SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
   Trade name : Mulan 20 SP
   Chemical formula : Acetamiprid : C10H11ClN4

1.2. Relevant identified uses of the substance or mixture and uses advised against
   Relevant identified uses : Insecticide
   Uses advised against : None under normal conditions.

1.3. Details of the supplier of the safety data sheet
   : ADAMA SOUTH AFRICA (PTY) LTD
     21 Viben Street
     Brackenfell 7560
   Email : msds@mcw.co.il

1.4. Emergency telephone number
   : +27 82 331 6463
   +27 21 982 1460

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture
   Hazard classification
   Classification 67/548/EEC (DSD) - 1999/45/EC (DPD)
   : Xn; R22
     N; R51-53

2.2. Label elements
   Labelling 1999/45/EC (DPD)
   Symbol(s)
     Xn : Harmful.
     N : Dangerous for the environment.

   R Phrase(s)
     R22 - Harmful if swallowed.
     R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

   S Phrase(s)
     S02 - Keep out of the reach of children.
     S13 - Keep away from food, drink and animal feedingstuffs.
     S20/21 - When using, do not eat, drink or smoke.
     S36/37 - Wear suitable protective clothing and gloves.
     S60 - This material and its container must be disposed of as hazardous waste.
     S61 - Avoid release to the environment. Refer to special instructions/Safety data sheets.

2.3. Other hazards
   Other hazards : None under normal conditions.
SECTION 3. Composition/information on ingredients

Components: This product is considered to be hazardous and contains hazardous components.

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Concentration % w/w</th>
<th>CAS No</th>
<th>EC No</th>
<th>Index No</th>
<th>REACH Reg.</th>
<th>Classification</th>
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</thead>
<tbody>
<tr>
<td>Acetamiprid</td>
<td>20 %</td>
<td>135410-20-7</td>
<td>-----</td>
<td>608-032-00-2</td>
<td>-----</td>
<td>Xn; R22</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>R52-53</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4 - H302</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 3 - H412</td>
</tr>
</tbody>
</table>

Text of R/H-Phrases: - Sec. 16

SECTION 4. First aid measures

4.1. Description of first aid measures

First aid measures

Inhalation: Remove victim to fresh air. Keep victim warm and at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediately get medical attention.

Skin contact: Remove affected clothing and wash all exposed skin area with soap and water, followed by warm water rinse. Immediately get medical attention.

Eye contact: In case of eye contact, immediately rinse with clean water for 10-15 minutes. Immediately consult an eye specialist.

Ingestion: Do not induce vomiting. Wash out mouth with plenty of water. Never give anything by mouth to an unconscious person. Immediately get medical attention.

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

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

Note to physician: No specific antidote known. Treat symptomatically and give supportive therapy. If ingested perform gastric lavage and administer activated charcoal.

SECTION 5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media: foam, dry chemical, carbon dioxide, foam.

Unsuitable extinguishing media: Avoid use of water jet.

5.2. Special hazards arising from the substance or mixture

Specific hazards: Thermal decomposition may generate: carbon monoxide, carbon dioxide, hydrogen chloride, nitrogen oxides.

5.3. Advice for fire-fighters

Protection against fire: Wear suitable protective clothing. Self-contained breathing apparatus.

Special procedures: Move containers away from fire without risk. Fight fires from a protected location. Dike fire control water for later disposal.

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For emergency responders: Use appropriate protection (see section 8).

6.2. Environmental precautions

Environmental precautions: Dispose of this material and its container at hazardous or special waste collection point. If the product has contaminated surface water, inform the appropriate authorities.

6.3. Methods and material for containment and cleaning up

Clean up methods: Avoid generation of dust. Collect spilled material with shovel, place into a clean container and cover container loosely. During cleaning activity, shut off ignition sources.

6.4. Reference to other sections
 SECTION 7. Handling and storage

7.1. Precautions for safe handling
Handling: Avoid generation of dust. Do not breathe dust. Avoid contact with skin and eyes. Avoid vigorous shaking of the bag when emptying the content.

7.2. Conditions for safe storage, including any incompatibilities
Packing: Woven polypropylene big bags.
Low density polyethylene open mouth bags.
Low density polyethylene valve bags.

Storage: Keep locked up. Keep container tightly closed. Keep only in the original container in a cool, well ventilated place. Keep container dry. Avoid: moisture, strong bases & acids, alkali, oxidizing substances.

7.3. Specific end use(s)

 SECTION 8. Exposure controls/personal protection

8.1. Control parameters
8.2. Exposure controls
Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower. Wash clothing before re-using. Wash hands thoroughly after handling.

