1. IDENTIFICATION

Product Identifier
Product Name

Quali-Pro TM 4.5

Other means of identification
SDS #

ADAMA-028A1

Registration Number(s)
UN/ID No

EPA Reg. No. 66222-134
UN3082

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

Off-white, opaque viscous liquid

Physical State

Liquid

Odor

No odor

Classification

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Inhalation (Dusts/Mists)</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute toxicity – Oral</td>
<td>Category 4</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

Signal Word

Warning

Hazard Statements

Harmful if inhaled
Harmful if swallowed
Suspected of causing genetic defects
Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Avoid breathing dust/fume/gas/mist/vapors/spray
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

Precautionary Statements - Response
If exposed or concerned: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF SWALLOWED: Call a poison center/doctor if you feel unwell
Rinse mouth

Precautionary Statements - Storage
Store locked up

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>Thiophanate-methyl</td>
<td>23564-05-8</td>
<td>45.27-48-07</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
IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye Contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Wash skin with soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give
oxxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration.
Call a physician if you feel unwell.

Ingestion
Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth
to an unconscious person. Do not induce vomiting without medical advice. Immediately call
a poison center or doctor/physician.

Most important symptoms and effects

Symptoms
May cause an allergic skin reaction. Harmful if inhaled.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Unsuitable Extinguishing Media
Not determined.

Specific Hazards Arising from the Chemical
Product is not flammable.

Hazardous Combustion Products
None known.

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

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
Cover liquid spill with sand, earth or other non-combustible absorbent material. Sweep up
and shovel into suitable containers for disposal. Dispose of in accordance with federal,
state and local regulations.
7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling
Handle in accordance with good industrial hygiene and safety practice. 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. Avoid contact with skin, eyes or clothing. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Contaminated work clothing should not be allowed out of the workplace.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed and store in a cool, dry and well-ventilated place. Do not contaminate water, food, or feed by storage or disposal. Keep/store only in original container. Protect container from physical damage. Store at ambient conditions. Store locked up.

Packaging Materials
Do not reuse container.

Incompatible Materials
None known based on information supplied.

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
Wear safety glasses with side shields (or goggles).

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.

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Off-white, opaque viscous liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>No odor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Off-white/opaque</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>5.0-6.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>~ 100 °C / ~212 °F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Liquid-not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>Not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>Not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.1652</td>
<td>(1=Water)</td>
<td></td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Dispersible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulk Density</td>
<td>1.62 g/ml (9.69 lb/gal)</td>
<td></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. Contamination.

Incompatible Materials
None known based on information supplied.

Hazardous Decomposition Products
None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact
Avoid contact with eyes.
Skin Contact  Avoid 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>Thiophanate-methyl</td>
<td>6640 mg/kg (Rat)</td>
<td>&gt; 10 g/kg (Rat) &gt; 10 g/kg (Rabbit)</td>
<td>1700 mg/m³ (Rat) 4 h</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

Germ cell mutagenicity  Suspected of causing genetic defects.

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): 1,752 mg/kg
Acute Dermal LD50 (Rabbit): >2,000 mg/kg
Acute Inhalation LC50 (Rat): >2.02 mg/L (4-hr)

Eye Irritation: Minimally irritating.
Dermal Irritation: Non-irritating.
Dermal Sensitization: Not a skin sensitizer

12. ECOLOGICAL INFORMATION

Ecotoxicity
Very toxic to aquatic life with long lasting effects. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water.

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>Thiophanate-methyl</td>
<td></td>
<td>7.8: 48 h Oncorhynchus mykiss mg/L LC50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistence/Degradability  Not determined.

Bioaccumulation  Not determined.

Mobility  Not determined.

Other Adverse Effects  Not determined.
13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS.

Pesticide wastes are acutely hazardous. 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 at the nearest EPA Regional Office for guidance.

Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

Contaminated Packaging

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

US EPA Waste Number

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>RCRA</th>
<th>RCRA - Basis for Listing</th>
<th>RCRA - D Series Wastes</th>
<th>RCRA - U Series Wastes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiophanate-methyl</td>
<td>U409</td>
<td></td>
<td></td>
<td>U409</td>
</tr>
<tr>
<td>23564-05-8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT

Package size less than 2.3 gallons: Not regulated

Package larger than 2.3 Gallons:

<table>
<thead>
<tr>
<th>UN/ID No</th>
<th>UN3082</th>
</tr>
</thead>
</table>

Proper Shipping Name

Environmentally hazardous substance, liquid, n.o.s. (Thiophanate-methyl) RQ, Marine pollutant.

Hazard Class

9

Packing Group

III

Reportable Quantity (RQ)

RQ = 10 lb

IATA

Not regulated

IMDG

Basic Description

UN 3082, Environmentally hazardous Substance N.O.S., liquid, 9, PG III, Marine Pollutant

This material may meet the definition of a 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>Thiophanate-methyl</td>
<td>10 lb</td>
<td></td>
<td>RQ 10 lb final RQ</td>
</tr>
<tr>
<td>23564-05-8</td>
<td></td>
<td></td>
<td>RQ 4.54 kg final RQ</td>
</tr>
</tbody>
</table>
SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>No</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>Thiophanate-methyl - 23564-05-8</td>
<td>23564-05-8</td>
<td>45.27-48-07</td>
<td>1.0</td>
</tr>
</tbody>
</table>

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiophanate-methyl - 23564-05-8</td>
<td>Female Reproductive</td>
</tr>
<tr>
<td></td>
<td>Male Reproductive</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiophanate-methyl - 23564-05-8</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

EPA Pesticide Registration Number  EPA Reg. No. 66222-134

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

<table>
<thead>
<tr>
<th></th>
<th>EPA</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal Word</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>Harmful if absorbed through the skin</td>
<td>N/A</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation</td>
<td>Harmful if inhaled</td>
<td>Harmful if inhaled</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>N/A</td>
<td>Suspected of causing genetic defects</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></td>
<td>1</td>
<td>0</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>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td>See section 8</td>
</tr>
</tbody>
</table>

Issue Date: 24-Feb-2011
Revision Date: 09-Oct-2015
Revision Note: Updated format from 30-Jun-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