

# SAFETY DATA SHEET



Date Issued : 2/8/2017  
 SDS No : RAVINE  
 Date Revised : 1/8/2018  
 Revision No : 2

## RAVINE

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** RAVINE  
**CHEMICAL FAMILY:** Herbicide

#### DISTRIBUTOR

ALTITUDE CROP INNOVATIONS LLC  
 1880 Fall River Drive  
 Suite 100  
 Loveland, CO 80538

#### 24 HR. EMERGENCY TELEPHONE NUMBERS

24-Hour Emergency Assistance Call: 1-800-222-1222  
 Chemical Emergency Call CHEMTREC: 1-800-424-9300

**EPA REG. NO.:** 83100-47-91395

### 2. HAZARDS IDENTIFICATION

#### GHS CLASSIFICATIONS

##### Health:

Eye Irritation, Category 2A  
 Skin Sensitization, Category 1B  
 Target Organ Toxicity (Repeated exposure), Category 2  
 Acute Toxicity (Oral), Category 5  
 Acute Toxicity (Dermal), Category 5

##### Environmental:

Acute Hazards to the Aquatic Environment, Category 1  
 Chronic Hazards to the Aquatic Environment, Category 1

#### GHS LABEL



Exclamation  
mark



Health  
hazard



Environment

**SIGNAL WORD:** WARNING

#### HAZARD STATEMENTS

H303: May be harmful if swallowed.  
 H313: May be harmful in contact with skin.  
 H317: May cause an allergic skin reaction.  
 H319: Causes serious eye irritation.  
 H373: May cause damage to liver through prolonged or repeated exposure.  
 H400: Very toxic to aquatic life.  
 H410: Very toxic to aquatic life with long lasting effects.

#### PRECAUTIONARY STATEMENTS

**General:**

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P101: If medical advice is needed, have product container or label at hand.

P102: Keep out of reach of children.

P103: Read label before use.

**Prevention:**

P260: Do not breathe mist, vapors or spray.

P264: Wash hands, face and other affected areas thoroughly after handling.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313: If eye irritation persists: Get medical advice/attention.

P391: Collect spillage.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

P321: Specific treatment see Section 4, First Aid Measures, on this SDS.

P363: Wash contaminated clothing before reuse.

P314: Get medical advice/attention if you feel unwell.

**Disposal:**

P501: Dispose of contents/container to Local, State and Federal Regulations.

**COMMENTS HEALTH:** Read all precautions of products being handled and follow the most restrictive language for all products to provide the safest work environment.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	Wt.%	CAS
Metolachlor	19	51218-45-2
Atrazine	18.61	1912-24-9
Mesotrione	2.44	104206-82-8
Atrazine Related Compounds	0.48	Mixture
Other Ingredients	59.48	Mixture

**4. FIRST AID MEASURES**

**EYES:** Hold eyes 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 eyes. Call a poison control center or doctor for treatment advice.

**SKIN:** 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.

**INGESTION:** Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

**INHALATION:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

**NOTES TO PHYSICIAN:** All treatments should be based on observed signs and symptoms of distress in the patient.

Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

**ADDITIONAL INFORMATION:** Have the product container or label with you when calling a poison control center or doctor, or going in for treatment. For emergency medical assistance call **NPCC 1-800-222-1222** or call **CHEMTREC 1-800-424-9300**.

**5. FIRE FIGHTING MEASURES**

**GENERAL HAZARD:** Toxic fumes may be emitted in a fire situation.

**EXTINGUISHING MEDIA:** Foam, dry chemical, carbon dioxide, water spray or fog.

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**HAZARDOUS COMBUSTION PRODUCTS:** Normal combustion forms carbon dioxide, water vapor and may produce oxides of carbon, nitrogen and phosphorous.

**EXPLOSION HAZARDS:** No specific explosion hazards are identified or expected. Always fight fire with the implication that other volatile substances may be present.

**FIRE FIGHTING PROCEDURES:** Evacuate area and fight fire upwind a safe distance to avoid hazardous vapors and decomposition products. Fire exposed containers can build up pressure and should be kept cool with water spray if possible. Explosive vapor could form from ruptured containers. Dike and collect water used to fight fire to prevent environmental damage due to runoff. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff.

