1.1. Product identifier

Trade name: Cormoran 180 EC
Product code: R-23894
Chemical formula: Acetamiprid: C₁₀H₁₁ClN₄
Novaluron: C₁₇H₉ClF₈N₂O₄

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

Classification 67/548/EEC (DSD) - 1999/45/EC (DPD)

Repr. Cat. 2; R61
Xn; R20/22
Xi; R36
R43
N; R50-53

2.2. Label elements

Labelling 1999/45/EC (DPD)

Symbol(s):

: T - Toxic
N - Dangerous for the environment.

R Phrase(s):

R20/22 - Harmful by inhalation and if swallowed.
R36 - Irritating to eyes.
R43 - May cause sensitization by skin contact.
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R61 - May cause harm to the unborn child.

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.
S24/25 - Avoid contact with skin and eyes.
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S57 - Use appropriate container to avoid environmental contamination.
S60 - This material and its container must be disposed of as hazardous waste.

2.3. Other hazards

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

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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<td>80 g/l</td>
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<td>608-032-00-2</td>
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</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. Consult a doctor in the event of any complaints.

**Skin contact**
Remove affected clothing and wash all exposed skin area with soap and water, followed by warm water rinse. Consult a doctor in the event of any complaints.

**Eye contact**
Wash off with plenty of water (15 min.) If pain persists, 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. Consult a doctor in the event of any complaints.

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

**Eye contact**
Redness, tears.

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**
For small fire: dry chemical, carbon dioxide.
For large fire: foam, water fog, water spray.

5.2. Special hazards arising from the substance or mixture

**Specific hazards**
Thermal decomposition may generate: carbon dioxide, carbon monoxide, nitrogen oxides, chlorides, fluorides.

5.3. Advice for fire-fighters

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

**Special procedures**
Fight fires from a protected location. Dike fire control water for later disposal.

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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. Contaminated soil layers have to be dug out.

6.3. Methods and material for containment and cleaning up

Clean up methods: In the event of minor spillage: Absorb in sand or other inert material. Use appropriate containment to avoid environmental contamination.

In the event of major spillage: Dike spills using absorbent or impervious materials such as sand or clay for later disposal. Collect and contain as much free liquid as possible. Do not empty into drains.

6.4. Reference to other sections

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Handling: Do not breathe vapour. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Storage: Keep locked up. Keep container tightly closed. Keep only in the original container in a cool, well ventilated place.

7.3. Specific end use(s)

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Not established

Industrial hygiene: Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower. Wash hands thoroughly after handling. Wash clothing before re-using.

- Respiratory protection: During spraying wear suitable respiratory equipment.
- Hand protection: Wear suitable gloves.
- Skin protection: Wear suitable protective clothing & 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

- Physical state at 20 °C: Liquid
- Colour: Yellow - Pink
- Odour: characteristic
- Odour threshold: Data not available.
- pH: Data not available.
- Melting point / Freezing point: Data not available.
- Initial boiling point - boiling range: Data not available.
- Flash point: Not flammable : > 90

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SECTION 9. Physical and chemical properties (continued)

Evaporation rate: Data not available.
Flammability: Not flammable.
Explosion limits (lower - upper): Data not available.
Vapour pressure: Data not available.
Vapour density: Data not available.
Relative density: 1.05 - 1.15
Solubility: Data not available.
Partition coefficient: n-octanol / water: Acetamiprid: 0.80 (25 °C)
                        Novaluron: 4.3
Auto-ignition temperature: Data not available.
Decomposition temperature: Data not available.
Viscosity: Data not available.
Explosive Properties: Data not available.
Oxidising properties: Data not available.

9.2. Other information

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 reactions: Hazardous polymerization will not occur.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Materials to avoid: Avoid contact with: strong acids, strong bases.

10.6. Hazardous decomposition products


SECTION 11. Toxicological information

11.1. Information on toxicological effects

- Acute toxicity
  - Oral, Rat LD50 (mg/kg) : 300 < LD50 < 2000
  - Dermal, Rat LD50 [mg/kg] : > 2000
  - Inhalation, Rat LC50 [mg/l/4h] : 1.61
- Skin corrosion/irritation: Not irritant
- Serious eye damage/irritation: Irritating to eyes.
- Respiratory or skin sensitisation: Buehler method: sensitizer
- Germ cell mutagenicity: No evidence of genotoxicity
- Carcinogenicity: Not carcinogenic
- Reproductive toxicity: Acetamiprid: Not considered to be toxic for the reproductive system. N-methyl-2-pyrrolidone: Repr.Cat. 2; R61

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SECTION 11. Toxicological information (continued)

- STOT-single exposure: Not available
- STOT-repeated exposure: Not available
- Aspiration hazard: Not available
- Other: EPA Pesticide fact sheet: "Acetamiprid has relatively low acute and chronic toxicity in mammals and there was no evidence of carcinogenicity, neurotoxicity, mutagenicity and/or endocrine disruption".

SECTION 12. Ecological information

12.1. Toxicity

Acute toxicity
- LC50 96 Hour - fish [mg/l]: Guppy: 1.06
- 48 H-LC50-Daphnia magna [mg/l]: 0.04
- LD50 Birds [mg/kg]: 150.22 (quail)

Long-term exposure
- 72 H-NOEC - Algae [mg/l]: > 100

12.2. Persistence - degradability

Persistence - degradability: Novaluron: Half-life time (t1/2): 68-76 days, soil

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.

Other information: EPA Pesticide fact sheet: "Acetamiprid poses low risks to the environment relative to most other insecticides. Acetamiprid is only moderately toxic to bees".

SECTION 13. Disposal considerations

13.1. Waste treatment methods

General: Dispose in a safe manner in accordance with local/national regulations.

SECTION 14. Transport information

14.1. UN number

UN N°: 3082

14.2. UN proper shipping name

- Land transport - ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acetamiprid, Novaluron)
- Sea transport - IMO-IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acetamiprid, Novaluron)
- Air transport - ICAO/IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acetamiprid, Novaluron)
SECTION 14. Transport information (continued)

14.3. Transport hazard class(es)
- Land transport - ADR/RID : 9
- Sea transport - IMO-IMDG : 9
- Air transport - ICAO/IATA : 9

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

14.5. Environmental hazards
- IMDG-Marine pollution : Marine pollutant - Polluant marin

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.
R36/37/38 - Irritating to eyes, respiratory system and skin.
R36/38 - Irritating to eyes and skin.
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.
R61 - May cause harm to the unborn child.

List of relevant H phrases (Section 3) : H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H355 - May cause respiratory irritation.
H360D - May damage the unborn child.
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.

Print date : 21 / 5 / 2014

Recommended uses and restrictions : None.

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