pow: 3.03 (acetochlor) |

10. STABILITY AND REACTIVITY

Reactivity / chemical stability: Stable under normal temperature and conditions.

Incompatible materials: Extreme temperatures. Mildly corrosive to mild steel. PVC (polyvinyl chloride). Contact with mild steel may

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result in color change and reduce product's ability to emulsify with water.

Hazardous decomposition products: Combustion products: Oxides of carbon, nitrogen and hydrogen chloride.

Hazardous reactions: Not expected under normal conditions of handling and use. Mildly corrosive to mild steel.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

| | |
|---------------------|---|
| Inhalation | Harmful if inhaled |
| Eye contact | Causes moderate temporary eye irritation |
| Skin contact | May cause skin irritation. May cause allergic skin reaction. |
| Ingestion | Harmful in contact with skin. Harmful if swallowed. |

Product toxicology (similar formulation):

| | |
|--|--|
| Acute oral LD₅₀: | Rat =1849 mg/kg |
| Acute dermal LD₅₀: | Rat >5000 mg/kg |
| Acute inhalation LC₅₀: | Rat =1.4 mg/L 4-hour aerosol |
| Eye irritation: | Slightly irritating to the eye. |
| Skin irritation: | Moderately irritating. Primary irritation index: 3.5/8.0 |
| Sensitization: | Positive sensitizer |

Toxicology note: Above data obtained from similar formulation.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Component information:

| | |
|--|--|
| Acetochlor (34256-82-1) | |
| Sensitization (experience with human exposure): | May cause sensitization in susceptible individuals. |
| Mutagenic effects: | Not considered genotoxic |
| Carcinogenicity: | Nasal and thyroid tumors in rats. Liver tumors in rats and mice. All not relevant to humans. |
| Reproductive / Developmental effects: | Reproductive and developmental effects in rats only in the presence of significant maternal toxicity. No developmental effects in rabbits. |
| Hydrocarbon solvent (64742-94-5) | |
| Skin contact: | Repeated or prolonged contact may cause temporary irritation. |
| Eye contact: | Irritating |
| Inhalation, excessive: | Gastro-intestinal effects – nausea/vomiting General/ systemic effects – fatigue Neurological effects – headache, drowsiness, dizziness |
| Ingestion, accidental or misuse: | Aspiration into lungs Abdominal pain, diarrhea |

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Furilazole (121776-33-8)

Mutagenic effects:

Carcinogenicity:

Not considered genotoxic

Liver, testes and forestomach tumors in rats.

Liver and lung tumors in mice. Questionable relevance to humans.

Reproductive / Developmental effects:

No reproductive effects in rats. No developmental effects in rabbits. Developmental effects in rats only in the presence of maternal toxicity.

Naphthalene (91-20-3) (experience with human exposure)

Skin contact, repeated:

Eye contact, repeated:

Inhalation, excessive:

Irritation, sensitization

Clouding of eye (corneal opacity)

Eye nerve inflammation; Yellowing of skin; Nausea / vomiting; Urinary bladder inflammation; headache; drowsiness; confusion.

Ingestion, accidental or misuse:

Abdominal pain; May also cause effects similar to those described under inhalation.

Carcinogenicity:

Lung tumors in mice. Nasal tumors in rats. IARC Classification 2B – Possibly carcinogenic to humans.

Reproductive / Developmental effects:

No developmental effects in rabbits.

12. ECOLOGICAL INFORMATION

Environmental Hazards:

Moderate to highly toxic to aquatic life.

Keep out of any body of water.

Ecotoxicity:

Acetochlor (34256-82-1)

96-hour LC₅₀: 0.36 – 1.2 mg/L *Onchorhynchus mykiss*

96-hour LC₅₀: 1.3 mg/L *Lepomis macrochirus*

48-hour EC₅₀: 8.6 - 16 mg/L *Daphnia magna*

96-hour EC₅₀: 0.27 – 1.49 ug/L *Selenastrum capricornutum*

Persistence and degradability:

Acetochlor soil half-life 3.4 – 29 days.

Bioaccumulation:

Whole fish bioaccumulation factor: 20. Rapid depuration after end of exposure.

Mobility:

Koc: 74 - 422

Ecotoxicity:

Furilazole (121776-33-8)

96-hour LC₅₀: 6.2 mg/L *Onchorhynchus mykiss*

96-hour LC₅₀: 4.6 mg/L *Lepomis macrochirus*

48-hour EC₅₀: 26 mg/L *Daphnia magna*

96-hour EC₅₀: 34.8 mg/L *Selenastrum capricornutum*

Persistence and degradability:

Furilazole aerobic soil half-life 52 – 78 days.

Biodegradation:

1% within 28 days; Not readily biodegradable.

Mobility:

Koc: 56 – 341 l/kg

13. DISPOSAL CONSIDERATIONS

Product disposal:

Wastes resulting from the use of this product that cannot be used must be disposed in accordance with applicable Federal, State or local

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regulations at an approved waste disposal facility. Keep out of drains, sewers, ditches and water ways.

Container disposal:

Refer to product label for container disposal. Emptied container retains product vapor and residue. Observe all labeled safeguards until container is reconditioned or destroyed. Clean container promptly after emptying, triple rinse. Do not allow rinse waters to contaminate soil or waterways. Do not reuse containers.

14. TRANSPORT INFORMATION

U.S. DOT: Not regulated for domestic ground transportation.

This material meets the definition of a marine pollutant.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

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:

Signal word: WARNING

EPA Registration No.: 74530-84

Hazards to Humans and Domestic Animals

Causes substantial but temporary eye and skin irritation, harmful if swallowed, harmful if inhaled. May cause an allergic skin reaction. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling.

TSCA: TSCA exempt; regulated under FIFRA.
SARA 311/312: Refer to section 2 for GHS hazards.
SARA 313: Naphthalene (CASRN 91-20-3)
CERCLA: Naphthalene: RQ – 100 pounds

U.S. State Regulations:

State Right-to-Know Regulations:

| Component / CASRN | MA | NJ | PA | NY |
|--------------------------------|----|----|----|----|
| Aromatic solvent 64742-94-5 | X | X | X | X |
| 2-Methylnaphthalene 91-57-6 | X | X | X | X |
| 1-Methylnaphthalene 90-12-0 | X | X | X | X |
| Naphthalene 91-20-3 | X | X | X | X |

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California Proposition 65 WARNING: This product can expose you to chemicals including acetochlor, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

16. OTHER INFORMATION

| NFPA Ratings: | Health | Fire | Instability |
|----------------------|---------------|-------------|--------------------|
| | 2 | 1 | 0 |

Revision No.: 2.0
Revision Date: 09 March 2019
Revision Note: Changes to sections 14 & 15.

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; CST - Centistokes; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; GHS - Global Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Association; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

Other information / Disclaimer

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

End of Safety Data Sheet