SAFETY DATA SHEET (SDS) ID: EPA Reg. No. 74530-98, HELMET MTZ Herbicide

SECTION 1: Product and Company IDs

Product name: HELMET MTZ Herbicide
Product use / type: Herbicide
Restrictions on use: See product label.
SDS ID: EPA Reg. No.: 74530-98
Chemical name / active ingredients: See Section 3.
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:**

Flammable (combustible) Liquid	Category 4
Harmful if swallowed	Category 4
Specific Target Organ Toxicity	Category 3
Carcinogenicity	Category 2
Aspiration Hazard	Category 1
Skin Sensitization	Category 1

Hazard Statements:

- Combustible liquid.
- Harmful if swallowed.
- May cause drowsiness or dizziness.
- Suspected of causing cancer.
- May cause drowsiness or dizziness.
- May cause an allergic skin reaction.
- May be fatal if swallowed and enters airways.

Precautionary Statements:

- Refer Section 4, First Aid Measures.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Wash thoroughly after handling.
- Avoid breathing mist/vapors/spray.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Do not eat drink or smoke when using this product.
- Wear protective gloves/eye protection.
- Use only outdoors or in a well-ventilated area.
- Wear respiratory protection.
- If experiencing respiratory symptoms: Immediately call a poison center.
- If exposed or concerned, get medical attention. Call POISON CENTER or doctor/physician if you feel unwell.
- In case of fire: Extinguish with carbon dioxide, dry chemical, foam or water spray.
- Refer Sections 7 and 13.

Other Information / Potential Hazards:

- Very toxic to aquatic life with long lasting effects.
- Contains: Metolachlor. May produce an allergic reaction in persons already sensitized.
- Substances in the product which may present a health or environmental hazard, or which have been assigned occupational exposure limits, are detailed below:
- **Contains: Naphthalene** (CAS No. 91-20-3), ~1.5% **and 1,2,4-Trimethylbenzene** (CAS No. 95-63-6), < 1%

SECTION 3: Ingredient Composition

Chemical Name	**CAS #**	**% Composition** (exact values may be withheld as trade secrecy)
Metolachlor; 2-chloro-N-(2-ethyl-6-methylphenyl)- N-(2-methoxy-1-methylethyl) acetamide	51218-45-2	~58
Metribuzin	21087-64-9	~14
Heavy aromatic naphtha	64742-94-5	15.3
Other:	N/R as trade** secrecy	**

** Values are not product specifications.

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:** Wash and remove contaminated clothing and shoes. Wash before reuse. 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. **Physician:** Treat symptomatically. Contains: Metolachlor. May produce an allergic reaction in persons already sensitized.

SECTION 5: Fire Fighting Measures

Flammable properties: Not flammable. **Extinguishing media:** Water fog, dry chemical, foam or CO2. **Unsuitable extinguishing media:** High pressure water streams. **Firefighting measures:** Evacuate area. Use extinguishing media appropriate for surrounding fire. Prevent contaminated firefighting waters and spillage from entering sewers, drains and waterways. Contain run-off water with temporary dike. Prevent use of contaminated buildings, area and equipment until decontamination. **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:** Combustion or thermal decomposition will evolve toxic and irritant vapors. Forms oxides of carbon and nitrogen, also chlorine and chlorinated compounds and sulfur and sulfur compounds.

SECTION 6: Accidental Release Measures

Personal precaution: Isolate and post, and clean spill area. Keep unnecessary personnel, pets and livestock from spill area. Wear protective gloves / clothing and eye protection. Avoid breathing, wear 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 unintentional releases to the environment. Report spills as required by local and federal regulations. **Methods for containment:** Contain spill with inert material (e.g. sand, silica gel, binder). Clean immediately. **Methods for cleanup:** Pick up absorbent by shovel and transfer to properly labeled containers for disposal in accordance wither regulations. Observe label for further safeguards, containment, and disposal.

SECTION 7: Handling and Storage

Precautions for safe handling: Wear protective attire. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mist. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product. Avoid contamination of work clothing; remove and clean after handling. **Precautions for safe storage:** Store and handle in accordance with good industrial hygiene practices. Keep container tightly closed. Store in original container in a cool, dry and well-ventilated place away from children and animals. Keep away from incompatible materials, heat, and direct sunlight and ignition sources. **Incompatible storage situations:** Store product in original container only. Keep container closed when not in use, away from food or feed, fertilizer and other pesticides. Do not put formulation or spray solution in food or drink containers. Store in a cool, dry place and avoid excess heat. Protect container from physical damage. Do not contaminate water, food or feed by storage or disposal or cleaning of equipment. Keep away from strong oxidizing agents.