**FIRE FIGHTING EQUIPMENT:** As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:** Pick up spilled liquid with absorbent material and sweep up for disposal. Place it and damaged unusable containers in a landfill appropriate for non hazardous chemical waste. Check local, state, and federal regulations for proper disposal.

**LARGE SPILL:** Dike around the spill area to prevent spreading. Pick up spilled material with suitable absorbent material and place in appropriate container for disposal. Scrub the contaminated area with a detergent or soap solution. Place it and unusable containers in a landfill appropriate for non hazardous chemical waste. Check local, state, and federal regulations for proper disposal.

### ENVIRONMENTAL PRECAUTIONS

**WATER SPILL:** Do not contaminate any body of water.

**LAND SPILL:** Avoid runoff onto any adjacent land.

**SPECIAL PROTECTIVE EQUIPMENT:** Always wear proper protective equipment when handling this product.

## 7. HANDLING AND STORAGE

**HANDLING:** Wash hands after handling, before eating, drinking, chewing gum, using tobacco, or using the toilet. Avoid contact with eyes and contact with skin. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**STORAGE:** Store in original container only. Store in a well-ventilated place. Keep container tightly closed. Store locked up and away from unauthorized people, children or animals.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**ENGINEERING CONTROLS:** When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** Wear chemical goggles or shielded safety glasses (ANSI Z87.1 or approved equivalent) when handling and mixing product. Contact lenses should not be worn when working with chemicals.

**SKIN:** Wear chemical resistant gloves such as Viton or barrier laminate, Coveralls over long-sleeved shirt, long pants and chemical resistant footwear plus socks. Chemical resistant headgear for overhead exposure. When exposed to product concentrate, wear a chemical resistant apron. Always refer to the label of the pesticide(s) in the tank mix and follow the most restrictive requirements.

**RESPIRATORY:** Proper ventilation is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Wear a NIOSH/MSHA approved dust mask or filter when vapors are expected to be generated above the permissible limit.

**PROTECTIVE CLOTHING:** Eye protection, long sleeved shirt and long pants, shoes plus socks and chemical resistant gloves. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**OTHER USE PRECAUTIONS:** Avoid contact with skin, eyes, and clothing. Avoid breathing vapors. Wash thoroughly after handling product. Eye wash fountains and drench showers should be located within 100 feet or a 10 second walk from the work

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area per ANSI Z358.1-1990

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**PHYSICAL STATE:** Liquid  
**ODOR:** Mild  
**APPEARANCE:** Opaque  
**COLOR:** Off-white  
**pH:** > 3.32  
**PERCENT VOLATILE:** Not Established  
**FLASH POINT AND METHOD:** > 100°C (212°F)  
**FLAMMABLE LIMITS:** Not Established  
**AUTOIGNITION TEMPERATURE:** Not Established  
**VAPOR PRESSURE:** ~ 17 mm Hg at 20°C  
**VAPOR DENSITY:** Not Established  
**BOILING POINT:** Not Established  
**FREEZING POINT:** Not Established  
**MELTING POINT:** Not Established  
**POUR POINT:** Not Established  
**THERMAL DECOMPOSITION:** Not Established  
**SOLUBILITY IN WATER:** Dispersible  
**EVAPORATION RATE:** Not Established  
**SPECIFIC GRAVITY:** 1.07 g/cm<sup>3</sup>  
**VISCOSITY:** Not Established  
**MOLECULAR WEIGHT:** Not Established

**10. STABILITY AND REACTIVITY**

**STABLE:** Yes  
**HAZARDOUS POLYMERIZATION:** No  
**POLYMERIZATION:** Will not occur.  
**CONDITIONS TO AVOID:** Extreme temperatures.  
**INCOMPATIBLE MATERIALS:** Strong oxidizing agents.

