1. PRODUCT AND COMPANY IDENTIFICATION

Product name

Field Master® Herbicide

EPA Reg. No.

524-497

Product use

Herbicide

Chemical name

Not applicable.

Synonyms

None.

Company

MONSANTO COMPANY, 800 N. Lindbergh Blvd., St. Louis, MO, 63167

Telephone: 800-332-3111, Fax: 314-694-5557

E-mail: TS-SAFETYDATASHEET@DOMINO.MONSANTO.COM

Emergency numbers

FOR CHEMICAL EMERGENCY, SPILL LEAK, FIRE, EXPOSURE, OR ACCIDENT Call CHEMTREC - Day or Night: 1-800-424-9300 toll free in the continental U.S., Puerto Rico, Canada, or Virgin Islands. For calls originating elsewhere: 703-527-3887 (collect calls accepted).

FOR MEDICAL EMERGENCY - Day or Night: +1 (314) 694-4000 (collect calls accepted).

2. HAZARDS IDENTIFICATION

Emergency overview

Appearance and odour (colour/form/odour): Whitish / Liquid / No information.

RESTRICTED USE PESTICIDE due to ground and surface water concerns.

CAUTION!

HARMFUL IF SWALLOWED

HARMFUL IF INHALED

CAUSES MODERATE EYE IRRITATION

MAY CAUSE ALLERGIC SKIN REACTION

Potential health effects

Likely routes of exposure

Skin contact, eye contact, inhalation

Eye contact, short term

May cause temporary eye irritation.

Skin contact, short term

May cause allergic skin reaction.

Inhalation, short term

Harmful by inhalation.

Single ingestion

Harmful if swallowed.

Medical conditions aggravated by exposure

Hypersensitivity to sulphiting agents.

Note
A very small percentage of particularly sensitive people may suffer skin or respiratory reactions. Refer to section 11 for toxicological and section 12 for environmental information.

**OSHA Status**
This product is hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Active ingredient**
- 2-chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methylphenyl) acetamide; {Acetochlor}
- 6-chloro-N-ethyl-N'-(1-methylethyl)-1,3,5-triazine-2,4-diamine; {Atrazine}
- Isopropylamine salt of N-(phosphonomethyl)glycine; {Isopropylamine salt of glyphosate}

**Composition**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS No.</th>
<th>% by weight (approximate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetochlor</td>
<td>34256-82-1</td>
<td>21.6</td>
</tr>
<tr>
<td>Atrazine</td>
<td>1912-24-9</td>
<td>16.2</td>
</tr>
<tr>
<td>Isopropylamine salt of glyphosate</td>
<td>38641-94-0</td>
<td>8.2</td>
</tr>
<tr>
<td>Furilazole (Safener)</td>
<td>121776-33-8</td>
<td>&lt;=1</td>
</tr>
<tr>
<td>Water and minor formulating ingredients</td>
<td></td>
<td>53</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

Use personal protection recommended in section 8.

**Eye contact**
If in eyes, hold eye open and rinse slowly and gently for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

**Skin contact**
Take off contaminated clothing. 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.

**Inhalation**
If inhaled, move person to fresh air. If person is not breathing, call emergency number or ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.

**Ingestion**
Call 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 the poison center or doctor. Do not give anything by mouth to an unconscious person.

**Advice to doctors**
This product is not an inhibitor of cholinesterase.

**Antidote**
Treatment with atropine and oximes is not indicated.

### 5. FIRE-FIGHTING MEASURES

**Flash point**
Does not flash.

**Extinguishing media**
Recommended: Water, foam, dry chemical, carbon dioxide (CO2)

**Unusual fire and explosion hazards**

None.
Minimise use of water to prevent environmental contamination.
Environmental precautions: see section 6.

**Hazardous products of combustion**

Carbon monoxide (CO), nitrogen oxides (NOx), hydrogen chloride (HCl), phosphorus oxides (PxOy)

**Fire fighting equipment**

Self-contained breathing apparatus.
Equipment should be thoroughly decontaminated after use.

---

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**

Use personal protection recommended in section 8.

**Environmental precautions**

Minimise spread.
Keep out of drains, sewers, ditches and water ways.
Do NOT contaminate water when disposing of rinse waters.

