SAFETY DATA SHEET
Advantage multi for Cats or Dogs

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

Product information

ADVANTAGE MULTI 88 DOG 6X4.0ML

Product Name: Advantage multi for Cats or Dogs
Synonyms: Advantage multi Spot On
Imidacloprid 10% / Moxidectin 0,5 - 2,5% Spot On
PRINOVOX SO L CAT

SDS Number: 122000001555

Use: veterinary medicine

Company
Bayer HealthCare, LLC
Animal Health Division
12707 Shawnee Mission Parkway
(West 63rd)
Shawnee, KS 66216-1846
UNITED STATES OF AMERICA
(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

Classification of the substance or mixture

Classification according to national GHS implementation:
Acute toxicity, Inhalation, Category 4 (H332)
Eye irritation, Category 2A (H319)
Reproductive toxicity, Category 2 (H361fd)

Label elements

Labelling according to national GHS implementation:

Warning

Hazard statements:
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

Precautionary statements:
Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Hazardous components which must be listed on the label:

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl alcohol</td>
<td>100-51-6</td>
</tr>
<tr>
<td>Moxidectin</td>
<td>113507-06-5</td>
</tr>
</tbody>
</table>

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Hazardous components

Benzyl alcohol
Concentration [Weight percent] 74.85
CAS-No.: 100-51-6
CAS name: Benzenemethanol

GHS Classification:
Acute Tox. 4 H332

Propylene carbonate
Concentration [Weight percent] 15.03
CAS-No.: 108-32-7
CAS name: 1,3-Dioxolan-2-one, 4-methyl-

GHS Classification:
Eye Irrit. 2 H319

Imidacloprid
Concentration [Weight percent] 9.11
CAS-No.: 138261-41-3
CAS name: 2-Imidazolidinimine, 1-((6-chloro-3-pyridinyl)methyl)-N-nitro

GHS Classification:
Acute Tox. 4 H302

M-Factor: 1,000

Moxidectin
Concentration [Weight percent] 0.91
CAS-No.: 113507-06-5
CAS name: Milbemycin B, 5-O-demethyl-28-deoxy-25-[(1E)-1,3-dimethyl-1-butanyl]-6,28-epoxy-23-(methoxyimino)-, (6R,23E,25S)-
4. FIRST AID MEASURES

Description of first aid measures

General advice: Take off all contaminated clothing immediately.

If inhaled: Not an expected entry route.

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: In case of accidental ingestion, contact your regional poison center or physician immediately.

Most important acute symptoms/effects

Indication of any immediate medical attention and special treatment needed

5. FIREFIGHTING MEASURES

Extinguishing media

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

Unsuitable extinguishing media: High volume water jet

Special hazards arising from the substance or mixture

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

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

Advice for firefighters

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

Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Use adequate ventilation.

Environmental precautions

Methods and materials for containment and cleaning up

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.

Reference to other sections

Additional advice: No special precautions required.

7. HANDLING AND STORAGE

Precautions for safe handling

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.

Conditions for safe storage, including any incompatibilities

Storage temperature: 39 - 77 °F

Specific end use(s)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl alcohol</td>
<td>100-51-6</td>
<td>TWA</td>
<td>10 ppm</td>
</tr>
<tr>
<td>Imidacloprid</td>
<td>138261-41-3</td>
<td>SUP</td>
<td>0.7 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

Hazardous components without workplace control parameters

<table>
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<th>Components</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Propylene carbonate</td>
<td>108-32-7</td>
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<td>Moxidectin</td>
<td>113507-06-5</td>
</tr>
</tbody>
</table>

Personal protective equipment

Respiratory protection : Recommended Filter type:
Organic vapor with prefilter

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

Remarks: None required for consumer use of this product.

Eye protection: Safety glasses
None required for consumer use of this product.

