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

1.1. Product identifier

THROTTLE
Pure substance/mixture \( \Rightarrow \) Mixture

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

Recommended Use \( \Rightarrow \) Fungicide
Uses advised against \( \Rightarrow \) No information available

1.3. Details of the supplier of the safety data sheet

Supplier Address \( \Rightarrow \)
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 \( \Rightarrow \) ukenquiries@adama.com***

1.4. Emergency telephone number

Emergency Telephone \( \Rightarrow \)
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]
Acute toxicity - Oral \( \Rightarrow \) Category 4 - (H302)
Serious eye damage/eye irritation \( \Rightarrow \) Category 2 - (H319)
Reproductive Toxicity \( \Rightarrow \) Category 2 - (H361d)
Acute aquatic toxicity \( \Rightarrow \) Category 1 - (H400)
Hazardous to the Aquatic \( \Rightarrow \) Category 1 - (H410)
Environment - Chronic Hazard

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

Xn;R22 - Xi;R36 - Repr. cat. 3;R63 - N;R50-53
2.2. Label elements

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

Hazard pictograms

![Hazard pictograms]

Signal word  Warning

Hazard Statements

H302 - Harmful if swallowed
H319 - Causes serious eye irritation
H361d - Suspected of damaging the unborn child
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements

P102 - Keep out of reach of children
P201 - Obtain special instructions before use
P270 - Do not eat, drink or smoke when using this product
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P501 - Dispose of contents/container to an approved waste disposal plant
P280 - Wear protective gloves/protective clothing/eye protection/face protection***

EU Specific Hazard Statements

EUH401 - To avoid risks to human health and the environment, comply with the instructions for use
EUH208 - Contains Propanoic acid, 2-hydroxy-, 2-ethylhexyl ester. May produce an allergic reaction***

Additional phrases for PPP
SP1 - Do not contaminate water with the product or its container

2.3. Other hazards
No information available

---

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>Tebuconazole</td>
<td>11-13.5</td>
<td>107534-96-3</td>
<td>403-640-2***</td>
<td>603-197-00-7</td>
<td>Acute Tox. 4 (H302) Repr. 2 (H361d) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)***</td>
<td>Xn; R22 Repr. Cat.3; R63 N; R50-53***</td>
<td>M=1</td>
<td>M=10***</td>
</tr>
<tr>
<td>Prochloraz</td>
<td>22-27</td>
<td>67747-09-5</td>
<td>266-994-5</td>
<td>613-128-00-2</td>
<td>Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)</td>
<td>Xn; R22 N; R50-53</td>
<td>M=1</td>
<td>M=10***</td>
</tr>
<tr>
<td>Propanoic acid, 2-hydroxy-, 2-ethylhexyl ester</td>
<td>40-45</td>
<td>186817-80-1</td>
<td>-</td>
<td>-</td>
<td>Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) Xn;R36/38 R43</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>
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
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
Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

For emergency responders
Use personal protection recommended in Section 8.

6.2. Environmental precautions
Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

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
Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Use with local exhaust ventilation.

General Hygiene Considerations
Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

7.2. Conditions for safe storage, including any incompatibilities
Storage Conditions
Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

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, Suitable protective clothing, Apron, Gloves made of plastic or rubber.

General Hygiene Considerations
Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

Environmental exposure controls
Do not allow into any sewer, on the ground or into any body of water.

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>Liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>orange light brown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.8-7.8</td>
<td>CIPAC MT 75.3</td>
<td>solution (1 %)</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling point/bubbling range</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point °C</td>
<td>154</td>
<td>EEC A.9</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not Applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not Applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper/lower flammability or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>explosive limits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor pressure kPa</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td>1.04-1.12</td>
<td>EEC A.3</td>
<td></td>
</tr>
<tr>
<td>Solubility(ies) mg/l</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n-octanol/water) Log Pow</td>
<td></td>
<td></td>
<td>See Section 12 for more information</td>
</tr>
<tr>
<td>Autoignition temperature °C</td>
<td>275</td>
<td>EEC A.15</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature °C</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity mm2/s</td>
<td>43.469</td>
<td>OECD 114</td>
<td></td>
</tr>
<tr>
<td>40 °C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not an explosive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.2. Other information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulk density g/ml</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface tension mN/m</td>
<td>35.6</td>
<td>OECD 115 EEC A.5</td>
<td></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