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. **Control parameters and exposure limits**:

SUBSTANCE.	CAS No.	(8hr TWA) PEL (OSHA)	(8hr TWA) TLV (ACGIH)
Metribuzin	21087-64-9	-----	5 mg/m3
Aromatic hydrocarbons, C9-C15	64742-94-5	-----	100 mg/m3
Naphthalene	91-20-3	10 ppm	10 ppm
1,2,4-Trimethylbenzene	95-63-6	-----	25 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 eye 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. **Other**: Thermal: Not normally required. Refer Section 6. Do **NOT** aerosolize or atomize to produce inhalable-size particles. Use low-pressure course spray only. Observe directions on label and instructions for use. See Also Section 15.

SECTION 9: Physical & Chemical Properties

Physical state: Liquid. **Appearance:** Amber. **Odor:** Pungent. **pH**: 4.53 (1% solution). **Melting point**: Not available. **Boiling point**: No information available. **Flash point**: 81.7º C / 179º F. **Explosive properties**: N/A. **Autoignition temperature**: No information available. **Oxidizing properties**: No information available. **Relative density**: 1.08 g/mL. **Water solubility**: N/A. **Vapor pressure**: N/A. **Viscosity (cSt)**: 26 at 40º C. **Partition coefficient**: N/A. **Other as commonly listed**: No info available.

SECTION 10: Stability & Reactivity

Reactivity / chemical stability: None expected. Stable under normal temperature and conditions. **Conditions / Materials to avoid:** Extreme heat, sparks, incompatible agents, strong oxidizers. Avoid contact with oxidizing agents, and bases. **Hazardous decomposition products:** Combustion or thermal decomposition will evolve toxic and irritant vapors. Forms oxides of carbon and nitrogen, also chlorine and chlorinated compounds and sulfur and sulfur compounds. **Hazardous reactions:** Not expected under normal use.

SECTION 11: Toxicological Information

See Section 4 for information on likely routes of exposure and effects. May be harmful if inhaled. **Product toxicology: Acute oral LD50**: Rat LD50: >985 mg/kg. **Acute dermal LD50**: Rat LD50: >5050 mg/kg. **Acute inhalation LC50**: Rat LC50: >2.3 mg/L. **Skin corrosion/irritation**: Causes mild skin irritation. **Serious eye damage/irritation**: May cause eye irritation. **Respiratory or skin sensitization**: It is not a skin sensitizer in animal tests. **Germ cell mutagenicity**: Not available. **Carcinogenicity**: Not available. **Reproductive toxicity**: Not available. **STOT - single exposure**: Not available. **STOT - repeated exposure**: Not available. **Aspiration hazard**: Not available.

Component Toxicology: **Metolachlor** (CAS No. 51218-45-2), **Acute toxicity, Oral**: LD50 >2000 mg/kg -bw. **Dermal**: LD50 >5000 mg/kg -bw. **Inhalation**: LC50 >2.08 mg/l (Aerosol), 4-hr. rat. **Irritation/Corrosivity**: Causes skin irritation. Causes serious eye irritation. **Sensitization**: May cause an allergic skin reaction**. Repeated dose toxicity**: No data. **Carcinogenicity**: No data. **Mutagenicity**: Not to be expected. **Reproductive toxicity**: Not to be expected.

Metribuzin (CAS # 21087-64-9), **Acute toxicity** (calculated / estimated), **Oral**: LD50 >2000 mg/kg-bw. **Dermal**: LD50 >2000 mg/kg-bw. **Inhalation**: LC50 >0.64 mg/l, 4-hr. rat. **Irritation/Corrosivity**: Unlikely to cause skin irritation. Unlikely to cause eye irritation. **Sensitization**: It is not a skin sensitizer. **Repeated dose toxicity**: Not to be expected. NOEL = 200 mg/kg/day. **Carcinogenicity**: It is unlikely to present a carcinogenic hazard to man. **Mutagenicity**: Not to be expected. Reproductive toxicity: Not to be expected

Solvent Naptha (Petroleum) Heavy Aromatic (CAS No. 64742-94-5), **Acute toxicity** (calculated / estimated), **Oral**: LD50 >5 g/kg-bw. **Dermal**: LD50 >2 g/kg-bw. **Inhalation**: LC50 >20 mg/l (Vapor), 4-hr. rat - May cause drowsiness or dizziness. **Irritation/Corrosivity**: Causes serious eye irritation. Unlikely to cause skin irritation. **Sensitization**: It is not a skin sensitizer. **Repeated dose toxicity**: No data. **Carcinogenicity**: It is unlikely to present a carcinogenic hazard to man.

