



# Safety Data Sheet

Issue Date: 23-Jan-2012

Revision Date: 03-Sept-2015

Version 2

## 1. IDENTIFICATION

### Product Identifier

Product Name

**Paradigm**

### Other means of identification

SDS #

ADAMA-008

Registration Number(s)

EPA Reg. No. 66222-223

### 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. (DBA: 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.

**Appearance** Light yellow liquid

**Physical State** Liquid

**Odor** Mild organic

### Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 2
Skin Sensitization	Category 1

### Hazards Not Otherwise Classified (HNOC)

May be harmful in contact with skin  
Causes mild skin irritation

### Signal Word

**Danger**

**Hazard Statements**

Harmful if swallowed

Fatal if inhaled

May cause an allergic skin reaction

**Precautionary Statements - Prevention**

Use personal protective equipment as required

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Do not breathe dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

Wear respiratory protection

Contaminated clothing must not be allowed out of the workplace

**Precautionary Statements - Response**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a poison center or doctor/physician

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Rinse mouth

IF ON SKIN: Wash with plenty of soap and water

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

**Precautionary Statements - Storage**

Store locked up

Store in a well-ventilated place. Keep container tightly closed

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other Hazards**

Very toxic to aquatic life with long lasting effects

<b>3. COMPOSITION/INFORMATION ON INGREDIENTS</b>
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Chemical Name	CAS No	Weight-%
Methyl oleate	112-62-9	65.8-69.9
Cyhalothrin, lambda-	91465-08-6	12.5-13.78
Proprietary Solvent	Proprietary	1.5-1.67

\*\*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.\*\*

<b>4. FIRST-AID MEASURES</b>
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**First Aid Measures****General Advice**

When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention if adverse effect occurs.
<b>Skin Contact</b>	Take off immediately all contaminated clothing. Drench affected area with water for at least 15 minutes. If skin irritation occurs: Get medical advice/ attention. Effects may be reduced by applying an oil-based cream.
<b>Inhalation</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. Seek immediate medical attention/advice.
<b>Ingestion</b>	Immediately call a poison center or doctor/physician. DO NOT induce vomiting. If conscious, drink 8-10 oz. of water promptly. Never give anything by mouth to an unconscious person. Obtain medical attention. Do not induce vomiting unless directed by medical personnel.

**Most important symptoms and effects**

<b>Symptoms</b>	Contact with skin can cause irritation, (minor itching, burning and/or redness), tingling. May cause an allergic skin reaction.
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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**

Foam. Dry chemical. Water spray (fog). Foam or dry chemical systems are preferred to prevent environmental damage from excessive water runoff.

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

Product is not flammable.

**Hazardous Combustion Products** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**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.

**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. Stop spill at source, dike area of spill to prevent spreading.
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**Methods for Clean-Up**

For small spills, absorb with sand, clay, or other inert absorbent. Place in appropriate containers for disposal. For large spills: recover free product. Dike for later disposal. Absorb with inert material, and then place in suitable container for chemical waste. Wash spill area with a strong detergent and water solution; rinse with water, but minimize water use during clean-up. Do not flush to sewer. Pick up and transfer to properly labeled containers.

## 7. HANDLING AND STORAGE

**Precautions for safe handling****Advice on Safe Handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment. Keep containers closed when not in use. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product.

**Conditions for safe storage, including any incompatibilities****Storage Conditions**

Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep out of the reach of children. Store away from incompatible materials. Keep/store only in original container. Store locked up. Store at ambient conditions. Protect from freezing.

**Incompatible Materials**

None known.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

**Appropriate engineering controls****Engineering Controls**

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.

**Individual protection measures, such as personal protective equipment****Eye/Face Protection**

Use splash goggles or face shield when contact may occur.

**Skin and Body Protection**

Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Viton or other impervious gloves are required. Long sleeve shirt, trousers, and safety shoes.

**Respiratory Protection**

Ensure adequate ventilation, especially in confined areas. Wear an appropriate NIOSH/MSHA approved respirator if ventilation is inadequate.

**General Hygiene Considerations**

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. Wash at the end of each work shift and before eating, smoking or using the toilet. Promptly remove clothing that becomes contaminated. Discard contaminated leather articles. Launder or discard contaminated clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical State</b>	Liquid	<b>Odor</b>	Mild organic
<b>Appearance</b>	Light yellow liquid	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Light yellow		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	4.8	(1% dispersion)
<b>Melting Point/Freezing Point</b>	Not determined	
<b>Boiling Point/Boiling Range</b>	Not determined	
<b>Flash Point</b>	> 110 °C / > 230 °F	
<b>Evaporation Rate</b>	Not determined	
<b>Flammability (Solid, Gas)</b>	Liquid-not applicable	
<b>Upper Flammability Limits</b>	Not applicable	
<b>Lower Flammability Limit</b>	Not applicable	
<b>Vapor Pressure</b>	Not determined	
<b>Vapor Density</b>	Not determined	
<b>Specific Gravity</b>	Not determined	
<b>Water Solubility</b>	Not determined	
<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>	12.0 centipoise @ 23°C; 7.63 centipoise @ 39°C	
<b>Explosive Properties</b>	Not determined	
<b>Oxidizing Properties</b>	Not determined	
<b>Bulk Density</b>	0.94 g/ml	

## 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.

**Hazardous Polymerization**      Not known to occur.

### Conditions to Avoid

Contact with incompatible materials. Keep out of reach of children. Excessive heat and freezing temperature. Open flames. See Sec. 7 Handling & Storage.

### Incompatible Materials

None known.

### Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

<b>Eye Contact</b>	Avoid contact with eyes.
<b>Skin Contact</b>	Causes mild skin irritation. May be harmful in contact with skin.
<b>Inhalation</b>	Fatal if inhaled.
<b>Ingestion</b>	Harmful if swallowed.

### Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Methyl oleate 112-62-9	> 2000 mg/kg ( Rat )	> 5000 mg/kg ( Rabbit )	-
Cyhalothrin, lambda- 91465-08-6	= 56 mg/kg ( Rat )	= 632 mg/kg ( Rat )	-
Proprietary Solvent	1516 - 2774 mg/kg ( Rat )	-	-

### 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** Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Skin Sensitization** May cause an allergic skin reaction

### Product Information (Numerical measures of toxicity)

**Acute Oral LD50 (Rat):** 1,530 mg/kg

**Acute Dermal LD50 (Rabbit):** >10,000 mg/kg

**Acute Inhalation LC50 (Rat):** >2.14 mg/L (4-hr)

**Eye Irritation:** Moderately irritating.

**Dermal Irritation:** Mildly irritating.

**Dermal Sensitization:** May cause an allergic skin reaction.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. Do not apply this product directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate. This product may contaminate water through drift or spray in wind. This product has a potential for runoff for several days to weeks after application. Poorly draining soil with shallow water tables is more prone to produce runoff. A level, well maintained vegetative (grass) buffer strip between areas to which this product is applied and the surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

**Component Information**

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Proprietary Solvent	11.5: 72 h Desmodesmus subspicatus mg/L EC50	32 - 37: 96 h Oncorhynchus mykiss mg/L LC50 static 7.5: 96 h Oncorhynchus mykiss mg/L LC50 27 - 29.5: 96 h Pimephales promelas mg/L LC50 flow-through 29.7: 96 h Pimephales promelas mg/L LC50 static 10.0 - 33.0: 96 h Lepomis macrochirus mg/L LC50 static		39: 48 h Daphnia magna mg/L EC50

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

Not determined.

**Mobility**

Chemical Name	Partition Coefficient
Proprietary Solvent	3.1

**Other Adverse Effects**

Not determined

**13. DISPOSAL CONSIDERATIONS****Waste Treatment Methods****Disposal of Wastes**

Do not contaminate water, food, or feed by storage or disposal. END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS. PRODUCT DISPOSAL: Pesticide spray mixture or rinsate that cannot be used should be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Contaminated Packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**California Hazardous Waste Status**

Chemical Name	California Hazardous Waste Status
Cyhalothrin, lambda-91465-08-6	Toxic

**14. TRANSPORT INFORMATION****DOT**

Note: Packages with inner packaging not over 5 liters (1.3 gallons) each may be reclassified as Limited Quantity.

Inner packages greater than 5L/ 1.3 gal:

<b>UN/ID No</b>	UN3352
<b>Proper Shipping Name</b>	Pyrethroid pesticide, liquid, toxic
<b>Hazard Class</b>	6.1
<b>Packing Group</b>	III
<b>Marine Pollutant</b>	Yes, if inner package greater than 119 gals

**IATA**

UN/ID No UN3352  
 Proper Shipping Name Pyrethroid pesticide, liquid, toxic  
 Hazard Class 6.1  
 Packing Group III  
 Marine Pollutant Yes

**IMDG**

UN/ID No UN3352  
 Proper Shipping Name Pyrethroid pesticide, liquid, toxic  
 Hazard Class 6.1  
 Packing Group III  
 Marine Pollutant Yes

**15. REGULATORY INFORMATION****International Inventories**

TSCA Listed

**Legend:**

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

*DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List*

*EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

*ENCS - Japan Existing and New Chemical Substances*

*IECSC - China Inventory of Existing Chemical Substances*

*KECL - Korean Existing and Evaluated Chemical Substances*

*PICCS - Philippines Inventory of Chemicals and Chemical Substances*

**US Federal Regulations****SARA 311/312 Hazard Categories**

Acute Health Hazard Yes  
 Chronic Health Hazard No  
 Fire Hazard No  
 Sudden Release of Pressure Hazard No  
 Reactive Hazard No

**SARA 313**

Not determined

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

This product does not contain any Proposition 65 chemicals.

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

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Proprietary Solvent		X	X

**EPA Pesticide Registration Number** 66222-223

**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

Harmful if swallowed or absorbed through the skin. Causes moderate eye irritation. 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. Wear appropriate protective clothing.

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Skin exposure may also result in a sensation described as tingling, itching, burning, or prickly feeling. Onset may occur immediately to 4 hours after exposure and may last 2-30 hours, without damage. Wash exposed areas once with soap and water. Relief from the skin sensation may be obtained by applying an oil based cream.

**Difference between SDS and EPA pesticide label**

	<b>EPA</b>	<b>OSHA</b>
<b>Signal Word</b>	Caution	Danger
Acute toxicity - Oral	Harmful if swallowed	Harmful if swallowed
Acute toxicity - Dermal	Harmful if absorbed through the skin	May be harmful in contact with skin
Acute toxicity - Inhalation (Dusts/Mists)	N/A	Fatal if inhaled
Skin corrosion/irritation	N/A	Causes mild skin irritation
Serious eye damage/eye irritation	Causes moderate eye irritation	N/A
Skin sensitization	Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals	May cause an allergic skin reaction

**16. OTHER INFORMATION****NFPA****Health Hazards**

1

**Flammability**

0

**Instability**

0

**Special Hazards**

None

**HMIS****Health Hazards**

1

**Flammability**

0

**Physical Hazards**

0

**Personal Protection**

See section 8

**Issue Date:**

23-Jan-2012

**Revision Date:**

03-Sept-2015

**Revision Note:**

Updated format from 29-Apr-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 a 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**