Protective measures: Wear suitable protective equipment.
Please consult label for end-user requirements.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form: liquid
Colour: yellow, brownish, clear
Odour: weak characteristic
Melting point/range: No statements available.
Boiling point/boiling range: No statements available.
Density: 1.098 g/cm³ at 20 °C
Bulk density: Not applicable
Vapour pressure: No statements available.
Viscosity, dynamic: No statements available.
Viscosity, kinematic: No statements available.
Flow time: No statements available.
Surface tension: No statements available.
Water solubility: No statements available.
Solubility(ies): No statements available.
pH: No statements available.
Corrosive to metal: No statements available.
Partition coefficient (n-octanol/water):
Benzyl alcohol log Pow: 1.05
Propylene carbonate log Pow: -0.48 at 25 °C
Imidacloprid log Pow: 0.57 at 21 °C OECD 107

Flash point: > 100 °C
Inflammability (solid, gaseous): Not applicable
Explosion limits:
Benzyl alcohol
upper: 13 % (V) lower: 1.3 % (V)
Propylene carbonate
upper: 14.3 % (V) lower: 1.8 % (V)

Other information
10. STABILITY AND REACTIVITY

Reactivity
No statements available.

Reactions with water / air:
No statements available.

Ignition temperature:
Benzyl alcohol
c. 435 °C DIN 51794

Propylene carbonate
455 °C DIN 51794

Burning number:
Imidacloprid
5 at 20 °C Method: VDI 2263 Burning with flames or flying sparks.

fire spread velocity > 45 s/10 cm (EEC Method A.10)

Chemical stability

Thermal decomposition:
No data available

Dust explosion characteristic number:
Not applicable

Dust explosion class:
Not applicable

Impact sensitivity:
No data available

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

Explosive properties:
No statements available.

Possibility of hazardous reactions

deflagration ability:
No statements available.

Smoldering combustion:
No statements available.

Conditions to avoid
Do not allow product to come in contact with:
Heat
11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity: Acute toxicity estimate (ATE): 1,105 mg/kg
Method: Calculation method
Assessment: Harmful if swallowed.
Remarks: Calculated for GHS Classification and Labelling.

Acute toxicity estimate (ATE): 3,374 mg/kg
Method: Calculation method

Acute inhalation toxicity: Acute toxicity estimate (ATE): 14.25 mg/l
Test atmosphere: vapour
Method: Calculation method
Assessment: Harmful if inhaled.
Remarks: Calculated for GHS Classification and Labelling.

Acute toxicity estimate (ATE): 2 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist/aerosol
Method: Calculation method

Acute dermal toxicity: Acute toxicity estimate (ATE): 3,340 mg/kg
Method: Calculation method

Components:

Benzyl alcohol:

Acute oral toxicity: LD50 (Rat, male): 1,620 mg/kg
Assessment: Harmful if swallowed.

Acute inhalation toxicity: Assessment: Harmful if inhaled.

Acute dermal toxicity: LD50 (Rabbit): > 2,000 mg/kg
Assessment: May be harmful in contact with skin.
Propylene carbonate:
Acute oral toxicity: LD50 (Rat): 32,100 mg/kg
Assessment: No adverse effect has been observed in acute toxicity tests.

Acute inhalation toxicity: Exposure time: 8 h
Assessment: No adverse effect has been observed in acute toxicity tests.
Remarks: An LC50/inhalation/8h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.

Acute dermal toxicity: LD50 (Rabbit): > 20,000 mg/kg
Assessment: No adverse effect has been observed in acute toxicity tests.

Imidacloprid:
Acute oral toxicity: LD50 (Rat): 424 mg/kg
Assessment: Harmful if swallowed.

Acute inhalation toxicity: LC50 (Rat): > 5.323 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist/aerosol
Method: OECD 403
Assessment: May be harmful if inhaled.

Acute dermal toxicity: LD50 (Rat): > 5,000 mg/kg
Assessment: No adverse effect has been observed in acute toxicity tests.

Moxidectin:
Acute oral toxicity: LD50 (Rat): 106 mg/kg
Assessment: Toxic if swallowed.

Acute inhalation toxicity: LC50 (Rat): 4.1 mg/l
Exposure time: 4 h
Method: Calculation method
Assessment: Harmful if inhaled.

