Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Apollo 50 SC

Synonyms
Clofentezine 500 SC
Pure substance/mixture
Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use
Acaricide
Uses advised against
No information available

1.3. Details of the supplier of the safety data sheet

Supplier Address
ADAMA Agricultural Solutions UK Ltd
Unit 15, Thatcham Business Village Colthrop Way,
Thatcham Berkshire RG19 4LW, UK : 01635 860555
Fax: 01635 861555

For further information, please contact
Email address
ukenquiries@adama.com

1.4. Emergency telephone number

Emergency Telephone
National Chemical Emergency Centre (UK):
Tel: 01865 407333 (24 hours)

Section 2: HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hazardous to the Aquatic
Category 2 - (H411)
Environment - Chronic Hazard

Classification according to Directive 67/548/EEC or 1999/45/EC
Full text of R-phrases: see section 16
R52-53

2.2. Label elements
Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms

Signal word

none

Hazard Statements

H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements

P102 - Keep out of reach of children
P501 - Dispose of contents/container to an approved waste disposal plant

EU Specific Hazard Statements

EUH401 - To avoid risks to human health and the environment, comply with the instructions for use
EUH208 - Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction

Additional phrases for PPP

SP1 - Do not contaminate water with the product or its container

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Weight-%</th>
<th>CAS No</th>
<th>EC No</th>
<th>Index No</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
<th>Classification according to 67/548/EEC</th>
<th>M-Factor</th>
<th>REACH Registration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clofentezine</td>
<td>41 - 45</td>
<td>74115-24-5</td>
<td>277-728-2</td>
<td>-</td>
<td>Aquatic Chronic 3 (H412)</td>
<td>R52-53</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Full text of R- and H-phrases: see section 16
Full text of EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). First aider: Pay attention to self-protection!

Inhalation

Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.

Eye contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

Ingestion

Do NOT induce vomiting. Rinse mouth. Drink plenty of water. If symptoms persist, call a physician.
Self-protection of the first aider: Use personal protective equipment as required.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms: None known

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians: Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

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

Unsuitable Extinguishing Media
No information available.

5.2. Special hazards arising from the substance or mixture

No specific hazard known.

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus
In the event of fire and/or explosion do not breathe fumes

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Use only with adequate ventilation.

For emergency responders
Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up
Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

Other Information
See also section 8,13

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling
Use only with adequate ventilation.
General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Risk Management Methods (RMM)
The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Derived No Effect Level (DNEL) No information available
Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Controls
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment
Eye/face protection Tight sealing safety goggles.
Body Protection Suitable protective clothing.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical state</td>
<td>suspension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>dark red</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Slight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.7 - 7.7</td>
<td>CIPAC MT 75</td>
<td>solution (1 %)</td>
</tr>
<tr>
<td>Melting point/freezing point °C</td>
<td>----</td>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Boiling point/boiling range °C</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point °C</td>
<td>&gt; 120.5</td>
<td>EEC A.9</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>----</td>
<td></td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable for liquids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor pressure kPa</td>
<td>----</td>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td>1.15 - 1.25</td>
<td>OECD 109</td>
<td></td>
</tr>
<tr>
<td>Solubility(ies) mg/l</td>
<td>----</td>
<td></td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
Section 10: STABILITY AND REACTIVITY

10.1. Reactivity
Not available.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
None under normal processing.

10.4. Conditions to avoid
Heat, flames and sparks.

10.5. Incompatible materials
No information available

10.6. Hazardous decomposition products
None under normal use conditions.

Section 11: TOXICOLOGY INFORMATION

11.1. Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th></th>
<th>Values</th>
<th>Species</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50 mg/kg</td>
<td>&gt; 5000</td>
<td>Rat</td>
<td>OECD 423</td>
<td></td>
</tr>
<tr>
<td>Dermal LD50 mg/kg</td>
<td>&gt; 5000</td>
<td>Rat</td>
<td>OECD 402</td>
<td></td>
</tr>
<tr>
<td>Inhalation LC50 mg/l/4h</td>
<td>----</td>
<td></td>
<td></td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Non-irritating to the skin
Serious eye damage/eye irritation: Not irritating to eyes
Respiratory/skin sensitization: Not a skin sensitizer

