



SAFETY DATA SHEET (SDS) ID: EPA Reg. No. 74530-84, FEARLESS Herbicide

SECTION 1: Product and Company IDs

Product name: FEARLESS Herbicide
Product use / type: Herbicide
Restrictions on use: See product label.
SDS ID: EPA Reg. No.: 74530-84
Chemical name / active ingredients:
 • Acetochlor (2-chloro-N-ethoxymethyl-N-(2-ethyl-6-methylphenyl)acetamide)
Manufacturer / Registrant Info:
 HELM Agro US, Inc. 401 E. Jackson St.
 Suite 1600, Tampa, FL 33602
 (813)-621-8846, info@helmagro.com
Chemical Emergency Number: 1-800-424-9300 (Chemtrec)

SECTION 2: Hazard Communication

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

Signal Word: Danger. **Pictograms:**



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

Hazard Statements:

- Harmful if swallowed.
- May be fatal if swallowed and enters airways.
- May cause an allergic skin reaction or skin irritation.
- Causes eye irritation.
- Harmful if inhaled. Harmful if in contact with skin.
- 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.
- **See Section 4:** IF SWALLOWED, IF ON SKIN: IF INHALED: IF IN EYES: Call POISON CENTER or doctor 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.
- See sections 4 & 15.

SECTION 3: Ingredient Composition

Chemical Name	CAS #	% Composition (exact values may be withheld as trade secrecy)
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:	**N/R as trade secrecy	<=8.0**
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SECTION 4: First Aid Measures

If swallowed: 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. **If on skin or clothes:** Remove contaminated clothing and shoes. Rinse skin immediately with plenty of water for 15 or 20 minutes. Call a poison control center/doctor for treatment advice. Sensitized persons should avoid reuse. **If in eyes:** 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 poison control center or doctor for treatment advice. **If inhaled:** 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. **First Aid Note:** Have this safety data sheet, the product container or label with you when calling a poison control center or doctor or going for treatment. **Note to Physician:** No antidote available. Treat symptomatically.

SECTION 5: Fire Fighting Measures

Flammable properties: Not flammable, however refer Section 10. **Extinguishing media:** Water fog, dry chemical, alcohol resistant foam or CO₂. **Unsuitable extinguishing media:** High pressure water streams. **Firefighting measures:** Use extinguishing media appropriate for surrounding fire. Prevent contaminated firefighting waters and spillage from entering sewers, drains and waterways. Foam or dry chemical are preferred to minimize environmental contamination. **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. **Hazardous decomposition products:** Under fire conditions, may emit irritating vapors, carbon dioxide, carbon monoxide and hydrogen chloride.

SECTION 6: Accidental Release Measures

Personal precautions: Isolate and post spill area. Wear protective gloves / clothing and eye protection. Avoid contact with eyes, skin and clothing. Ensure adequate ventilation. See section 8 for personal protective equipment. **Environmental precautions:** Prevent further spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Avoid release into the environment. If spill is on soil near desirable trees or plants remove contaminated soil after initial clean-up. **Methods for containment:** Isolate the spill area. Contain small spill with inert material (e.g., sand, silica gel, binder). Dike large spill with absorbent or impervious material such as clay. **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.

SECTION 7: Handling and Storage

Precautions for safe handling: Use only with adequate ventilation. Avoid breathing vapor or mists. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product. Avoid contamination of work clothing. **Precautions for safe storage:** Store and handle in accordance with good industrial hygiene practices. Keep container tightly closed. Store in a cool, dry and well-ventilated place away from children and animals. **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, water, feed.

SECTION 8: Exposure Control / Protection

The following recommendations for exposure controls and personal protection are intended for the manufacture, formulation, and packaging of this material. All forms of application should refer to the product label for personal protection equipment. **Furilazole (Safener):** New Chemical Exposure Limit (NECL) 0.1 mg/m³ TWA. **2-Methylnaphthalene** TLV (ACGIH): 3.0 mg/m³; (TWA) 0.5 ppm; (TWA): skin. Skin absorption of material may contribute to the overall exposure. **1-Methylnaphthalene** TLV (ACGIH): 3.0 mg/m³; (TWA) 0.5 ppm; (TWA): skin. Skin absorption of material may contribute to the overall exposure. **Naphthalene** TLV (ACGIH): 10 ppm; skin. Skin absorption of material may contribute to the overall exposure. PEL (OSHA): 10 ppm. **Engineering controls:** Emergency eye 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:** Wear chemical-tight goggles or safety glasses and full face-shield. **Body / skin protection:** Long sleeved shirt, long pants, shoes plus socks. Applicators must wear chemical resistant clothing and footwear plus socks. Wash contaminated work clothing before reuse. **Hand protection:** Wear chemical resistant gloves / hand protection. Wash outside of gloves before removing. **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. **General hygiene considerations:** Handle in accordance with good industrial hygiene practice. Remove and wash contaminated clothing before reuse. Launder separate from household laundry.

SECTION 9: Physical & Chemical Properties

Appearance: Blue/purple. **Odor:** Mild sweet. **pH:** N/A. **Melting point:** N/A. **Boiling point:** No info available. **Flash point:** >200° F / 93.3° C (Closed cup). **Relative density:** 1.107 g/ml at 20° C. **Water solubility:** Emulsifies. **Viscosity:** No info available. **Vapor pressure:** No significant volatility. **n-Octanol / water partition coefficient:** log Pow: 3.03 (acetochlor). **Physical state:** Liquid.

SECTION 10: Stability & Reactivity

Reactivity / chemical stability: Stable under normal temperature and conditions. **Conditions / Materials to avoid:** Extreme temperatures. Mildly corrosive to mild steel. PVC (polyvinyl chloride). Contact with mild steel may 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.

SECTION 11: Toxicological Information

See Section 4 for information on likely routes of exposure. 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. **Furilazole (121776-33-8). Mutagenic effects:** Not considered genotoxic. **Carcinogenicity:** 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:** Irritation, sensitization. **Eye contact, repeated:** Clouding of eye (corneal opacity). **Inhalation, excessive:** 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.

SECTION 12: Ecological Information

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.

SECTION 13: Disposal Information

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 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.

SECTION 14: Transport Information

DOT regulation for ground transportation. IMDG, IATA: UN 3082, Environmentally hazardous substance, liquid, n.o.s. (acetochlor), 9, III. Not subject to U.S.

SECTION 15: Regulatory 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 criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. **Refer EPA label.** 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. **Read product label and ensure all necessary precautions. State Right-to-Know Regulations:** MA NJ PA NY for Components, CASRNs, Aromatic solvent, 64742-94-5, 2-Methylnaphthalene. 91-57-6. 1-Methylnaphthalene, 90-12-0. Naphthalene, 91-20-3. **SARA 311/312:** Refer to section 2 for GHS hazards. **SARA 313:** Naphthalene (CASRN 91-20-3). **CERCLA:** Naphthalene: RQ – 100 pounds **California Proposition 65:** WARNING: This product can expose you to chemicals including acetochlor, which is known to the State of California to cause cancer. See www.P65Warnings.ca.gov.

SECTION 16: Other Information

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

Acronyms which may or may not be referenced: 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; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; FIFRA - Federal Insecticide, Fungicide and Rodenticide Act; 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; MP - Marine Pollutant; NFPA - National Fire Protection Association; NIOSH - National Institute for Occupational Safety and Health; NJTSP - 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.

Revision Date: October 2nd, 2023. **Revision no. 3**
Reason for Revision: SDS review and truncate. Confirm/Update Section 14. Review, truncate, and/or update Sections 2 and 15 (PRN 2012-1), 16. Address change.

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