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

Product information

Product Name: Advantage multi for Cats or Dogs
Synonyms: Advantage
SDS Number: 122000001555

Use: veterinary medicine

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

| Colour: yellow, brownish, clear | Form: liquid | Odour: weak, characteristic. |

GHS Classification:

<table>
<thead>
<tr>
<th>Eye irritation</th>
<th>Acute toxicity (Oral)</th>
<th>Acute toxicity (Inhalation)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Category 2</td>
<td>Category 4</td>
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</table>

GHS Label element:

<table>
<thead>
<tr>
<th>Hazard pictograms</th>
<th>Signal word</th>
<th>Hazard statements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Warning</td>
<td>H302 + H332 Harmful if swallowed or if inhaled</td>
</tr>
</tbody>
</table>
Precautionary statements:

**Prevention:**
- P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ eye protection/ face protection.

**Response:**
- P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
- P337 + P313 If eye irritation persists: Get medical advice/ attention.
- P391 Collect spillage.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Ingredients:</th>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weight percent</strong></td>
<td><strong>Carbonate derivative</strong></td>
<td><strong>Imidacloprid</strong></td>
</tr>
<tr>
<td>10 - 30%</td>
<td></td>
<td>138261-41-3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Ingredients</th>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weight percent</strong></td>
<td><strong>Moxidectin</strong></td>
<td><strong>113507-06-5</strong></td>
</tr>
<tr>
<td>0.8645%</td>
<td></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: Hydrogen cyanide (hydrocyanic acid) Hydrogen chloride gas Nitrogen oxides (NOx) Carbon oxides

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

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Use adequate ventilation.

Methods for cleaning up: Suppress (knock down) gases/vapours/mists with a water spray jet. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Place in closed containers. Label for proper disposal.

Additional advice: No special precautions required.

Further Accidental Release Notes: No special precautions required.

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.

Storage:
Storage temperature: 39 - 77 °F (3.89 - 25 °C)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Benzyl alcohol (100-51-6)
US. OARS. WEELs Workplace Environmental Exposure Level Guide
Time Weighted Average (TWA): 10 ppm, 44.20 mg/m³
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

Form: liquid
Colour: yellow, brownish, clear
Odour: weak, characteristic
Odour Threshold: No applicable information is available
Melting point: No applicable information is available
Boiling point/boiling range: No applicable information is available
Density: 1.098 g/cm³ at 68 °F (20 °C)
Bulk density: No applicable information is available
Vapour pressure: No applicable information is available
Viscosity, dynamic: No applicable information is available
Viscosity, kinematic: No applicable information is available
Flow time: No applicable information is available
Surface tension: No applicable information is available
Miscibility with water: immiscible
Water solubility: No applicable information is available
pH: No applicable information is available
Relative density: No applicable information is available
Partition coefficient: No applicable information is available
Solubility(ies): No applicable information is available
Flash point: > 212 °F (> 100 °C)
Flammability (solid, gas): No applicable information is available
Ignition temperature: No applicable information is available
Explosion limits: No applicable information is available
10. STABILITY AND REACTIVITY

**Conditions to avoid:** Do not allow product to come in contact with:
- Heat

**Materials to avoid:** Oxidizing agents

**Hazardous reactions:** Exothermic polycondensation, accompanied by setting-free of water, may occur in the presence of acids and dissolved iron, zinc or aluminium.

**Thermal decomposition:**
No data available

**Hazardous decomposition products:**
Hydrogen cyanide (hydrocyanic acid), Hydrogen chloride gas, Nitrogen oxides (NOx), Carbon oxides

**Oxidizing properties:**
No statements available.

**Impact sensitivity:**
No data available

11. TOXICOLOGICAL INFORMATION

**Other information on toxicity:**
Alcohol derivative
Dermal absorption possible

If inhaled: irritations, Shortness of breath, Cough

If swallowed: Vomiting, Nausea, Irritation of mucous membranes in the mouth, throat, gullet and gastro-intestinal tract after swallowing.

Systemic toxicity headaches, Nausea, CNS disorders, Convulsions, Unconsciousness, cessation of breathing

**Acute oral toxicity:**
Acute toxicity estimate (ATE) 1,105 mg/kg
Harmful if swallowed.
Method: Calculation method
Calculated for GHS Classification and Labelling.
Acute inhalation toxicity:
Acute toxicity estimate (ATE) 14.25 mg/l
Harmful if inhaled.
Method: Calculation method
Calculated for GHS Classification and Labelling.

Acute dermal toxicity:
Imidacloprid
LD50 Rat: > 5,000 mg/kg
The substance or mixture has no acute dermal toxicity

Moxidectin
LD50 Rabbit: > 2,000 mg/kg
LD50 Rat: > 2,000 mg/kg
May be harmful in contact with skin.

Carbonate derivative
LD50 Rabbit: > 20,000 mg/kg
The substance or mixture has no acute dermal toxicity

Alcohol derivative
LD50 Rabbit: > 2,000 mg/kg
May be harmful in contact with skin.

