



# Safety Data Sheet

Issue Date: 11-May-2009

Revision Date: 22-Sept-2015

Version 2

## 1. IDENTIFICATION

### Product Identifier

Product Name

**Oryzalin 4 A.S. Herbicide**

### Other means of identification

SDS #

ADAMA-060

Registration Number(s)

EPA Reg. No. 66222-138

UN/ID No

UN3077

### Recommended use of the chemical and restrictions on use

Recommended Use

EPA registered pesticide.

### Details of the supplier of the safety data sheet

#### Manufacturer Address

Makhteshim Agan of North America, Inc. (d/b/a ADAMA)  
3120 Highwoods Blvd., Suite 100  
Raleigh, NC 27604  
1-919-256-9300

### Emergency Telephone Number

Emergency Telephone (24 hr)

For fire, spill and/or leak contact INFOTRAC:  
1-800-535-5053 (North America) 1-352-323-3500 (International)  
For medical emergencies and health/safety inquiries, contact PROSAR:  
1-877-250-9291

## 2. HAZARDS IDENTIFICATION

This chemical is a product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-EPA registered chemicals. Please see Section 15 for additional EPA information. The product contains no substances which, at their given concentration, are considered to be hazardous to health.

**Appearance** Bright orange opaque liquid

**Physical State** Liquid

**Odor** Slight aromatic odor

### Hazards Not Otherwise Classified (HNOC)

May be harmful in contact with skin

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Oryzalin	19044-88-3	41
Proprietary Additive	Proprietary	59

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

### 4. FIRST-AID MEASURES

#### First Aid Measures

<b>General Advice</b>	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment. If exposed or concerned: Get medical advice/attention.
<b>Eye Contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison control center or doctor for treatment advice.
<b>Skin Contact</b>	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Call a poison control center or doctor for treatment advice.
<b>Inhalation</b>	Give oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. Call a poison control center or doctor for further treatment advice.
<b>Ingestion</b>	Immediately call a poison center or doctor/physician. Do not induce vomiting, unless directed by medical personnel. Never give anything by mouth to an unconscious person.

#### Most important symptoms and effects

<b>Symptoms</b>	May be harmful in contact with skin. Direct contact with eyes may cause temporary irritation. Direct contact with skin can cause irritation or redness.
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#### Indication of any immediate medical attention and special treatment needed

<b>Notes to Physician</b>	Treat symptomatically.
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### 5. FIRE-FIGHTING MEASURES

#### Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Not determined.

#### Specific Hazards Arising from the Chemical

Product is water-based and will not burn. However, if the water in the product has evaporated, there is an explosion potential of the remaining solid if dust becomes airborne. The minimum ignition temperature for a dust cloud is 714°F (379°C).

**Hazardous Combustion Products** Nitrogen oxides (NOx). Other unidentified toxic and/or irritating compounds.

#### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate area of unprotected personnel. Remain upwind of fire to avoid hazardous vapors and decomposition products. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Closed containers may build up pressure and rupture if exposed to extreme heat. Cool exposed containers with water to prevent rupturing.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

<b>Personal Precautions</b>	Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.
<b>Environmental Precautions</b>	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

### Methods and material for containment and cleaning up

<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for Clean-Up</b>	Absorb with inert material or sweep up, and then place in suitable container for chemical waste.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

<b>Advice on Safe Handling</b>	Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face, hands, and any exposed skin thoroughly after handling. Wash contaminated clothing before reuse. Use in accordance with product label instructions. Do not eat, drink, smoke, or apply cosmetics while handling this product.
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### Conditions for safe storage, including any incompatibilities

<b>Storage Conditions</b>	Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep out of the reach of children. Keep/store only in original container. Keep away from food, drink and animal feeding stuffs. Store at ambient conditions.
<b>Incompatible Materials</b>	None known based on information supplied.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b><u>Exposure Guidelines</u></b>	The following information is given as general guidance
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### Appropriate engineering controls

<b>Engineering Controls</b>	Please refer to the product label. Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
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### Individual protection measures, such as personal protective equipment

<b>Eye/Face Protection</b>	Wear safety glasses with side shields (or goggles). Goggles are recommended.
<b>Skin and Body Protection</b>	Wear appropriate clothing to prevent repeated or prolonged skin contact. Wear long-sleeved shirt, long pants, and shoes plus socks. Use chemical resistant gloves, such as P.V.C., butyl-rubber, nitrile-rubber, or neoprene.
<b>Respiratory Protection</b>	NIOSH-approved respirator or mask in the absence of adequate ventilation.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling. Take off all contaminated clothing and wash it before reuse. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical State</b>	Liquid	<b>Odor</b>	Slight aromatic odor
<b>Appearance</b>	Bright orange opaque liquid	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Opaque Bright orange		
<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>	
<b>pH</b>	5.2-5.6		
<b>Melting Point/Freezing Point</b>	Not determined		
<b>Boiling Point/Boiling Range</b>	100 °C / 212 °F		
<b>Flash Point</b>	> 93 °C / > 200 °F		
<b>Evaporation Rate</b>	Not determined		
<b>Flammability (Solid, Gas)</b>	Liquid-not applicable		
<b>Upper Flammability Limits</b>	Not determined		
<b>Lower Flammability Limit</b>	Not determined		
<b>Vapor Pressure</b>	23 mmHg @ 25°C		
<b>Vapor Density</b>	Not determined		
<b>Specific Gravity</b>	1.138-1.239 @ 25°C		
<b>Water Solubility</b>	Miscible in water		
<b>Solubility in other solvents</b>	Not determined		
<b>Partition Coefficient</b>	Not determined		
<b>Auto-ignition Temperature</b>	Not determined		
<b>Decomposition Temperature</b>	Not determined		
<b>Kinematic Viscosity</b>	Not determined		
<b>Dynamic Viscosity</b>	Not determined		
<b>Explosive Properties</b>	Not determined		
<b>Oxidizing Properties</b>	Not determined		

## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions.

### Chemical Stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
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### Conditions to Avoid

Avoid evaporating to dryness.

### Incompatible Materials

None known based on information supplied.

### Hazardous Decomposition Products

Nitrogen oxides (NO<sub>x</sub>). Other potentially hazardous fumes.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Eye Contact</b>	Avoid contact with eyes.
<b>Skin Contact</b>	May be harmful in contact with skin.
<b>Inhalation</b>	Avoid breathing vapors or mists.
<b>Ingestion</b>	Do not ingest.

### Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Oryzalin 19044-88-3	= 10000 mg/kg ( Rat )	> 2 g/kg ( Rabbit )	-

### Information on physical, chemical and toxicological effects

**Symptoms** Please see section 4 of this SDS for symptoms.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Carcinogenicity** This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

### Product Information (Numerical measures of toxicity)

**Acute Oral LD50 (Rat):** >5,000 mg/kg

**Acute Dermal LD50 (Rabbit):** No data available

**Acute Inhalation LC50 (Rat):** No data available

**Eye Irritation:** Slightly irritating.

**Dermal Irritation:** Slightly irritating.

**Dermal Sensitization:** Not available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

This pesticide is toxic to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Cover or incorporate spills.

### Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Oryzalin 19044-88-3		3.26: 48 h Oncorhynchus mykiss mg/L LC50		

### Persistence/Degradability

Not determined.

### Bioaccumulation

Not determined.

### Mobility

Not determined

### Other Adverse Effects

Not determined

### 13. DISPOSAL CONSIDERATIONS

#### Waste Treatment Methods

<b>Disposal of Wastes</b>	Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.
<b>Contaminated Packaging</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.

### 14. TRANSPORT INFORMATION

<b><u>DOT</u></b>	Non-bulk packages (less than 119 gal/ 450 liters): Not Regulated
	Bulk packages (greater than 119 gal/ 450 liters):
<b>UN/ID No</b>	UN3077
<b>Proper Shipping Name</b>	Environmentally Hazardous Substance, liquid, N.O.S. (Oryzalin)
<b>Hazard Class</b>	9
<b>Packing Group</b>	III
<b>Marine Pollutant</b>	Yes
<b><u>IATA</u></b>	
<b>UN/ID No</b>	UN3077
<b>Proper Shipping Name</b>	Environmentally Hazardous Substance, liquid, N.O.S. (Oryzalin)
<b>Hazard Class</b>	9
<b>Packing Group</b>	III
<b>Marine Pollutant</b>	Yes
<b><u>IMDG</u></b>	
<b>UN/ID No</b>	UN3077
<b>Proper Shipping Name</b>	Environmentally Hazardous Substance, liquid, N.O.S. (Oryzalin)
<b>Hazard Class</b>	9
<b>Packing Group</b>	III
<b>Marine Pollutant</b>	Yes

### 15. REGULATORY INFORMATION

#### International Inventories

**TSCA** All ingredients are listed or exempt from listing on Chemical Substance Inventory

**Legend:**

*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*

#### US Federal Regulations

#### SARA 311/312 Hazard Categories

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

#### SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Oryzalin - 19044-88-3	19044-88-3	41.61-44.19	1.0

**US State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Oryzalin - 19044-88-3	Carcinogen

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Oryzalin 19044-88-3	X		
Proprietary Additive	X		X

**EPA Pesticide Registration Number** 66222-138**EPA Statement**

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:

**EPA Pesticide Label**

Signal Word: Caution

**Difference between SDS and EPA pesticide label**

	EPA	OSHA
<b>Signal Word</b>	Caution	N/A
Acute toxicity - Dermal	N/A	May be harmful in contact with skin

**16. OTHER INFORMATION**

<b><u>NFPA</u></b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Instability</b>	<b>Special Hazards</b>
	2	0	0	None
<b><u>HMIS</u></b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Physical Hazards</b>	<b>Personal Protection</b>
	2	0	0	See section 8

**Issue Date:** 11-May-2009  
**Revision Date:** 22-Sept-2015  
**Revision Note:** Updated format from 01-Oct-2014

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**