Contains: **Naphthalene** (CAS No. 91-20-3). Reasonably anticipated to be a human carcinogen (NTP) / Possible Human Carcinogen (IARC 2B). **Mutagenicity**: Not to be expected. **Reproductive toxicity**: Not to be expected.

SECTION 12: Ecological Information

Environmental Hazards: Very toxic to aquatic life with long lasting effects. Keep out of any body of water. **Ecotoxicity**: **Metolachlor** (CAS No. 51218-45-2), **Short term**: EC50 (96 hour): 3.9 - 10 mg/L (Fish), EC50 (48 hour): 25.1 mg/L (Daphnia magna), EC50 (72 hour): <1 mg/L (aquatic plants), estimated. **Long Term** NOEC (1 - 4 days): 0.038 mg/L (Duckweed). **Metribuzin** (CAS # 21087-64-9), **Short term**: EC50: 42 - 113 mg/L (Fish)), EC50 (48 hour): 4.2 mg/L (Daphnia magna), EC50 (72-hr): 0.0087 mg/L (Skeletonema costatum). **Long Term**: LOEC = 3 ppm (Oncorhynchus mykiss), NOEC = 1.29 (Daphnia magna).

Persistence and degradability: Part of the components are poorly biodegradable. **Bioaccumulative potential**: Not determined. **Mobility in soil**: Not determined. **Results of PBT and vPvB assessment**: Not classified as PBT. **Other adverse effects**: None known.

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:** Observe all labeled safeguards until container is destroyed to prevent unauthorized use of used container. Refer product label. See Section 15.

SECTION 14: Transport Information

Not subject to U.S. DOT regulation in packages less than or equal to 119 gallons (450 liters). U.S. DOT for packages greater than 119 gallons (450 liters), UN1993, Combustible Liquid, n.o.s. (Aromatic Naphtha), Comb. Liq., PG III. Other which may apply, IMDG, IATA: UN3082, Environmentally hazardous substance, liquid, n.o.s. (Metolachlor), 9, PG III, Marine pollutant.

Note: Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable. Contains a RQ substance at <1% (see Section 15).

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. Following is the hazard information as required on the pesticide label: **Signal word**: Warning. **EPA Registration No**.: 74530-98. **Hazards to Humans and Domestic Animals:** Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. 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. **ENVIRONMENTAL HAZARDS:** This pesticide is toxic to marine/estuarine invertebrates. **DO NOT** apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to terrestrial and aquatic plants adjacent to treated areas. **DO NOT** contaminate water when disposing of equipment wash waters or rinsate. **DO NOT use on coarse soils classified as sand containing less than 1% organic matter**.

Read EPA registered product label and advisories, **EPA Registration No**.: 74530-98.
SARA 311/312 Hazard Categories: None listed. Refer Section 2. **SARA 313**: Naphthalene (Cas No. 91-20-3), Typical %wt. < 1. Metribuzin (Cas No. 21087-64-9), Typical % wt. ~ 14. **CERCLA**: N/A. **TSCA**: Components listed or exempt. **Clean Water Act**: N/A. **Proposition 65 (California):** This product does contain substances known to the state of California to cause cancer and/or reproductive/developmental effects: Naphthalene, CAS# 91-20-3. **Other right-to-know: Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4)**: Naphthalene, typical wight < 1%, RQ (pounds): 100.

SECTION 16: Other Information

NFPA Ratings:	Health = 3	Fire = 3	Instability = 1

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; 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; 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.

Revision Date: December 4th, 2023. **Revision no.** 2. **Reason for Revision:** SDS review and truncate. Confirm/Update Section 14. Review, truncate, and/or update Sections 2, 15 (PRN 2012-1), 16. Address change. Other edits/updates.

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