**Methods for cleaning up**

Absorb in earth, sand or absorbent material.
Dig up heavily contaminated soil.
Collect in containers for disposal.
Flush residues with small quantities of water.
Minimise use of water to prevent environmental contamination.

Refer to section 13 for disposal of spilled material.
Use handling recommendations in Section 7 and personal protection recommendations in Section 8.

---

### 7. HANDLING AND STORAGE

Good industrial practice in housekeeping and personal hygiene should be followed.

**Handling**

Avoid contact with eyes, skin and clothing.
Avoid breathing vapour or mist.
Wash hands thoroughly after handling or contact.
Wash contaminated clothing before re-use.
Thoroughly clean equipment after use.
Do not contaminate drains, sewers and water ways when disposing of equipment rinse water.
Refer to section 13 of the safety data sheet for disposal of rinse water.
Emptyed containers retain vapour and product residue.
FOLLOW LABELLED WARNINGS EVEN AFTER CONTAINER IS EMPTIED.

**Storage**

| Compatible materials for storage: stainless steel, Heresite[TM]-lined steel, high-density polyethylene (HDPE), polypropylene (PP), Teflon[TM], polyvinylidene difluoride (PVDF) |
| Incompatible materials for storage: unlined mild steel, aluminium, polyvinyl chloride (PVC), Contact with mild steel may cause color change and reduce product's ability to emulsify with water., see section 10. |

Keep out of reach of children.
Keep away from food, drink and animal feed.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>Exposure Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetochlor</td>
<td>No specific occupational exposure limit has been established.</td>
</tr>
<tr>
<td>Atrazine</td>
<td>TLV (ACGIH): 5 mg/m3 (TWA)</td>
</tr>
<tr>
<td></td>
<td>PEL (OSHA): No specific occupational exposure limit has been established.</td>
</tr>
<tr>
<td>Isopropylamine salt of glyphosate</td>
<td>No specific occupational exposure limit has been established.</td>
</tr>
<tr>
<td>Furilazole (Safener)</td>
<td>NCEL (New Chemical Exposure Limit): 0.1 mg/m3 (TWA)</td>
</tr>
<tr>
<td>Water and minor formulating</td>
<td>No specific occupational exposure limit has been established.</td>
</tr>
<tr>
<td>ingredients</td>
<td></td>
</tr>
</tbody>
</table>

Engineering controls
Provide local exhaust ventilation.

Eye protection
If there is significant potential for contact:
Wear chemical goggles.

Skin protection
Wear chemical resistant gloves.
If there is significant potential for contact:
Wear face shield.
Wear chemical resistant clothing/footwear.

Respiratory protection
If airborne exposure is excessive:
Wear respirator.
Full facepiece/hood/helmet respirator replaces need for chemical goggles.
Respiratory protection programs must comply with all local/regional/national regulations.

When recommended, consult manufacturer of personal protective equipment for the appropriate type of equipment for a given application.

9. PHYSICAL AND CHEMICAL PROPERTIES

These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

<table>
<thead>
<tr>
<th>Colour/colour range:</th>
<th>Whitish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour:</td>
<td>No information.</td>
</tr>
<tr>
<td>Form:</td>
<td>Liquid</td>
</tr>
<tr>
<td>Physical form changes (melting, boiling, etc.):</td>
<td></td>
</tr>
<tr>
<td>Melting point:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Boiling point:</td>
<td>No data.</td>
</tr>
<tr>
<td>Flash point:</td>
<td>Does not flash.</td>
</tr>
<tr>
<td>Explosive properties:</td>
<td>No data.</td>
</tr>
<tr>
<td>Auto ignition temperature:</td>
<td>No data.</td>
</tr>
<tr>
<td>Specific gravity:</td>
<td>1.1120 20 °C / 15.6 °C</td>
</tr>
</tbody>
</table>
Vapour pressure: No significant volatility.
Vapour density: Not applicable.
Evaporation rate: No data.
Dynamic viscosity: 160 - 185 cP 10 °C
Kinematic viscosity: No data.
Density: 1.1120 g/cm3 @ 20 °C
Solubility: Water: Emulsifies.
pH: 5.2 - 5.7 50 g/l
Partition coefficient: log Pow: 4.14 20 °C (acetochlor)
Partition coefficient: log Pow: 2.5 25 °C (atrazine)

10. STABILITY AND REACTIVITY

Oxidizing properties
No data.