Chronic toxicity

Germ cell mutagenicity
Chemical Name: Clofentezine: Not classified

Carcinogenicity
Chemical Name:  

Partition Coefficient (n-octanol/water) Log Pow: See Section 12 for more information
Autoignition temperature °C: 334 EEC A.15
Decomposition temperature °C: No data available
Kinematic viscosity mm2/s 40 °C: 83 - 555 OECD 114
Explosive properties: Not an explosive EEC A.14
Oxidizing properties: Not oxidizing EEC A.21

9.2. Other information
Bulk density g/ml: ---- Not Applicable
Surface tension mN/m: 54 EEC A.5
Clofentezine: Not Carcinogenic

Reproductive toxicity.
Chemical Name
Clofentezine: Not classified

STOT - single exposure
Chemical Name
Clofentezine: No data available

STOT - repeated exposure
Chemical Name
Clofentezine: No data available

Aspiration hazard
Chemical Name
Clofentezine: No data available

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Aquatic toxicity

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Values</th>
<th>Species</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish 96-hour LC50 mg/l</td>
<td>&gt; 20</td>
<td>Oncorhynchus mykiss</td>
<td>USA EPA, FIFRA E, 72-1</td>
<td></td>
</tr>
<tr>
<td>Crustacea 48-hour EC50 mg/l</td>
<td>&gt; 200</td>
<td>Daphnia magna</td>
<td>OECD 202</td>
<td></td>
</tr>
<tr>
<td>Algae 72-hour EC50 mg/l</td>
<td>&gt; 80</td>
<td>Selenastrum capricornutum</td>
<td>OECD 201</td>
<td></td>
</tr>
<tr>
<td>Other plants EC50 mg/l</td>
<td>----</td>
<td></td>
<td></td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Terrestrial Toxicity

Birds Oral LD50 mg/kg
Chemical Name
Clofentezine: > 3000 Mallard duck US EPA 71-1

Bees Oral LD50 μg/bee
Chemical Name
Clofentezine: > 252.6 EPPO 170

12.2. Persistence and degradability

Abiotic Degradation

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water DT50 days</td>
<td>9.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil DT50 days</td>
<td>63.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Biodegradation
Chemical Name
Clofentezine: Not readily biodegradable

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition Coefficient (n-octanol/water) Log Pow</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Clofentezine: 3.1

### 12.4. Mobility in soil

<table>
<thead>
<tr>
<th>Adsorption/Desorption</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clofentezine</td>
<td>248</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB

### 12.6. Other adverse effects

No information available.

---

### Section 13: DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

- **Waste from residues/unused products**: Disposal should be in accordance with applicable regional, national and local laws and regulations.
- **Contaminated packaging**: Improper disposal or reuse of this container may be dangerous and illegal.
- **Other Information**: Waste codes should be assigned by the user based on the application for which the product was used.

---

### Section 14: TRANSPORTATION INFORMATION

#### IMDG/IMO

- **14.1 UN/ID No**: 3082
- **14.2 Proper shipping name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
- **14.3 Hazard Class**: 9
- **14.4 Packing Group**: III
- **14.5 Marine pollutant**: Yes
- **14.6 Special precautions for user**: 

#### RID/ADR

- **14.1 UN/ID No**: 3082
- **14.2 Proper shipping name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
- **14.3 Hazard Class**: 9
- **14.4 Packing Group**: III
- **14.5 Environmental hazard**: Yes
- **14.6 Special precautions for user**: 

#### ICAO/IATA

- **14.1 UN/ID No**: 3082
- **14.2 Proper shipping name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
- **14.3 Hazard Class**: 9
- **14.4 Packing Group**: III
- **14.5 Environmental hazard**: Yes
- **14.6 Special precautions for user**: 

---
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Section 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical safety assessment
A chemical safety assessment according to regulation (EC) No. 1907/2006 is not required. A risk assessment was performed according to directive (EC) No. 91/414 or according to regulation (EC) No. 1107/2009.

Section 16: OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3
R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Full text of H-Statements referred to under sections 2 and 3
H411 - Toxic to aquatic life with long lasting effects
H412 - Harmful to aquatic life with long lasting effects

Revision Note
*** - Change from previous version.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer
The information provided in this Material 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