**11. TOXICOLOGICAL INFORMATION****ACUTE****DERMAL LD<sub>50</sub>:** > 2000 mg/kg**ORAL LD<sub>50</sub>:** > 2000 mg/kg**INHALATION LC<sub>50</sub>:** > 5.12 mg/L**EYE EFFECTS:** Causes serious eye irritation.**SKIN EFFECTS:** May cause an allergic skin reaction in some individuals.**CARCINOGENICITY**

Chemical Name	IARC Status
Atrazine	3

**COMMENTS:** 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 specification items.

## 12. ECOLOGICAL INFORMATION

### ENVIRONMENTAL DATA:

This pesticide is toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean water mark. Do not apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water.

Atrazine can travel through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water.

Metolachlor has the potential to leach through soil into ground water under certain conditions as a result of agricultural use.

The active ingredients in this product have the potential to contaminate surface water through ground spray drift. Under some conditions, the active ingredients may also have a high potential for runoff into surface water (primarily via dissolution in runoff water) for several months post-application.

### AQUATIC TOXICITY (ACUTE)

**96-HOUR LC<sub>50</sub>:** 6.75 mg/L (Oncorhynchus mykiss)

**48-HOUR EC<sub>50</sub>:** ~ 6.65 mg/L (Daphnia Magna)

**96-HOUR EC<sub>50</sub>:** ~ 0.27 mg/L (Pseudokirchneriella subcapitata)

## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Do not reuse product containers. Triple rinse (or equivalent), then offer for recycling at an ACRC site (go to <http://www.acrecycle.org/> for locations) or by reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved by local, state, and federal regulations.

## 14. TRANSPORT INFORMATION

### DOT (DEPARTMENT OF TRANSPORTATION)

**PROPER SHIPPING NAME:** Not regulated by DOT

### AIR (ICAO/IATA)

**SHIPPING NAME:** Environmentally Hazardous Substance, liquid, N.O.S.

**UN/NA NUMBER:** 3082

**PRIMARY HAZARD CLASS/DIVISION:** 9

**PACKING GROUP:** III

**ERG:** 171

**SPECIAL PROVISIONS:** A97, A158, A197

### VESSEL (IMO/IMDG)

**SHIPPING NAME:** Environmentally Hazardous Substance, liquid, N.O.S.

**UN/NA NUMBER:** 3082

**PRIMARY HAZARD CLASS/DIVISION:** 9

**PACKING GROUP:** III

**EmS:** F-A, S-F

**MARINE POLLUTANT #1:** Atrazine

**MARINE POLLUTANT #2:** Mesotrione

**SPECIAL PROVISIONS:** 274, 335

## 15. REGULATORY INFORMATION

### UNITED STATES

**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

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**311/312 HAZARD CATEGORIES:** Acute**FIRE:** No **PRESSURE GENERATING:** No **REACTIVITY:** No **ACUTE:** Yes **CHRONIC:** No**EPCRA SECTION 313 SUPPLIER NOTIFICATION**

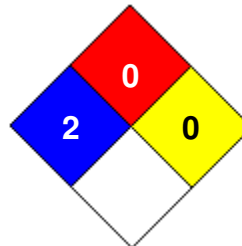
Chemical Name	Wt.%	CAS
Atrazine	18.61	1912-24-9

**FIFRA (FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT):****Labeling 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:

**PRECAUTIONARY STATEMENTS****Hazards to Humans and Domestic Animals**

**CAUTION** - Causes moderate eye irritation. Avoid contact with eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wear protective eyewear. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

**16. OTHER INFORMATION****REASON FOR ISSUE:** New Revision**REVISION SUMMARY:** This SDS replaces the 3/17/2017 SDS. Revised: **Section 1:** REASON FOR ISSUE.**NFPA CODES****GENERAL STATEMENTS: DISCLAIMER AND LIMITATION OF LIABILITY**

This data sheet was developed from information on the constituent materials identified herein and does not relate to the use of such materials in combination with any other material or process. No warranty is expressed or implied with respect to the completeness or ongoing accuracy of the information contained in this data sheet, and ALTITUDE CROP INNOVATIONS, LLC, disclaims all liability for reliance on such information. This data sheet is not a guarantee of safety. Users are responsible for ensuring that they have all current information necessary to safely use the product described by this data sheet for their specific purpose.