Materials to avoid/Reactivity
Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.
Corrosive to mild steel.
Corrosive to aluminium.

Self-accelerating decomposition temperature (SADT)
No data.

Hazardous polymerization
Does not occur.

11. TOXICOLOGICAL INFORMATION

This section is intended for use by toxicologists and other health professionals.

Data obtained on product and components are summarized below.

Acute oral toxicity
Rat, LD50: 3,105 mg/kg body weight
Other effects: decreased activity, decrease of food consumption
FIFRA category III.
Slightly toxic.

Acute dermal toxicity
Rat, LD50: > 5,000 mg/kg body weight
 Practically non-toxic.
FIFRA category IV.
No mortality.

Acute inhalation toxicity
Rat, LC50, 4 hours, aerosol:
Slightly toxic.
FIFRA category III.
Maximum attainable concentration. No mortality.

Skin irritation
Rabbit, 6 animals, OECD 404 test:
Days to heal: 10
Primary Irritation Index (PII): 1.0/8.0
FIFRA category IV.
Slight irritation.

Eye irritation
Rabbit, 6 animals, OECD 405 test:
   Days to heal: 3
   Slight irritation.
   FIFRA category III.

Skin sensitization

Guinea pig, 3-induction Buehler test:
   Positive incidence: 20 %
   Positive.

Acetochlor

Mutagenicity

In vitro and in vivo mutagenicity test(s):
   Equivocal response.

Repeated dose toxicity

Rat, oral, 90 days:
   NOAEL toxicity: 18 mg/kg body weight/day
   Target organs/systems: none
   Other effects: decrease of body weight gain, decrease of food consumption

Rabbit, dermal, 21 days:
   NOAEL toxicity: 400 mg/kg body weight/day
   Target organs/systems: none
   Other effects: increased mortality, decrease of body weight gain

Chronic effects/carcinogenicity

Rat, oral, 2 years:
   NOEL tumour: 10 mg/kg body weight/day
   NOAEL toxicity: 10 mg/kg body weight/day
   Tumours: thyroid, nose
   Target organs/systems: liver, kidneys
   Other effects: decrease of body weight gain, organ weight change, blood biochemistry effects
   Tumours only at or above MTD. Tumours not relevant for man based on mechanistic data.

Mouse, oral:
   NOAEL toxicity: 1.1 mg/kg body weight/day
   Tumours: liver, lung, haematopoietic system (histiocytic sarcoma)
   Target organs/systems: kidneys, liver
   Other effects: histopathologic effects, haematological effects, decrease of body weight gain
   Tumours only at or above MTD. Equivocal response.

Toxicity to reproduction/fertility

Rat, oral, 2 generations:
   NOAEL toxicity: 21 mg/kg body weight/day
   NOAEL reproduction: 66 mg/kg body weight/day
   Target organs/systems in parents: liver, kidneys, thyroid
   Other effects in parents: decrease of body weight gain, organ weight change, histopathologic effects
   Target organs/systems in pups: none
   Other effects in pups: decrease of body weight gain, change in sexual maturation landmarks

Developmental toxicity/teratogenicity

Rat, oral, 6 - 18 days of gestation:
   NOAEL toxicity: 200 mg/kg body weight
   NOAEL development: 400 mg/kg body weight
   Target organs/systems in mother animal: none
   Other effects in mother animal: decrease of body weight gain
   No adverse treatment related effects in offspring.

Rabbit, oral, 7 - 19 days of gestation:
   NOAEL toxicity: 100 mg/kg body weight/day
   NOAEL development: 300 mg/kg body weight/day
   Target organs/systems in mother animal: none
   Other effects in mother animal: decrease of body weight gain
No adverse treatment related effects in offspring.

**Acute neurotoxicity**
- **Rat, oral, single dose, gavage:**
  - NOAEL: 150 mg/kg body weight
  - Other effects: decreased activity

**Repeated dose neurotoxicity**
- **Rat, oral, 13 weeks, dietary:**
  - NOAEL: 52 mg/kg body weight/day
  - Target organs/systems: none
  - Other effects: decrease of body weight gain, decrease of food consumption
  - Not neurotoxic.