• Respiratory protection: During spraying wear suitable respiratory equipment.
• Hand protection: Wear suitable gloves.
• Skin protection: Wear suitable protective clothing and chemical resistant boots.
• Eye protection: Chemical goggles or safety glasses.

 SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties
Appearance: Solid - Powder
Colour: white
Odour: Odourless
Odour threshold: Not available
pH: Not available
Melting point / Freezing point: Acetamiprid: 98.9
Melting point {°C}: Acetamiprid: 98.9
Initial boiling point - boiling range: Not available
Flash point: Not applicable
Evaporation rate: Not available
Flammability: Not flammable
Explosion limits (lower - upper): Not available
Vapour pressure: Not available
Vapour density: Not available
Relative density: 0.625 - 0.721 g/cm 3
Solubility: Not applicable
Partition coefficient : n-octanol / water: Acetamiprid: KOW=0.80 (25 °C)
Auto-ignition temperature: Not available
Decomposition temperature: Not available
Viscosity: Not available
Explosive Properties: Not explosive
Oxidising properties: Not available
SECTION 9. Physical and chemical properties (continued)

9.2. Other information

Molecular weight : Acetamiprid : 222.7

SECTION 10. Stability and reactivity

10.1. Reactivity

10.2. Chemical stability

Chemical stability : Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization : Will not occur.

10.4. Conditions to avoid

Conditions to avoid : Protect from sunlight, sources of heat, open flame.

10.5. Incompatible materials

Materials to avoid : oxidizing agents, strong acids, strong bases.

10.6. Hazardous decomposition products

Hazardous decomposition products : Thermal decomposition may generate: carbon dioxide, carbon monoxide, hydrogen chloride, nitrogen oxides.

SECTION 11. Toxicological information

11.1. Information on toxicological effects

• Acute toxicity
  - Oral, Rat LD50 (mg/kg) : 500
  - Dermal, Rat LD50 [mg/kg] : > 2000
  - Inhalation, Rat LC50 [mg/l/4h] : > 3.5 (Maximum concentration attainable Not adequate for classification.)
  - Skin corrosion/irritation : Not irritant
  - Serious eye damage/irritation : Not irritating
  - Respiratory or skin sensitisation : Non sensitizer
  - Germ cell mutagenicity : Not available
  - Carcinogenicity : Not available
  - Reproductive toxicity : Not available
  - STOT-single exposure : Not available
  - STOT-repeated exposure : Not available
  - Aspiration hazard : Not available

SECTION 12. Ecological information

12.1. Toxicity

Acute toxicity

96 H-LC50 - Carp [mg/l] : 263.9
48 H-EC50 - Daphnia magna [mg/l] : > 100
72 H-EC50 - Algae [mg/l] : 123.73
LD50 Birds [mg/kg] : 154 - 170 (quail)

Long-term exposure
SECTION 12. Ecological information (continued)

72 H-NOEC - Algae [mg/l] : 10

12.2. Persistence - degradability

12.3. Bioaccumulative potential

12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment : Not available

12.6. Other adverse effects : None known.

SECTION 13. Disposal considerations

13.1. Waste treatment methods

General : Avoid release to the environment.
Disposal in a safe manner in accordance with local/national regulations.

Disposal method : Burn in a chemical incinerator equipped with an afterburner and a scrubber.

SECTION 14. Transport information

14.1. UN number

UN N° : 3077
Hazard Label(s) : 9

14.2. UN proper shipping name

- Land transport - ADR/RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (20% Acetamiprid)
  Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (20% Acetamiprid)
  - H.I. no : 90
- Sea transport - IMO-IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (20% Acetamiprid)
- Air transport - ICAO/IATA : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (20% Acetamiprid)

14.3. Transport hazard class(es)

- Land transport - ADR/RID : 9
- Sea transport - IMO-IMDG : 9
- IMO-IMDG - class or division : 9
- Air transport - ICAO/IATA : 9

14.4. Packing group

- Land transport - ADR/RID : III
- Packing group : III
- Sea transport - IMO-IMDG : III
- Air transport - ICAO/IATA : III

14.5. Environmental hazards

- IMDG-Marine pollution : Marine pollutant - Polluant marin
SECTION 14. Transport information (continued)

14.6. Special precautions for user

: See transport documents.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

: Not applicable.

SECTION 15. Regulatory information

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

: Ensure all national/local regulations are observed.

15.2. Chemical Safety Assessment

: Not applicable

SECTION 16. Other information

List of relevant R phrases (heading 3) : R22 - Harmful if swallowed.
                                             R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

List of relevant H phrases (Section 3) : H302 - Harmful if swallowed.
                                             H412 - Harmful to aquatic life with long lasting effects.

Print date : 21 / 5 / 2014

Recommended uses and restrictions : None.

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