Acute dermal toxicity: LD50 (Rabbit): > 2,000 mg/kg

Acute toxicity (other routes of administration):
LD50 (Rat): 394 mg/kg
Application Route: intraperitoneal
LD50 (Rat): > 640 mg/kg
Application Route: subcutaneous

Skin corrosion/irritation

Components:
Benzyl alcohol:
Species: Rabbit
Method: OECD 404
Result: No skin irritation

**Propylene carbonate:**
Species: Rabbit
Method: OECD 404
Result: No skin irritation

**Imidacloprid:**
Species: Rabbit
Result: No skin irritation

**Moxidectin:**
Result: Moderate skin irritation

**Serious eye damage/eye irritation**

**Components:**

**Benzyl alcohol:**
Species: Rabbit
Result: Irritation to eyes, reversing within 7 days
Method: OECD 405

**Propylene carbonate:**
Species: Rabbit
Result: Eye irritation
Method: OECD 405

**Imidacloprid:**
Species: Rabbit
Result: No eye irritation

**Moxidectin:**
Result: Moderate eye irritation

**Respiratory or skin sensitisation**

**Components:**

**Benzyl alcohol:**
Species: Guinea pig
Method: Magnusson and Kligmann maximization test
Result: Did not cause sensitisation on laboratory animals.

**Propylene carbonate:**
Result: Does not cause skin sensitisation.
Assessment: An acute toxic effect is not expected.

**Imidacloprid:**
Test Type: Skin sensitisation
Species: Guinea pig
Method: Magnusson and Kligmann maximization test
Result: Did not cause sensitisation on laboratory animals.

Assessment: Harmful if swallowed., May be harmful if inhaled.

**Moxidectin:**
Assessment: Toxic if swallowed., Harmful if inhaled.

**Germ cell mutagenicity**

**Components:**

**Benzyl alcohol:**
Genotoxicity in vitro: Test Type: Ames test
Result: negative
Genotoxicity in vivo: Result: No indication of mutagenic effects.

**Propylene carbonate:**
Genotoxicity in vivo: Result: No indication of mutagenic effects.

**Imidacloprid:**
Genotoxicity in vitro: Test Type: Ames test
Result: negative
Remarks: In vitro tests did not show mutagenic effects.
Genotoxicity in vivo: Result: No indication of mutagenic effects., No evidence of a genotoxic effect.

**Carcinogenicity**

**IARC**
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA**
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP**
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
STOT - single exposure

Components:
Benzyl alcohol:
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Components:
Benzyl alcohol:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Imidacloprid:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:
Benzyl alcohol:
Species: Rat
NOAEL: 400 mg/kg
Exposure time: 90-day

Propylene carbonate:
Repeated dose toxicity - Assessment: An acute toxic effect is not expected.

Imidacloprid:
Repeated dose toxicity - Assessment: Harmful if swallowed., May be harmful if inhaled.

Moxidectin:
Repeated dose toxicity - Assessment: Toxic if swallowed., Harmful if inhaled.

Further information

Components:
Benzyl alcohol:
Remarks: Dermal absorption possible

Remarks: If inhaled:
irritations
Shortness of breath
Cough

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

Remarks: Systemic toxicity
Headache
Nausea
CNS disorders
Convulsions
Unconsciousness
cessation of breathing

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Benzyl alcohol:
Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 10 mg/l
Exposure time: 96 h
Test Type: Acute Fish toxicity

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 55 mg/l
Exposure time: 24 h

Toxicity to algae : IC50: > 100 mg/l
Exposure time: 72 h

Toxicity to bacteria : EC50 (Photobacterium phosphoreum): 71.4 mg/l
Exposure time: 0.5 h

Propylene carbonate:
Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): ca. 5,300 mg/l
Exposure time: 96 h
Test Type: Static test
Method: DIN 38412

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 500 mg/l
Exposure time: 48 h
Test Type: Static test

Toxicity to algae : (Desmodesmus subspicatus (green algae)): > 500 mg/l
Exposure time: 72 h
Test Type: Static test
Method: DIN 38412
Toxicity to bacteria: EC20 (activated sludge micro-organism): > 800 mg/l
Exposure time: 0.5 h
Method: ISO 8192

Ecotoxicology Assessment
Acute aquatic toxicity: This product has no known ecotoxicological effects.