**EXPERIENCE WITH HUMAN EXPOSURE**
- **Skin contact, short term, occupational:**
  - **Skin effects:** sensitization in susceptible individuals

**Atrazine**

**Mutagenicity**
- **Ames test(s):**
  - Not mutagenic without metabolic activation.
- **In vivo chromosomal aberration test(s):**
  - Not mutagenic.
- **In vitro DNA-repair test(s):**
  - Not mutagenic.
- **Dominant lethal test(s):**
  - Not mutagenic.

**Repeated dose toxicity**
- **Rat, oral, 90 days:**
  - NOAEL toxicity: 3.3 mg/kg body weight/day
  - Target organs/systems: none
  - Other effects: decrease of body weight gain

- **Rabbit, dermal, 25 days:**
  - NOAEL toxicity: 10 mg/kg body weight/day
  - Target organs/systems: spleen
  - Other effects: decrease of food consumption, weight loss, organ weight change, haematological effects, histopathologic effects, blood biochemistry effects

**Chronic effects/carcinogenicity**
- **Rat, oral, 24 months:**
  - NOEL tumour: 0.45 mg/kg body weight/day
  - NOAEL toxicity: 3.5 mg/kg body weight/day
  - Tumours: mammary gland (adenocarcinoma)
  - Target organs/systems: eyes, kidneys, liver, mammary gland, prostate, skeletal muscle
  - Other effects: decrease of food consumption, weight loss, organ weight change, haematological effects, histopathologic effects, blood biochemistry effects
  - Tumours only at or above MTD. Tumours not relevant for man based on mechanistic data.

- **Mouse, oral, 91 weeks:**
  - NOEL tumour: ~ 400 mg/kg body weight/day
  - NOAEL toxicity: 43 mg/kg body weight/day
  - Target organs/systems: heart
  - Other effects: decrease of food consumption, weight loss, organ weight change, histopathologic effects
  - Tumours not related to treatment.

**Toxicity to reproduction/fertility**
- **Rat, oral, 2 generations:**
  - NOAEL toxicity: 50 mg/kg diet
  - NOAEL reproduction: 500 mg/kg diet
  - Target organs/systems in parents: none
Other effects in parents: decrease of body weight gain
Target organs/systems in pups: none
Other effects in pups: none

**Developmental toxicity/teratogenicity**

**Rat, oral, 6 - 15 days of gestation:**
- NOAEL toxicity: 10 mg/kg body weight
- NOAEL development: 10 mg/kg body weight
- Other effects in mother animal: weight loss, decrease of body weight gain, decrease of survival
- Developmental effects: weight loss, delayed ossification
- Effects on offspring only observed with maternal toxicity.

**Rabbit, oral, 7 - 19 days of gestation:**
- NOAEL toxicity: < 1 mg/kg body weight
- NOAEL development: 1 mg/kg body weight
- Other effects in mother animal: weight loss, decrease of survival
- Developmental effects: weight loss, post-implantation loss, delayed ossification
- Effects on offspring only observed with maternal toxicity.

**N-(phosphonomethyl)glycine; [glyphosate]**

**Mutagenicity**

In vitro and in vivo mutagenicity test(s):
- Not mutagenic.

**Repeated dose toxicity**

**Rabbit, dermal, 21 days:**
- NOAEL toxicity: > 5,000 mg/kg body weight/day
- Target organs/systems: none
- Other effects: none

**Rat, oral, 3 months:**
- NOAEL toxicity: > 20,000 mg/kg diet
- Target organs/systems: none
- Other effects: none

**Chronic effects/carcinogenicity**

**Mouse, oral, 24 months:**
- NOEL tumour: > 30,000 mg/kg diet
- NOAEL toxicity: ~ 5,000 mg/kg diet
- Tumours: none
- Target organs/systems: liver
- Other effects: decrease of body weight gain, histopathologic effects

**Rat, oral, 24 months:**
- NOEL tumour: > 20,000 mg/kg diet
- NOAEL toxicity: ~ 8,000 mg/kg diet
- Tumours: none
- Target organs/systems: eyes
- Other effects: decrease of body weight gain, histopathologic effects

**Toxicity to reproduction/fertility**

**Rat, oral, 2 generations:**
- NOAEL toxicity: 10,000 mg/kg diet
- NOAEL reproduction: > 30,000 mg/kg diet
- Target organs/systems in parents: none
- Other effects in parents: decrease of body weight gain
- Target organs/systems in pups: none
- Other effects in pups: decrease of body weight gain
- Effects on offspring only observed with maternal toxicity.

