



Safety Data Sheet

Report Date 21-Dec-16

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1. Identification

Product Name : TYRANT HERBICIDE
Synonyms : None
Product Use : S-metolachlor and Metribuzin Herbicide
Manufacturer/Supplier : Helena Chemical Company
Address : 225 Schilling Blvd. Collierville, TN 38017
General Information : 901-761-0050
Transportation Emergency Number : CHEMTREC:800-424-9300

2. Hazard Identification



Signal Word : Danger
Skin Irritation : Not classified as hazardous under 29 CFR 1910.1200 (2012)
Eye Irritation : Causes eye irritation
Acute Toxicity Oral : LD50 1,805 mg/kg (rat)
Acute Toxicity Dermal : LD50 >5,000 mg/kg (rat)

Hazard Categories : Oral Tox-4; Eye Irr-2B; STOT-SE-3/3; STOT-RE-2; Combustible Liq-4; Aspiration-1; Carcinogen-1B

Hazard Statement : Harmful if swallowed
Causes eye irritation
May cause respiratory irritation
Combustible liquid
May be fatal if swallowed and enters airways
May cause cancer
May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure

3. Composition / Information on Ingredients

Component	CAS Number	Weight %
S-Metolachlor	87392-12-9	58.2
Metribuzin	21087-64-9	13.8
Inert ingredients (total)	Proprietary	28.0
1,2,4 Trimethylbenzene	95-63-6	Trade Secret



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Naphthalene
Petroleum Solvent

91-20-3
64742-94-5

Trade Secret
Trade Secret

4. First Aid Measures

- Eye** : Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
- Skin** : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.
- Inhalation** : 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 a poison control center or doctor for further treatment advice.
- Ingestion** : Call 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 by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
- Indication of Immediate Medical Attention and Special Treatment Needed** : There is no specific antidote if this product is ingested. Treat symptomatically. Contains petroleum distillate-vomiting may cause aspiration pneumonia.

5. Fire Fighting Measures

- Extinguishing Media** : Use dry chemical, foam or carbon dioxide extinguishing media. If water is used to fight fire, dike and collect runoff.
- Specific Hazards Arising from the Chemical** : Combustible liquid. Can release vapors that form explosive mixtures at temperatures at or above the flash point. Heavy vapors can flow along surfaces to distant ignition sources and flash back.
- Special Fire Fight Proc** : Wear self-contained breathing apparatus and full protective clothing. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion.

6. Accidental Release Measures

- Personal Precautions** : Keep unprotected and unnecessary personnel out of spill area.
- Protective Equipment** : Splashproof goggles or face shield, chemical-resistant gloves, coveralls and footwear. Use self-contained breathing apparatus in case of emergency spills. Eyewash and emergency shower should be available in work area.
- Emergency Procedures** : 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.
- Methods and Materials for Containment and Cleanup** : Clean up spills immediately. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g., Tide). 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.



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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 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 : Store locked up.

8. Exposure Controls / Personal Protection

TLV/PEL : TLV: Metribuzin=5 mg/m³; 1,2,4-Trimethylbenzene=25 ppm; Naphthalene=10 ppm. PEL=Naphthalene=10 ppm.

Appropriate Engineering Controls : Use effective engineering controls to comply with occupational exposure limits, if applicable.

Personal Protective Equipment : Splashproof goggles or face shield, chemical-resistant gloves, coveralls and footwear. Use NIOSH-approved respirator with organic vapor cartridge. Eyewash and emergency shower should be available in work area.

9. Physical and Chemical Properties

Odor/Appearance : Transparent amber liquid/aromatic sulfur-like odor

Flash Point, °F : 184 Degrees F.

Boiling Point, °F : Not available

Melting Point(Freezing point), °C : Not applicable

Vapor Pressure, mm Hg @ 20 °C : Not determined for mixture

Vapor Density : Not available

Solubility in Water : Not determined for mixture

Molecular Formula : Not applicable, formulated mixture.

Density, g/mL @ 25 °C : 1.08

Evaporation Rate(Butyl Acetate = 1) : No information found

Octanol/Water Partition Coefficient : Not available

pH : 3 to 5 (1%)

Flammable Limits (approximate volume % in air) : Not available

Auto-ignition Temperature : 734 Degrees F.

Decomposition temperature : Not available

10. Stability and Reactivity



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Reactivity : Not reactive
Chemical Stability : Stable
Hazardous Decomposition Products : None known
Hazardous Polymerization : Will not occur
Conditions to Avoid : None known
Incompatible Materials : Oxidizing agents.

