1. IDENTIFICATION

**Product Identifier**
Product Name

**ATRAZINE 4L**

**Other means of identification**

**SDS #** ADAMA-048

**Registration Number(s)** EPA Reg. No. 66222-36

**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.

**Appearance** White liquid

**Physical State** Liquid

**Odor** Faint odor

**Classification**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Oral</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation (Dusts/Mists)</td>
<td>Category 4</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Category 2</td>
</tr>
<tr>
<td>Flammable Liquids</td>
<td>Category 4</td>
</tr>
</tbody>
</table>

**Hazard Not Otherwise Classified (HNOC)**

May be harmful in contact with skin

**Signal Word**

**Warning**
Hazard Statements
Harmful if swallowed
Harmful if inhaled
May cause damage to organs through prolonged or repeated exposure
Combustible liquid

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Keep away from flames and hot surfaces. - No smoking.
Keep cool

Precautionary Statements - Response
Get medical advice/attention if you feel unwell
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
If INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a poison center or doctor/physician if you feel unwell
If SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other Hazards
Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrazine</td>
<td>1912-24-9</td>
<td>41.61-44.19</td>
</tr>
<tr>
<td>Proprietary Solvent</td>
<td>Proprietary</td>
<td>&lt;6</td>
</tr>
<tr>
<td>Proprietary Additive</td>
<td>Proprietary</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

**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

**General Advice**
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.

**Eye Contact**
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.

**Skin Contact**
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.

**Inhalation**
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.

**Ingestion**
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. If conscious, give 1 glass of water to dilute.

**Most important symptoms and effects**

**Symptoms**
Mild eye, skin, and/or respiratory irritation. May cause an allergic skin reaction. Ingestion may cause irritation of the gastrointestinal tract, cramps, vomiting or diarrhea. Ingestion may cause nausea and headache.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician**
Treat symptomatically. If ingested, induce emesis or lavage stomach.

5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**
Foam. Carbon dioxide (CO2). Dry chemical.

**Unsuitable Extinguishing Media**
Not determined.

**Specific Hazards Arising from the Chemical**
Combustible liquid.

**Hazardous Combustion Products**
May include and are not limited to oxides of carbon. Hydrogen cyanide. Acetonitrile.

**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**

**Personal Precautions**
Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

**Environmental Precautions**
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

Methods for Containment
Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up
Reclaim where possible. Vacuum or sweep up material and place in a disposal container. Wash area with soap and water. Pick up wash liquid with inert absorbent and place in a chemical waste container for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling
Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Do not breathe vapors or spray mist. Wash face, hands, and any exposed skin thoroughly after handling. Wash contaminated clothing before reuse. Do not eat, drink, smoke, or apply cosmetics while handling this product. Use only in well-ventilated areas. Follow all SDS/label precautions even after container is emptied, because it may retain product residues. Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

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. Keep/store only in original container. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment. Store at ambient conditions. Store locked up. Protect from freezing. Store above -5°C (23°F).

Incompatible Materials
None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrazine 1912-24-9</td>
<td>TWA: 5 mg/m³</td>
<td>(vacated) TWA: 5 mg/m³</td>
<td>TWA: 5 mg/m³</td>
</tr>
<tr>
<td>Proprietary Solvent</td>
<td>Ceiling: 100 mg/m³ aerosol only</td>
<td>(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m³</td>
<td>-</td>
</tr>
</tbody>
</table>

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
Wear safety glasses with side shields (or goggles). Goggles are recommended.

Skin and Body Protection
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.

Respiratory Protection
NIOSH-approved respirator or mask in the absence of adequate ventilation.
9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>White liquid</td>
<td>Odor</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
<td>Odor Threshold</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6-8.7@25°C</td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 93 °C / &gt; 200 °F</td>
<td>TCC</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Liquid-not applicable</td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limit</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.103</td>
<td></td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not determined</td>
<td></td>
</tr>
</tbody>
</table>

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
Hazardous polymerization does not occur.

Conditions to Avoid
Keep out of reach of children. Keep from freezing. See Sec. 7 Handling & Storage.

Incompatible Materials
None known based on information supplied.

Hazardous Decomposition Products
11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact
Avoid contact with eyes.

Skin Contact
May be harmful in contact with skin.

Inhalation
Harmful if inhaled.

Ingestion
Harmful if swallowed.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrazine 1912-24-9</td>
<td>= 672 mg/kg (Rat)</td>
<td>&gt; 2000 mg/kg (Rat)</td>
<td>= 5200 mg/m³ (Rat) 4 h &gt; 5.1 mg/L (Rat) 4 h</td>
</tr>
<tr>
<td>Proprietary Solvent</td>
<td>= 4000 mg/kg (Rat)</td>
<td>= 9530 µL/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>Proprietary Additive</td>
<td>= 1020 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

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
Not classifiable as a human carcinogen.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrazine 1912-24-9</td>
<td></td>
<td>Group 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend
IARC (International Agency for Research on Cancer)
Group 3 IARC components are "not classifiable as human carcinogens"

STOT - repeated exposure
May cause damage to organs through prolonged or repeated exposure.