**Developmental toxicity/teratogenicity**

**Rat, oral, 6 - 19 days of gestation:**
- NOAEL toxicity: 1,000 mg/kg body weight
- NOAEL development: 1,000 mg/kg body weight
Other effects in mother animal: decrease of body weight gain, decrease of survival
Developmental effects: weight loss, post-implantation loss, delayed ossification
Effects on offspring only observed with maternal toxicity.

**Rabbit, oral, 6 - 27 days of gestation:**
NOAEL toxicity: 175 mg/kg body weight
NOAEL development: 175 mg/kg body weight
Target organs/systems in mother animal: none
Other effects in mother animal: decrease of survival
Developmental effects: none

**Furilazole (Safener)**

**Mutagenicity**
*In vitro and in vivo mutagenicity test(s):*
Not mutagenic on the basis of weight-of-evidence analysis.

**Repeated dose toxicity**

**Rat, oral, 3 months:**
NOAEL toxicity: 7 mg/kg body weight/day
Target organs/systems: liver
Other effects: decrease of food consumption, decrease of body weight gain, organ weight change, haematological effects, histopathologic effects

**Rat, dermal, 21 days:**
NOAEL toxicity: 25 mg/kg body weight/day
Target organs/systems: liver
Other effects: organ weight change

**Chronic effects/carcinogenicity**

**Rat, oral, 2 years:**
NOEL tumour: 6.03 mg/kg body weight/day
NOAEL toxicity: 0.26 mg/kg body weight/day
Tumours: liver (adenoma) (carcinoma), testes
Target organs/systems: liver, kidneys
Other effects: decrease of body weight gain, organ weight change, histopathologic effects, blood biochemistry effects

**Mouse, oral, 18 months:**
NOEL tumour: 5.9 mg/kg body weight/day
NOAEL toxicity: 5.9 mg/kg body weight/day
Tumours: liver (adenoma) (carcinoma), lung (adenoma) (carcinoma)
Target organs/systems: liver, lung
Other effects: increased mortality, blood biochemistry effects, organ weight change, histopathologic effects

**Toxicity to reproduction/fertility**

**Rat, oral, 2 generations:**
NOAEL toxicity: 10 mg/kg body weight/day
NOAEL reproduction: 99 mg/kg diet
Target organs/systems in parents: kidneys, liver
Other effects in parents: decrease of body weight gain, histopathologic effects
Target organs/systems in pups: none
Other effects in pups: none

**Developmental toxicity/teratogenicity**

**Rat, oral, 6 - 15 days of gestation:**
NOAEL toxicity: 10 mg/kg body weight
NOAEL development: 10 mg/kg body weight
Target organs/systems in mother animal: liver
Other effects in mother animal: organ weight change
Developmental effects: post-implantation loss
Effects on offspring only observed with maternal toxicity.

**Rabbit, oral, 7 - 19 days of gestation:**
NOAEL toxicity: 10 mg/kg body weight/day
NOAEL development: >= 50 mg/kg body weight/day
Target organs/systems in mother animal: none
Other effects in mother animal: weight loss, decrease of body weight gain, decrease of food consumption
Developmental effects: none
Other effects in foetus: none

12. ECOLOGICAL INFORMATION

This section is intended for use by ecotoxicologists and other environmental specialists.

Monsanto has not conducted environmental studies on this product. Data obtained on components are summarized below.

Acetochlor

Aquatic toxicity, fish
Bluegill sunfish (Lepomis macrochirus):
   Acute toxicity, 96 hours, static, LC50: 1.3 mg/L
   Moderately toxic.
Rainbow trout (Oncorhynchus mykiss):
   Acute toxicity, 96 hours, static, LC50: 0.36 - 1.2 mg/L
   Highly toxic.

Aquatic toxicity, invertebrates
Water flea (Daphnia magna):
   Acute toxicity, 48 hours, static, EC50: 8.6 - 16 mg/L
   Moderately toxic.

Aquatic toxicity, algae/aquatic plants
Green algae (Selenastrum capricornutum):
   Acute toxicity, 96 hours, static, EC50: 0.27 - 1.49 µg/L
   Very highly toxic.

