1. Product identifier

Hurricane

1.1. Product identifier
Hurricane

Synonyms
Diflufenican 500 SC

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

Recommended Use
Herbicide

Uses advised against
No information available

1.3. Details of the supplier of the safety data sheet

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

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 aquatic toxicity
Category 1 - (H400)

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

N; R50-53
2.2. Label elements

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

Hazard pictograms

![Hazard Pictogram]

Signal word
Warning

Hazard Statements
H410 - Very 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
EUH208 - Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction
EUH401 - To avoid risks to human health and the environment, comply with the instructions for use

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>Difufenican</td>
<td>40-44</td>
<td>83164-33-4</td>
<td>-</td>
<td>616-032-00-9</td>
<td>Aquatic Chronic 3 (H412)</td>
<td>R52-53</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Full text of R-phrases: see section 16
Full text of H- and 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  
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 personal protective equipment as required.

For emergency responders  
Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

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
When using do not eat, drink or smoke. Wash contaminated clothing before reuse.

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
When using do not eat, drink or smoke. Wash contaminated clothing before reuse.

Environmental exposure controls
Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains.

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>white</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Acid 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>6.5 - 9.5</td>
<td>CIPAC MT 75.3</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point °C</td>
<td>----</td>
<td></td>
<td></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; 100</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 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>
</tbody>
</table>
Hurricane - HRB00869-44

9.2. Other information

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

Section 11: TOXICOLOGY INFORMATION

11.1. Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Property</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; 2000</td>
<td>Rat</td>
<td>OECD 401</td>
<td>Maximum attainable concentration</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; 1.43</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>Not 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
Hurricane - HRB00869-44

Diflufenican : Not classified

Carcinogenicity
Chemical Name
Diflufenican : Not Carcinogenic

Reproductive toxicity
Chemical Name
Diflufenican : Not toxic for the reproductive system

STOT - single exposure
Chemical Name
Diflufenican : No data available

STOT - repeated exposure
Chemical Name
Diflufenican : No data available

Aspiration hazard
Chemical Name
Diflufenican : No data available

---

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Aquatic toxicity

Acute toxicity

<table>
<thead>
<tr>
<th>Values</th>
<th>Species</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 100</td>
<td>Rainbow trout</td>
<td>OECD 203</td>
<td></td>
</tr>
<tr>
<td>&gt; 100</td>
<td>Daphnia magna</td>
<td>OECD 202</td>
<td></td>
</tr>
<tr>
<td>0.00174</td>
<td>S. capricornutum</td>
<td>OECD 201</td>
<td></td>
</tr>
</tbody>
</table>

Terrestrial Toxicity

Birds Oral LD50 mg/kg

Chemical Name

Diflufenican : > 2150 Bobwhite quail

Bees Oral LD50 μg/bee

Chemical Name

Diflufenican : > 100 EPPO 170

12.2. Persistence and degradability

Abiotic Degradation

Water DT50 days

Chemical Name

Diflufenican : 1 - 5 BBA IV: 5-1 approx

Soil DT50 days

Chemical Name

Diflufenican : 128 EPA / SETAC

Biodegradation

Chemical Name

Diflufenican : No information available

12.3. Bioaccumulative potential

---
Hurricane - HRB00869-44

Partition Coefficient

(n-octanol/water) Log Pow
Chemical Name

Diflufenican : 4.2 OECD 117 20 ° C

Bioconcentration factor (BCF)
Chemical Name

Diflufenican : 1276 - 1596 OECD 305

12.4. Mobility in soil

Adsorption/Desorption
Chemical Name

Diflufenican : 3417 Koc

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. ( Diflufenican )
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. ( Diflufenican )
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. ( Diflufenican )
14.3 Hazard Class 9
14.4 Packing Group III
14.5 Environmental hazard Yes
14.6 Special precautions for user
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
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
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
H400 - Very toxic to aquatic life
H410 - Very 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