Product Information (Numerical measures of toxicity)
Acute Oral LD50 (Rat): 972 mg/kg (females) 1,000-3,000 mg/kg (males)
Acute Dermal LD50 (Rabbit): >5,000 mg/kg
Acute Inhalation LC50 (Rat): >2.13 mg/L (4-hr)
Eye Irritation: Mildly irritating.
Dermal Irritation: Non-irritating.
Dermal Sensitization: Not a contact skin sensitizer.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Very toxic to aquatic life with long lasting effects. Atrazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.
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 high 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 waters.
### Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrazine 1912-24-9</td>
<td>0.03: 72 h Desmodesmus subspicatus mg/L EC50 0.014 - 0.027: 96 h Desmodesmus subspicatus mg/L EC50 semi-static 0.072: 72 h Desmodesmus subspicatus mg/L EC50 static 0.13: 96 h Pseudokirchneriella subcapitata mg/L EC50 0.004: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 0.0096 - 0.07: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 0.0929: 72 h Pseudokirchneriella subcapitata mg/L EC50 semi-static</td>
<td>4.5 - 11: 96 h Oncorhynchus mykiss mg/L LC50 3 - 6.75: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 3 - 6.75: 96 h Oncorhynchus mykiss mg/L LC50 static 16: 96 h Lepomis macrochirus mg/L LC50 8: 96 h Lepomis macrochirus mg/L LC50 flow-through 23.999: 96 h Lepomis macrochirus mg/L LC50 semi-static 19: 96 h Lepomis macrochirus mg/L LC50 static 15.7 - 20.2: 96 h Lepomis macrochirus mg/L LC50 static 4.1: 96 h Pimephales promelas mg/L LC50 static 4.3: 96 h Poecilia reticulata mg/L LC50 static</td>
<td>EC50 &gt; 86 mg/L 5 min</td>
<td>5.2 - 8.1: 48 h Daphnia magna mg/L EC50 Static</td>
</tr>
<tr>
<td>Proprietary Solvent</td>
<td>6500 - 13000: 96 h Pseudokirchneriella subcapitata mg/L EC50</td>
<td>41000: 96 h Oncorhynchus mykiss mg/L LC50 14 - 18: 96 h Oncorhynchus mykiss mg/L LC50 static 27540: 96 h Lepomis macrochirus mg/L LC50 static 40761: 96 h Oncorhynchus mykiss mg/L LC50 static 40000 - 60000: 96 h Pimephales promelas mg/L LC50 static 16000: 96 h Poecilia reticulata mg/L LC50 static</td>
<td>EC50 = 10000 mg/L 16 h EC50 = 620 mg/L 30 min EC50 = 620.0 mg/L 30 min</td>
<td>46300: 48 h Daphnia magna mg/L EC50</td>
</tr>
</tbody>
</table>

### Persistence/Degradability
Not determined.

### Bioaccumulation
Not determined.

### Mobility

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrazine 1912-24-9</td>
<td>2.59</td>
</tr>
<tr>
<td>Proprietary Solvent</td>
<td>-1.93</td>
</tr>
<tr>
<td>Proprietary Additive</td>
<td>1.3</td>
</tr>
</tbody>
</table>

### Other Adverse Effects
Not determined
13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes
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.

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

14. TRANSPORT INFORMATION

DOT
Not regulated

IATA
UN 3082, Environmentally hazardous substance, liquid, n.o.s. (Atrazine), 9, PG III

IMDG
UN 3082, Environmentally hazardous substance, liquid, n.o.s. (Atrazine), 9, PG III, Marine Pollutant

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

CERCLA

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proprietary Solvent</td>
<td>5000 lb</td>
<td></td>
<td>RQ 5000 lb final RQ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RQ 2270 kg final RQ</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

SARA 313

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrazine - 1912-24-9</td>
<td>1912-24-9</td>
<td>41.61-44.19</td>
<td>1.0</td>
</tr>
<tr>
<td>Proprietary Solvent</td>
<td>-</td>
<td>5.13-5.67</td>
<td>1.0</td>
</tr>
</tbody>
</table>

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
EPA Pesticide Registration Number 66222-36

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. Do not breathe vapors or spray mist. Avoid contact with eyes, skin, or clothing

<table>
<thead>
<tr>
<th>Difference between SDS and EPA pesticide label</th>
<th>EPA</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Signal Word</strong></td>
<td>Caution</td>
<td>Warning</td>
</tr>
<tr>
<td>Acute toxicity - Oral</td>
<td>Harmful if swallowed</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>Acute toxicity - Dermal</td>
<td>N/A</td>
<td>May be harmful in contact with skin</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation</td>
<td>N/A</td>
<td>Harmful if inhaled</td>
</tr>
<tr>
<td>STOT - repeated exposure</td>
<td>N/A</td>
<td>May cause damage to organs through prolonged or repeated exposure</td>
</tr>
</tbody>
</table>

### 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazards</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
<td>See section 8</td>
</tr>
</tbody>
</table>

Issue Date: 11-Oct-2013
Revision Date: 03-May-2017
Revision Note: Updated format and Section 14 from 26-Oct-2015

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