Avian toxicity
Bobwhite quail (Colinus virginianus):
   Acute oral toxicity, single dose, LD50: > 31 - 1,560 mg/kg body weight
Mallard duck (Anas platyrhynchos):
   Acute oral toxicity, single dose, LD50: > 2,000 mg/kg body weight
   Practically non-toxic.

Dietary toxicity, 5 days, LC50: > 5,620 mg/kg diet
   Practically non-toxic.

Bobwhite quail (Colinus virginianus):
   Dietary toxicity, 5 days, LC50: > 5,620 mg/kg diet
   Practically non-toxic.

Arthropod toxicity
Honey bee (Apis mellifera):
   Oral, 48 hours, LD50: > 100 µg/bee
   Practically non-toxic.
Honey bee (Apis mellifera):
   Contact, 48 hours, LD50: > 200 µg/bee
   Practically non-toxic.

Soil organism toxicity, invertebrates
Earthworm (Eisenia foetida):
   Acute toxicity, 14 days, LC50: 211 - 397 mg/kg dry soil
   Slightly toxic.

Bioaccumulation
Bluegill sunfish (Lepomis macrochirus):
   Whole fish: BCF: 20
Rapid depuration after end of exposure.

**Dissipation**

**Water, aerobic, 20 °C:**
Half life: 12 days

**Soil, aerobic, 20 °C:**
Half life: 12.9 days
Koc: 204

**Atrazine**

**Aquatic toxicity, fish**
- Bluegill sunfish (Lepomis macrochirus):
  - Acute toxicity, 96 hours, LC50: 8 mg/L
  - Moderately toxic.
- Rainbow trout (Oncorhynchus mykiss):
  - Acute toxicity, 96 hours, LC50: 8.8 mg/L
  - Moderately toxic.

**Aquatic toxicity, invertebrates**

- Water flea (Daphnia magna):
  - Acute toxicity, 48 hours, EC50: 6.9 mg/L
  - Moderately toxic.

**Aquatic toxicity, algae/aquatic plants**

- Green algae (Selenastrum capricornutum):
  - Acute toxicity, 96 hours, static, EC50: 4 - 130 µg/L
  - Very highly toxic.
- Duckweed (Lemna gibba):
  - Acute toxicity, 5 days, EC50: 170 µg/L
  - Highly toxic.

**Avian toxicity**

- Bobwhite quail (Colinus virginianus):
  - Dietary toxicity, 5 days, LC50: > 5,000 mg/kg diet
  - Practically non-toxic.
- Mallard duck (Anas platyrhynchos):
  - Dietary toxicity, 5 days, LC50: > 5,000 mg/kg diet
  - Practically non-toxic.
- Mallard duck (Anas platyrhynchos):
  - Acute oral toxicity, single dose, LD50: > 2,000 mg/kg body weight
  - Practically non-toxic.

**Arthropod toxicity**

- Honey bee (Apis mellifera):
  - Contact, 48 hours, LD50: > 97 µg/bee

**Bioaccumulation**

- Bluegill sunfish (Lepomis macrochirus):
  - Edible portion: BCF: 8
  - Rapid depuration after end of exposure.
- Bluegill sunfish (Lepomis macrochirus):
  - Whole fish: BCF: 15
  - Rapid depuration after end of exposure.

**N-(phosphonomethyl)glycine (glyphosate)**

**Aquatic toxicity, fish**

- Bluegill sunfish (Lepomis macrochirus):
  - Acute toxicity, 96 hours, static, LC50: 120 mg/L
  - Practically non-toxic.
- Rainbow trout (Oncorhynchus mykiss):
  - Acute toxicity, 96 hours, static, LC50: 86 mg/L
Slightly toxic.

**Aquatic toxicity, invertebrates**

*Water flea (Daphnia magna):*
- Acute toxicity, 48 hours, static, EC50: 780 mg/L
- Practically non-toxic.

**Aquatic toxicity, algae/aquatic plants**

*Green algae (Selenastrum capricornutum):*
- Acute toxicity, 7 days, static, EC50: 13.8 mg/L
- Slightly toxic.

*Diatom (Skeletonema costatum):*
- Acute toxicity, 4 days, static, EC50: 1.3 mg/L
- Moderately toxic.

*Duckweed (Lemna gibba):*
- Acute toxicity, 14 days, static, EC50 (frond number): 25.5 mg/L

**Avian toxicity**

*Bobwhite quail (Colinus virginianus):*
- Dietary toxicity, 5 days, LC50: > 4,640 mg/kg diet
- No more than slightly toxic.

