1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product information

Product Name: K9 Advantix II
SDS Number: 122000003695

Use: Biocidal product

Company
BAYER HEALTHCARE LLC
Animal Health Division
12707 Shawnee Mission Parkway
(West 63rd)
Shawnee, KS 66216-1846
USA
(800) 633-3796

In case of emergency: (800) 422-9874
Chemtrec: (800) 424-9300
BAYER INFORMATION PHONE: (800) 633-3796
INTERNATIONAL: (703) 527-3887

2. HAZARDS IDENTIFICATION

Emergency Overview

WARNING! Colour: tan  Form: liquid  Odour: very faint.
May cause eye, skin, and respiratory tract irritation. Inhalation may cause nausea or dizziness. May be harmful if swallowed.

GHS Classification:

Acute toxicity (Inhalation): Category 4
Skin irritation: Category 2
Eye irritation: Category 2
Reproductive toxicity: Category 1B
Specific target organ toxicity - single exposure: Category 3 (Respiratory system)

GHS Label element:

Hazard pictograms: ☑️ ⚠️
Signal word: Danger

Hazard statements:
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H360D May damage the unborn child.

Precautionary statements:
- Prevention:
  - P201 Obtain special instructions before use.
  - P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
  - P273 Avoid release to the environment.
  - P280 Wear protective gloves/ eye protection/ face protection.
  - P281 Use personal protective equipment as required.
- Response:
  - P308 + P313 IF exposed or concerned: Get medical advice/ attention.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Weight percent</th>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.015%</td>
<td>Permethrin</td>
<td>52645-53-1</td>
</tr>
<tr>
<td>8.803%</td>
<td>Imidacloprid</td>
<td>138261-41-3</td>
</tr>
<tr>
<td>0.44%</td>
<td>Pyriproxyfen</td>
<td>95737-68-1</td>
</tr>
<tr>
<td>30 - 60%</td>
<td>Amine Derivative</td>
<td></td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

General advice: Take off all contaminated clothing immediately.

If inhaled: Remove to fresh air. Call a physician immediately.

In case of skin contact: After contact with skin, wash immediately with plenty of soap and water. If skin reactions occur, contact a physician.

In case of eye contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed: If swallowed, seek medical advice immediately and show this container or label.

Contact Number: Use the Bayer Emergency Number in Section 1
5. FIREFIGHTING MEASURES

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable extinguishing media:** High volume water jet

**Specific hazards during firefighting:** Fire may cause evolution of: Carbon monoxide (CO) Carbon dioxide (CO2) Nitrogen oxides (NOx) Hydrogen cyanide (hydrocyanic acid) Hydrogen chloride gas

**Special protective equipment for firefighters:** In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

**Further information:** Prevent fire extinguishing water from contaminating surface water or the ground water system.

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6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Use personal protective equipment.

**Methods for cleaning up:** Cover spilled product with liquid-binding material (sand, silica gel, acid binder, universal binder, hybilat). Take up mechanically and fill into labeled, closable containers.

**Additional advice:** No special precautions required.

**Further Accidental Release Notes**

No special precautions required.

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7. HANDLING AND STORAGE

**Handling:**
Avoid formation of aerosol. Only handle product with local exhaust ventilation. Avoid contact with skin, eyes and clothing.

**No special protective measures against fire required.**

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Amine Derivative**

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

- **Time Weighted Average (TWA):** 10 ppm, 40 mg/m3

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides
Skin designation: Can be absorbed through the skin.

**Respiratory protection:**
Recommended Filter type: Organic vapor with prefilter

None required for consumer use of this product.

**Hand protection:**
Chemically resistant gloves.
None required for consumer use of this product.

**Eye protection:**
Safety glasses

None required for consumer use of this product.

