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

Product information

Product Name:	Advantage II
SDS Number:	122000001561

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

Emergency Overview

Colour: yellow, brownish **Form:** solution **Odour:** weak, characteristic.

GHS Classification:

Acute toxicity (Oral)	:	Category 4
Acute toxicity (Inhalation)	:	Category 4
Serious eye damage	:	Category 1

GHS Label element:

Hazard pictograms :

Signal word : Danger

Hazard statements : H302 + H332 Harmful if swallowed or if inhaled
H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

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:
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.
P391 Collect spillage.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Weight percent	Components	CAS-No.
9.14%	Imidacloprid	138261-41-3
70.66%	Benzyl alcohol	100-51-6
15.08%	Propylene carbonate	108-32-7

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 the release 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.

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:	solution	
Colour:	yellow, brownish	
Odour:	weak, characteristic	
Odour Threshold:	No applicable information is available	
Melting point:	< -60 °C	ISO 3016
Boiling point/boiling range:	103 °C	DIN 53171
Density:	1.096 g/cm³ at 68 °F (20 °C)	DIN 51757
Bulk density:	No applicable information is available	
Vapour pressure:	38 hPa at 68 °F (20 °C)	EC A.4
Viscosity, dynamic:	6.606 mPa.s at 68 °F (20 °C)	DIN 53019/1
Viscosity, kinematic:	6.027 mm2/s at 68 °F (20 °C)	DIN 51562
Flow time:	< 30 s at 3 mm nozzle	ISO 2431
Surface tension:	No applicable information is available	
Miscibility with water:	immiscible	
Water solubility:	No applicable information is available	
pH:	neutral	
Relative density:	No applicable information is available	
Partition coefficient:	No applicable information is available	
Solubility(ies):	No applicable information is available	
Flash point:	> 239 °F (> 115 °C)	ISO 2719
Flammability (solid, gas):	No applicable information is available	
Ignition temperature:	779 °F (415 °C)	DIN 51794
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: No data available

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:
Benzyl alcohol
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:
LD50 Rat , female : 1,000 mg/kg

LD50 Rat , male : 1,283 mg/kg
Harmful if swallowed.

Acute inhalation toxicity:
LC50 Rat: > 2.5 mg/l

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

Skin irritation:
Rabbit
Result: Slightly irritating

Eye irritation:
Result: Irreversible effects on the eye
Method: Expert judgement

Rabbit
Result: Moderate eye irritation

Sensitisation:
Skin sensitization guinea pig
Result: Did not cause sensitisation on laboratory animals.

Subacute, subchronic and prolonged toxicity:
Benzyl alcohol
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

Benzyl alcohol
Ames test
Result: negative

pyriproxyfen
Ames test
Result: negative

V79-HPRT Forward Mutation Assay
Result: negative

In vitro Cytogenetic Test
Result: negative

Unscheduled DNA Synthesis Test
Result: negative

Genotoxicity in vivo:
Imidacloprid

Result: No indication of mutagenic effects., No evidence of a genotoxic effect.

Benzyl alcohol

Result: No indication of mutagenic effects.

Propylene carbonate

Result: No indication of mutagenic effects.

pyriproxyfen
Micronucleus test, Mouse
Result: No evidence of a genotoxic effect.

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

pyriproxyfen
Rat:
Result: negative

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

pyriproxyfen
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.

Benzyl alcohol
Result: Did not show teratogenic effects in animal experiments.

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

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

Pharmaceutic effects:
Imidacloprid
Insecticide

pyriproxyfen
Insecticide

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:

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

exposure.

100-51-6 :
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

Benzyl alcohol
Acute Fish toxicity: LC50 10 mg/l
Test species: Lepomis macrochirus (Bluegill) Duration of test: 96 h

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

pyriproxyfen
Acute Fish toxicity: LC50 0.33 - 0.37 mg/l
Test species: Oncorhynchus mykiss (rainbow trout) 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

Benzyl alcohol
EC50 55 mg/l
Test species: Daphnia magna (Water flea) Duration of test: 24 h

Propylene carbonate
static test EC50 > 500 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

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

Benzyl alcohol
IC50 > 100 mg/l
Duration of test: 72 h

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

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

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

Benzyl alcohol
EC50 71.4 mg/l
tested on: Photobacterium phosphoreum
Duration of test: 0.5 h

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

Biodegradability:
Benzyl alcohol
92 - 96 %, 28 d rapidly biodegradable
Method: OECD 301 C

Propylene carbonate
rapidly biodegradable

pyriproxyfen
Not readily biodegradable.
Method: OECD 301 D

Bioaccumulation:
Imidacloprid

Low potential for bioaccumulation

Propylene carbonate

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

pyriproxyfen

Bioconcentration factor (BCF)
ca. 1,500

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. (PYRIPROXYFEN)
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. (PYRIPROXYFEN)
Class	9
Packaging group	III
IMDG-Labels	9
EmS Number	F-A
Marine pollutant	yes

15. REGULATORY INFORMATION

Other regulations: No statements available.

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
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%	Benzyl alcohol	100-51-6

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.