*Mallard duck (Anas platyrhynchos):*
- Dietary toxicity, 5 days, LC50: > 4,640 mg/kg diet
- No more than slightly toxic.

*Bobwhite quail (Colinus virginianus):*
- Acute oral toxicity, single dose, LD50: > 3,851 mg/kg body weight
- Practically non-toxic.

**Arthropod toxicity**

*Honey bee (Apis mellifera):*
- Oral, 48 hours, LD50: 100 µg/bee
- Contact, 48 hours, LD50: > 100 µg/bee
- Practically non-toxic.

**Bioaccumulation**

*Bluegill sunfish (Lepomis macrochirus):*
- Whole fish: BCF: < 1
- No significant bioaccumulation is expected.

**Dissipation**

*Soil, field:*
- Half life: 2 - 174 days
- Koc: 884 - 60,000 L/kg
- Adsorbs strongly to soil.

*Water, aerobic:*
- Half life: < 7 days

---

### 13. DISPOSAL CONSIDERATIONS

**Product**

- Keep out of drains, sewers, ditches and water ways.
- Recycle if appropriate facilities/equipment available.
- Burn in special, controlled high temperature incinerator.
- Follow all local/regional/national/international regulations.

**Container**

- See the individual container label for disposal information.
- Emptied containers retain vapour and product residue.
- Observe all labelled safeguards until container is cleaned, reconditioned or destroyed.
- Empty packaging completely.
- Triple or pressure rinse empty containers.
- Do NOT contaminate water when disposing of rinse waters.
Ensure packaging cannot be reused.
Do NOT re-use containers.
Store for collection by approved waste disposal service.
Recycle if appropriate facilities/equipment available.
Follow all local/regional/national/international regulations.

Use handling recommendations in Section 7 and personal protection recommendations in Section 8.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Not hazardous under the applicable DOT, ICAO/IATA, IMO, TDG and Mexican regulations.

15. REGULATORY INFORMATION

TSCA Inventory
All components are on the US EPA's TSCA Inventory

OSHA Hazardous Components
Acetochlor
Atrazine

SARA Title III Rules
Section 311/312 Hazard Categories
Immediate, Delayed
Section 302 Extremely Hazardous Substances
Not applicable.
Section 313 Toxic Chemical(s)
Atrazine

CERCLA Reportable quantity
Not applicable.

16. OTHER INFORMATION

The information given here is not necessarily exhaustive but is representative of relevant, reliable data.
Follow all local/regional/national/international regulations.
Please consult supplier if further information is needed.
In this document the British spelling was applied.
|| Significant changes versus previous edition.

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<th>Health</th>
<th>Flammability</th>
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<td>NFPA</td>
<td>2</td>
<td>1</td>
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0 = Minimal hazard, 1 = Slight hazard, 2 = Moderate hazard, 3 = Severe hazard, 4 = Extreme hazard

Full denomination of most frequently used acronyms. BCF (Bioconcentration Factor), BOD (Biochemical Oxygen Demand), COD (Chemical Oxygen Demand), EC50 (50% effect concentration), ED50 (50% effect dose), I.M. (intramuscular), I.P. (intraperitoneal), I.V. (intravenous), Koc (Soil adsorption coefficient), LC50 (50% lethality concentration), LD50 (50% lethality dose), LDL0 (Lower limit of lethal dosage), LEL (Lower Explosion Limit), LOAEC (Lowest Observed Adverse Effect Concentration), LOAEL (Lowest Observed Adverse Effect Level), LOEC (Lowest Observed Effect Concentration), LOEL (Lowest Observed Effect Level), MEL (Maximum Exposure limit), MTD (Maximum Tolerated Dose), NOAEC (No Observed Adverse Effect Concentration), NOAEL (No Observed Adverse Effect Level), NOEC (No Observed Effect Concentration), NOEL (No Observed Effect Level), OEL (Occupational Exposure Limit), PEL (Permissible Exposure Limit), PI (Primary Irritation Index), Pow (Partition coefficient n-octanol/water), S.C. (subcutaneous), STEL (Short-Term Exposure Limit), TLV-C (Threshold Limit Value-Ceiling), TLV-TWA (Threshold Limit Value - Time Weighted Average), UEL (Upper Explosion Limit)
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