ADAMA
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

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>Values</th>
<th>Species</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50 mg/kg</td>
<td>2000</td>
<td>Rat</td>
<td>OECD 423</td>
<td></td>
</tr>
<tr>
<td>Dermal LD50 mg/kg</td>
<td>&gt;2000</td>
<td>Rat</td>
<td>OECD 402</td>
<td></td>
</tr>
<tr>
<td>Inhalation LC50 mg/l/4h</td>
<td>&gt;5.35</td>
<td>Rat</td>
<td>OECD 403</td>
<td></td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Non-irritating to the skin</td>
<td>Rabbit</td>
<td>OECD 404</td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Irritating to eyes</td>
<td>Rabbit</td>
<td>OECD 405</td>
<td></td>
</tr>
<tr>
<td>Respiratory/skin sensitization</td>
<td>Not a skin sensitizer***</td>
<td>Guinea pig</td>
<td>OECD 406</td>
<td></td>
</tr>
</tbody>
</table>

Chronic toxicity

Germ cell mutagenicity

Chemical Name

| Tebuconazole | Not classified
| Prochloraz   | Not classified***

Carcinogenicity

Chemical Name

| Tebuconazole | Not classified
| Prochloraz   | Not classified***

Reproductive toxicity

Chemical Name

| Tebuconazole | H361d - Suspected of damaging the unborn child
| Prochloraz   | Not classified***

STOT - single exposure

Chemical Name

| Tebuconazole | No information available
| Prochloraz   | No data available***

STOT - repeated exposure

Chemical Name

| Tebuconazole | No information available
| Prochloraz   | No data available***

Aspiration hazard

Chemical Name

| Tebuconazole | No information available
| Prochloraz   | No data available***

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Aquatic toxicity
Acute toxicity

<table>
<thead>
<tr>
<th>Species</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish 96-hour LC50 mg/l: 1.77</td>
<td>Oncorhynchus mykiss</td>
<td>OECD 203</td>
</tr>
<tr>
<td>Crustacea 48-hour EC50 mg/l: 12</td>
<td>Daphnia magna</td>
<td>OECD 202</td>
</tr>
<tr>
<td>Algae 72-hour EC50 mg/l: 0.41</td>
<td>Selenastrum capricornutum</td>
<td>OECD 201</td>
</tr>
<tr>
<td>Other plants EC50 mg/l: ***</td>
<td>Bobwhite quail***</td>
<td>US EPA 71-1***</td>
</tr>
</tbody>
</table>

Terrestrial Toxicity

<table>
<thead>
<tr>
<th>Species</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birds Oral LD50 mg/kg: 1988</td>
<td>Prochloraz: 624***</td>
<td>US EPA 71-1***</td>
</tr>
</tbody>
</table>

Bees Oral LD50 μg/bee: 83.05 Prochloraz: 684***

12.2. Persistence and degradability

Abiotic Degradation

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tebuconazole</td>
<td>365</td>
<td>OECD 301B</td>
<td>Static</td>
</tr>
<tr>
<td>Prochloraz</td>
<td>11.7***</td>
<td>OECD 301D***</td>
<td>Static</td>
</tr>
</tbody>
</table>

Soil DT50 days

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tebuconazole</td>
<td>34.8</td>
<td>OECD 301B</td>
<td>Static</td>
</tr>
<tr>
<td>Prochloraz</td>
<td>223.62***</td>
<td>OECD 301D***</td>
<td>Static</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

Partition Coefficient (n-octanol/water) Log Pow

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tebuconazole</td>
<td>3.7</td>
<td>EEC A.8***</td>
<td>20-25 °C***</td>
</tr>
<tr>
<td>Prochloraz</td>
<td>4.3***</td>
<td>EEC A.8***</td>
<td>20-25 °C***</td>
</tr>
</tbody>
</table>

Bioconcentration factor (BCF)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tebuconazole</td>
<td>78</td>
<td>EEC A.8***</td>
<td>20-25 °C***</td>
</tr>
<tr>
<td>Prochloraz</td>
<td>150-247***</td>
<td>EEC A.8***</td>
<td>20-25 °C***</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tebuconazole</td>
<td>769</td>
<td>Koc</td>
<td>20-25 °C***</td>
</tr>
<tr>
<td>Prochloraz</td>
<td>1222-8564***</td>
<td>Koc***</td>
<td>20-25 °C***</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. (Tebuconazole, Prochloraz)
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. (Tebuconazole, Prochloraz)
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. (Tebuconazole, Prochloraz)
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: Not Applicable

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
R43 - May cause sensitization by skin contact
R22 - Harmful if swallowed
R63 - Possible risk of harm to the unborn child
R36/38 - Irritating to eyes and skin
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51/53 - Toxic 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
H302 - Harmful if swallowed
H361d - Suspected of damaging the unborn child
H411 - Toxic to aquatic life with long lasting effects
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H400 - Very toxic to aquatic life
H410 - Very toxic 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