**Other protective measures:**
Wear suitable protective equipment.

Please consult label for end-user requirements.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form:</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour:</td>
<td>tan</td>
</tr>
<tr>
<td>Odour:</td>
<td>very faint</td>
</tr>
<tr>
<td>Odour Threshold:</td>
<td>No applicable information is available</td>
</tr>
<tr>
<td>Melting point:</td>
<td>No applicable information is available</td>
</tr>
<tr>
<td>Boiling point/boiling range:</td>
<td>195 °C</td>
</tr>
<tr>
<td>Density:</td>
<td>1.1360 g/cm³ at 68 °F (20 °C) DIN 51757</td>
</tr>
<tr>
<td>Bulk density:</td>
<td>No applicable information is available</td>
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<tr>
<td>Vapour pressure:</td>
<td>No applicable information is available</td>
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<tr>
<td>Viscosity, dynamic:</td>
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</tr>
<tr>
<td>Viscosity, kinematic:</td>
<td>No applicable information is available</td>
</tr>
<tr>
<td>Flow time:</td>
<td>No applicable information is available</td>
</tr>
<tr>
<td>Surface tension:</td>
<td>No applicable information is available</td>
</tr>
<tr>
<td>Miscibility with water:</td>
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<tr>
<td>Water solubility:</td>
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<tr>
<td>pH:</td>
<td>3.0 - 5.5 at 100 g/l DIN 51369</td>
</tr>
<tr>
<td>Relative density:</td>
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<tr>
<td>Partition coefficient:</td>
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<tr>
<td>Solubility(ies):</td>
<td>No applicable information is available</td>
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<tr>
<td>Flash point:</td>
<td>185 °F (85 °C)</td>
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<tr>
<td>Flammability (solid, gas):</td>
<td>No applicable information is available</td>
</tr>
<tr>
<td>Ignition temperature:</td>
<td>No applicable information is available</td>
</tr>
<tr>
<td>Explosion limits:</td>
<td>No applicable information is available</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

**Conditions to avoid:** No data available

**Materials to avoid:** Peroxides, Bases, Strong acids

**Hazardous reactions:** No data available

**Thermal decomposition:**
No data available

**Hazardous decomposition products:**
Carbon monoxide (CO), Carbon dioxide (CO2)

**Oxidizing properties:**
No statements available.

**Impact sensitivity:**
No data available

11. TOXICOLOGICAL INFORMATION

**Other information on toxicity:**
Permethrin
Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).

**Other information on toxicity:**
Amine Derivative
Dermal absorption possible

**Acute oral toxicity:**
LD50 Rat, female: > 2,000 mg/kg
May be harmful if swallowed.
Method: OECD 425

**Acute inhalation toxicity:**
LC50 Rat: > 2.86 mg/l, 4 h
Harmful if inhaled.
Method: OECD 403

**Acute dermal toxicity:**
LD50 Rat: > 5,000 mg/kg
The substance or mixture has no acute dermal toxicity
Method: OECD 402
Skin irritation:
- **Rabbit**
  - **Result:** Moderate skin irritation
  - **Method:** OECD 404

Eye irritation:
- **Rabbit**
  - **Result:** Moderate eye irritation
  - **Method:** OECD 405

Sensitisation:
- **Skin sensitization guinea pig**
  - **Result:** Does not cause skin sensitisation.
  - **Method:** Buehler Test

**Genotoxicity in vitro:**
- **pyriproxyfen**
  - **Ames test**
  - **Result:** negative

  V79-HPRT Forward Mutation Assay
  - **Result:** negative

  In vitro Cytogenetic Test
  - **Result:** negative

  Unscheduled DNA Synthesis Test
  - **Result:** negative

  **Amine Derivative**
  - **Bacterial mutagenicity**
  - **Result:** No evidence of a gene mutagenic effect.

  **Imidacloprid**
  - **Ames test**
  - **Result:** negative

  In vitro tests did not show mutagenic effects

**Genotoxicity in vivo:**
- **pyriproxyfen**
  - **Micronucleus test, Mouse**
  - **Result:** No evidence of a genotoxic effect.

  **Amine Derivative**

  In vivo tests did not show mutagenic effects

  **Imidacloprid**

  **Result:** No indication of mutagenic effects., No evidence of a genotoxic effect.
Carcinogenicity:
pyriproxyfen
Rat: Result: negative

Amine Derivative
Result: Animal testing did not show any carcinogenic effects.

Imidacloprid
Result: Animal testing did not show any carcinogenic effects.

Reproductive toxicity:
pyriproxyfen
Result: Animal studies have produced no evidence of toxic effects on reproduction.

Imidacloprid
Result: Animal studies have produced no evidence of toxic effects on reproduction.

Teratogenicity:
pyriproxyfen
Rat: Result: Did not show teratogenic effects in animal experiments.

Rabbit: Result: Did not show teratogenic effects in animal experiments.

Amine Derivative
Result: May damage the unborn child.

Imidacloprid
Result: Animal studies have produced no evidence of harmful effects on development.