11. Toxicological Information

Acute Toxicity (Oral LD50) : 1,805 mg/kg (rat). Harmful if swallowed. Aspiration hazard.
Acute Toxicity (Dermal LD50) : >5,000 mg/kg (rat). Not classified as hazardous under 29 CFR 1910.1200 (2012).
Acute Toxicity Inhalation LC50 : >2.53 mg/L/4 hours. Not toxic. May cause respiratory irritation, drowsiness or dizziness.
Likely Routes of Exposure : Inhalation, ingestion, eyes
Skin Irritation : Not classified as hazardous under 29 CFR 1910.1200 (2012).
Eye Irritation : Causes eye irritation.
Skin Sensitization : Not a sensitizer (Guinea pig).
Carcinogenic : Naphthalene: NTP (anticipated carcinogen), IARC (Group 2B possible human carcinogen).
Chronic Effects : Specific Target Organ Toxicity (STOT)-Repeated Exposure: May cause damage to organs (liver, kidney, thyroid, testes) through prolonged or repeated exposure.
Other Hazards : Aspiration Hazard: May be fatal if swallowed and enters airways. STOT-Single Exposure: May cause drowsiness or dizziness. May cause respiratory irritation.

12. Ecological Information

Ecotoxicity : S-Metolachlor: Fish (rainbow trout) 96-hour LC50 1.23 mg/L; Invertebrate (water flea) 48-hour EC50 11.24 mg/L. Metribuzin: Fish (rainbow trout) 96-hour LC50 42 ppm; Invertebrate (water flea) Daphnia Magna 48-hour EC50 4.18 ppm.
Persistence and Degradability : S-Metolachlor: Not persistent in soil, stable in water. Metribuzin: Not persistent in soil, stable in water.
Bioaccumulative Potential : S-Metolachlor: Low bioaccumulation potential.
Mobility in Soil : S-Metolachlor: Moderate mobility in soil. Metribuzin: Moderate mobility in soil.
Other Adverse Effects : Both active ingredients, S-Metolachlor and Metribuzin, sink in water (after 24 hours).

13. Disposal Considerations

Waste Disposal Method : This material must be disposed of according to Federal, State or Local procedures under the Resource Conservation and Recovery Act.

14. Transport Information



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UN Proper Shipping Name : Not regulated by D.O.T. in non-bulk packages. Regulated if shipped by air (IATA) or water (IMDG) in any size package.

Transport Hazard Class : None

UN Identification Number : None

Packaging Group : None

Environmental Hazards : Reportable Quantity for Naphthalene=100 lbs/>750 gallons. Not listed as a Marine Pollutant on Appendix B to 49 CFR 172.101. Classified as Marine Pollutant under air (IATA) and water (IMDG) regulations.

Transport in Bulk : If shipped in bulk packages (>119 gallons) by ground, ship as: NA1993, Compounds, Weed Killing, Liquid, (Naphthalene), PG III "ERG # 128" If single package >750 gallons, add "RQ" to proper shipping name.

Special Precautions for Transportation : If shipped by air (IATA) or water (IMDG), ship as: UN3082, Environmentally Hazardous Substance, Liquid, n.o.s., (S-Metolachlor, Naphthalene), 9, PG III, Marine Pollutant

Freight Classification : Pesticides, NOI, Herbicides, Other than Poison (NMFC Item 155050, Sub 11, Class 70)

15. Regulatory Information

National Fire Protection Association Rating :

Health: 2 Fire: 2 Reactivity: 0
Rating Level: (4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum)

S.A.R.A Title III Hazard Classification (Yes/No) :

Immediate(Acute) Health: Y
Delayed (Chronic) Health: N
Sudden Release of N Pressure:
Fire: Y
Reactive: N

FIFRA Information : This Chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labelling 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:

EPA Registration Number : 100-1162-5905

FIFRA Signal Word : Caution

FIFRA Label Statement : Keep out of reach of children.

FIFRA Label Statement : Contains petroleum distillate.

FIFRA Label Statement : Harmful if swallowed.

FIFRA Label Statement : Causes moderate eye irritation.

FIFRA Label Statement : Avoid contact with eyes, skin or clothing.

FIFRA Label Statement : No additional label statements.

FIFRA Label Statement : No additional label statements.

16. Other Information

Data of Preparation/Revision : 21-December-2016