Imidaclorpid:
Toxicity to fish: LC50 (Cyprinus carpio (Carp)): 280 mg/l
Exposure time: 96 h
Test Type: Acute Fish toxicity

LC50 (Oncorhynchus mykiss (rainbow trout)): 211 mg/l
Exposure time: 96 h
Test Type: Acute Fish toxicity

LC50 (Leuciscus idus (Golden orfe)): 237 mg/l
Exposure time: 96 h
Test Type: Acute Fish toxicity

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 85 mg/l
Exposure time: 48 h

Toxicity to algae: EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h

EC50 (Desmodesmus subspicatus (green algae)): > 10 mg/l
Exposure time: 72 h

M- Factor (Acute aquatic toxicity): 1,000

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

Ecotoxicology Assessment
Acute aquatic toxicity: Very toxic to aquatic life.

Chronic aquatic toxicity: Very toxic to aquatic life with long lasting effects.

Moxidectin:
Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): 0.16 µg/l
Test Type: Acute Fish toxicity

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 0.00003 mg/l

Toxicity to algae: EC50 (Selenastrum Capricornutum (Green algae)): 0.087 mg/l
M-Factor (Acute aquatic toxicity): 10,000

Ecotoxicology Assessment
Acute aquatic toxicity: Very toxic to aquatic life.
Chronic aquatic toxicity: Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:
Benzyl alcohol:
Biodegradability: Result: rapidly biodegradable
Biodegradation: 92 - 96 %
Exposure time: 28 d
Method: OECD 301 C

Propylene carbonate:
Biodegradability: Result: rapidly biodegradable
BOD/ThOD: 86 %
Dissolved organic carbon (DOC): 90 - 100 %
Method: ISO 7827

Imidacloprid:
Stability in water: Degradation half life: > 1 a (25 °C) pH: 4
Hydrolysis: at 25 °C
Degradation half life: > 1 a (25 °C) pH: 7
Hydrolysis: at 25 °C
Degradation half life: ca. 1 h (25 °C) pH: 9
Hydrolysis: at 25 °C

Moxidectin:
Stability in water: Degradation half life: 180 d

Bioaccumulative potential

Components:
Benzyl alcohol:
Partition coefficient: n-octanol/water: log Pow: 1.05

Propylene carbonate:
Bioaccumulation: Remarks: Due to the distribution coefficient n-octanol/water,
accumulation in organisms is not expected.

Partition coefficient: n-octanol/water : log Pow: -0.48 (25 °C)

**Imidacloprid:**

Bioaccumulation : Remarks: Low potential for bioaccumulation

Partition coefficient: n-octanol/water : log Pow: 0.57 (21 °C)

Method: OECD 107

**Mobility in soil**

No data available

**Other adverse effects**

**Product:**

Additional ecological information : Do not allow to enter surface waters or groundwater.

**Components:**

**Benzyl alcohol:**

Additional ecological information : Do not allow to enter surface waters or groundwater.

**Propylene carbonate:**

Adsorbed organic bound halogens (AOX) : Remarks: Product does not contain any organic halogens.

**Imidacloprid:**


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13. **DISPOSAL CONSIDERATIONS**

**Disposal methods**

Waste from residues : 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)
14. TRANSPORT INFORMATION

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

**Sea transport (IMDG)**

<table>
<thead>
<tr>
<th>Description of the goods</th>
<th>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (MOXIDECTIN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN Number</td>
<td>3082</td>
</tr>
<tr>
<td>Class</td>
<td>9</td>
</tr>
<tr>
<td>Packaging group</td>
<td>III</td>
</tr>
<tr>
<td>IMDG-Labels</td>
<td>9</td>
</tr>
<tr>
<td>EmS Number</td>
<td>F-A</td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>yes</td>
</tr>
</tbody>
</table>

**Air transport (IATA)**

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<td>Dangerous goods labels</td>
<td>9</td>
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<tr>
<td>Environmentally hazardous</td>
<td>yes</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

**EPCRA - Emergency Planning and Community Right-to-Know Act**

**CERCLA Reportable Quantity**
This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**
This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards**
- Immediate Health Hazard
- Acute Health Hazard
- Chronic Health Hazard

**SARA 302**
This material does not contain any components with a section 302 EHS TPQ.

**SARA 313**
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**US State Regulations**
**Massachusetts Right To Know**
SAFETY DATA SHEET

Advantage multi for Cats or Dogs

Version 3.0

Revision Date 06/01/2017

Print Date 07/11/2017

16. OTHER INFORMATION

Full text of H-Statements mentioned in chapters 2 and 3

H301 Toxic if swallowed.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

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.