Pharmaceutic effects:
Permethrin
Insecticide

pyriproxyfen
Insecticide

Imidacloprid
Insecticide

Carcinogenicity:
No Carcinogenic substances as defined by IARC, NTP and/or OSHA

STOT - single exposure:
No data available

STOT - repeated exposure:
Components:

138261-41-3 :
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
12. ECOLOGICAL INFORMATION

**General advice:**
Do not allow to enter surface waters or groundwater.

**Toxicity to fish:**

**Permethrin**
LC50 0.0076 mg/l
Test species: Poecilia reticulata Duration of test: 48 h

**Pyriproxyfen**
Acute Fish toxicity: LC50 0.33 - 0.37 mg/l
Test species: Oncorhynchus mykiss (rainbow trout) Duration of test: 96 h

**Amine Derivative**
Acute Fish toxicity: LC50 > 500 mg/l
Test species: Leuciscus idus (Golden orfe) Duration of test: 96 h

**Imidacloprid**
Acute Fish toxicity: LC50 280 mg/l
Test species: Cyprinus carpio (Carp) Duration of test: 96 h

Acute Fish toxicity: LC50 211 mg/l
Test species: Oncorhynchus mykiss (rainbow trout) Duration of test: 96 h

Acute Fish toxicity: LC50 237 mg/l
Test species: Leuciscus idus (Golden orfe) Duration of test: 96 h

**Toxicity to daphnia and other aquatic invertebrates:**

**Permethrin**
EC50 37 µg/l
Test species: Daphnia magna (Water flea) Duration of test: 48 h
Method: OECD 202

EC50 0.00017 mg/l
Test species: Daphnia magna (Water flea) Duration of test: 48 h

**Pyriproxyfen**
EC50 0.4 mg/l
Test species: Daphnia magna (Water flea) Duration of test: 48 h

**Amine Derivative**
LC50 > 1,000 mg/l
Test species: Daphnia magna (Water flea) Duration of test: 24 h

**Imidacloprid**
EC50 0.055 mg/l
Test species: Hyalella azteca Duration of test: 96 h

**Toxicity to algae:**

**Permethrin**
EC50 0.5 mg/l
Duration of test: 72 h
pyriproxyfen  
IC50 0.064 mg/l  
tested on: Pseudokirchneriella subcapitata (green algae)  Duration of test: 72 h

Amine Derivative  
EC50 > 500 mg/l  
tested on: Desmodesmus subspicatus (green algae)  Duration of test: 72 h

Imidacloprid  
EC50 > 100 mg/l  
tested on: Pseudokirchneriella subcapitata (green algae)  Duration of test: 72 h

EC50 > 10 mg/l  
tested on: Desmodesmus subspicatus (green algae)  Duration of test: 72 h

**Toxicity to bacteria:**  
Amine Derivative  
EC20 > 600 mg/l  
Duration of test: 0.5 h  
Method: OECD 209

Imidacloprid  
EC50 > 10,000 mg/l  
tested on: activated sludge micro-organism  
Method: OECD 209

**Biodegradability:**  
Permethrin  
0 %, 28 d  Not rapidly biodegradable  

pyriproxyfen  
Not readily biodegradable.  
Method: OECD 301 D

Amine Derivative  
> 90 %, rapidly biodegradable  
Method: OECD 301 E

**Bioaccumulation:**  
pyriproxyfen  

Bioconcentration factor (BCF)  
ca. 1,500

Imidacloprid  

Low potential for bioaccumulation
13. DISPOSAL CONSIDERATIONS

If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

14. TRANSPORT INFORMATION

**Land transport (CFR)**
non-regulated

**US Sea transport (IMDG)**
non-regulated

**US Air transport (ICAO / IATA cargo aircraft only)**
non-regulated

**US Air transport (ICAO / IATA passenger and cargo aircraft)**
non-regulated

**International IATA**

- **UN Number**: 3082
- **Description of the goods**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PERMETHRIN, IMIDACLOPRID, N-METHYL PYRROLIDONE)
- **Class**: 9
- **Packaging group**: III
- **Dangerous goods labels**: 9
- **Environmentally hazardous**: yes

**International IMDG**

- **UN Number**: 3082
- **Description of the goods**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PERMETHRIN, IMIDACLOPRID, N-METHYL PYRROLIDONE)
- **Class**: 9
- **Packaging group**: III
- **IMDG-Labels**: 9
- **EmS Number**: F-A
- **Marine pollutant**: yes

15. REGULATORY INFORMATION
FIFRA Status
This product is registered with the EPA under FIFRA.

US. Toxic Substances Control Act
This product is excluded from TSCA Regulation under FIFRA Section 3 (2)(B)(ii) when used as a pesticide.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)
Components
None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required
Components
Permethrin
Amine Derivative

US. EPA CERCLA Hazardous Substances (40 CFR 302) Components
None

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists
Weight percent Components CAS-No.
30 - 60% Permethrin 52645-53-1
30 - 60% Amine Derivative

New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists
Weight percent Components CAS-No.
30 - 60% Permethrin 52645-53-1
30 - 60% Amine Derivative

California Prop. 65
Weight percent Components CAS-No.
30 - 60% Amine Derivative

OSHA Hazcom Standard Rating Hazardous

16. OTHER INFORMATION

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Further information
The information provided in this 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.