Acute toxicity (other routes of administration):
Moxidectin
LD50 intraperitoneal Rat: 394 mg/kg
LD50 intraperitoneal Mouse: 86 mg/kg
LD50 subcutaneous Rat: > 640 mg/kg
LD50 subcutaneous Mouse: 86 mg/kg

Skin irritation:
Imidacloprid
Rabbit
Result: No skin irritation

Moxidectin
Result: Moderate skin irritation

Carbonate derivative
Rabbit
Result: No skin irritation
Method: OECD 404

Alcohol derivative
Rabbit
Result: No skin irritation
Method: OECD 404
Eye irritation:
Imidacloprid
Rabbit
Result: No eye irritation

Moxidectin
Result: Moderate eye irritation

Carbonate derivative
Rabbit
Result: Causes eye irritation.
Method: OECD 405

Alcohol derivative
Rabbit
Result: No eye irritation
Method: OECD 405

Sensitisation:
Imidacloprid
Skin sensitization guinea pig
Result: Did not cause sensitisation on laboratory animals.
Method: Magnusson and Kligmann maximization test

Carbonate derivative
Result: Does not cause skin sensitisation.

Alcohol derivative
guinea pig
Result: Did not cause sensitisation on laboratory animals.
Method: Magnusson and Kligmann maximization test

Subacute, subchronic and prolonged toxicity:
Alcohol derivative
NOEL 400 mg/kg, Rat, Exposure time 90-day

Genotoxicity in vitro:
Imidacloprid
Ames test
Result: negative

In vitro tests did not show mutagenic effects

Moxidectin
Result: No evidence of a gene mutagenic effect.

Alcohol derivative
Ames test
Result: negative

Genotoxicity in vivo:
Imidacloprid
Result: No indication of mutagenic effects., No evidence of a genotoxic effect.
Carbonate derivative

Result: No indication of mutagenic effects.

Alcohol derivative

Result: No indication of mutagenic effects.

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

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

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

Moxidectin
Suspected of damaging fertility. Suspected of damaging the unborn child.

Alcohol derivative
Result: Did not show teratogenic effects in animal experiments.

Pharmaceutic effects:
Imidacloprid
Insecticide

Moxidectin
Anthelmintics Antiparasitic agent

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

STOT - single exposure:
Components:

100-51-6 :
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure:
Components:

100-51-6 :
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

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:**

- **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

- **Moxidectin**
  - Acute Fish toxicity: LC50  16 µg/l  
  - Test species: Oncorhynchus mykiss (rainbow trout)

**LC50  62 µg/l**
- Test species: Lepomis macrochirus (Bluegill)

- **Carbonate derivative**
  - static test: LC50 ca.  5,300 mg/l  
  - Test species: Leuciscus idus (Golden orfe)  Duration of test: 96 h
  - Method: DIN 38412

- **Alcohol derivative**
  - Acute Fish toxicity: LC50  10 mg/l  
  - Test species: Lepomis macrochirus (Bluegill)  Duration of test: 96 h

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

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

- **Moxidectin**
  - EC50  302 ng/l  
  - Test species: Daphnia magna (Water flea)

- **Carbonate derivative**
  - static test EC50 > 500 mg/l  
  - Test species: Daphnia magna (Water flea)  Duration of test: 48 h

- **Alcohol derivative**
  - EC50  55 mg/l  
  - Test species: Daphnia magna (Water flea)  Duration of test: 24 h
Toxicity to algae:
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

Moxidectin
EC50 > 869 µg/l

Carbonate derivative
static test > 500 mg/l
tested on: Desmodesmus subspicatus (green algae) Duration of test: 72 h
Method: DIN 38412

Alcohol derivative
IC50 > 100 mg/l
Duration of test: 72 h

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

Carbonate derivative
EC20 > 800 mg/l
tested on: activated sludge micro-organism
Duration of test: 0.5 h
Method: ISO 8192

Alcohol derivative
EC50 71.4 mg/l
tested on: Photobacterium phosphoreum
Duration of test: 0.5 h

Biodegradability:
Carbonate derivative
rapidly biodegradable

Alcohol derivative
92 - 96 %, 28 d rapidly biodegradable
Method: OECD 301 C
Bioaccumulation:
Imidacloprid

Low potential for bioaccumulation

Carbonate derivative

Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

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)**
on-regulated

**International IATA**

<table>
<thead>
<tr>
<th>UN Number</th>
<th>Description of the goods</th>
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<tbody>
<tr>
<td>3082</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (MOXIDECTIN)</td>
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</table>

<table>
<thead>
<tr>
<th>Class</th>
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<tbody>
<tr>
<td>Packaging group</td>
<td>III</td>
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<tr>
<td>Dangerous goods labels</td>
<td>9</td>
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<tr>
<td>Environmentally hazardous</td>
<td>yes</td>
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</table>

**International IMDG**

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15. REGULATORY INFORMATION

US. Toxic Substances Control Act  This product is excluded from TSCA regulation by Section 3 (2)(B)(vi) when used for FDA application.

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

SARA Section 311/312 Hazard Categories
Immediate Health Hazard

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
None

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.
60 - 100% Alcohol derivative

California Prop. 65
To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

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.