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

Product information

Product Name: Advantage Treatment Spray for Dogs
MSDS Number: 122000010787

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

CAUTION! OSHA, Flammable liquid  Colour: clear, yellowish  Form: liquid  Odour: Alcohol.
Harmful if inhaled. Harmful if absorbed through skin. Moderate eye irritation Harmful if swallowed.

GHS Classification:

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquids</td>
<td>Category 2</td>
</tr>
<tr>
<td>Eye irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific target organ toxicity - single exposure</td>
<td>Category 3 (Central nervous system)</td>
</tr>
<tr>
<td>Acute toxicity</td>
<td>Category 5</td>
</tr>
</tbody>
</table>

GHS Label element:

<table>
<thead>
<tr>
<th>Hazard pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Fire] [Exclamation]</td>
</tr>
</tbody>
</table>

Signal word : Danger
Hazard statements:
- H225 Highly flammable liquid and vapour.
- H303 May be harmful if swallowed.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.

Precautionary statements:

Prevention:
- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P233 Keep container tightly closed.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P273 Avoid release to the environment.

Response:
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:
- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Hazard Communication (29CFR 1910.1200)

Skin Contact: Eye Contact

Hazardous under 29 CFR 1910.1200

Acute Inhalation Hazards: Harmful by inhalation.

Acute Skin Hazards: May cause slight irritation.

Acute Eye Hazards: Moderate eye irritation

Acute Ingestion Hazards: Expected to be harmful.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Weight percent</th>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;=95%</td>
<td>Propan-2-ol</td>
<td>67-63-0</td>
</tr>
<tr>
<td>1 - 5%</td>
<td>Tradesecret</td>
<td></td>
</tr>
</tbody>
</table>

Other Ingredients

<table>
<thead>
<tr>
<th>Weight percent</th>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.18%</td>
<td>Pyrethrum Extract</td>
<td>8003-34-7</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)

**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:
Industrial uses: 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

Propan-2-ol (67-63-0)

US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 200 ppm

US. ACGIH Threshold Limit Values
Short Term Exposure Limit (STEL): 400 ppm

US. NIOSH: Pocket Guide to Chemical Hazards
Recommended exposure limit (REL): 400 ppm, 980 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards
Short Term Exposure Limit (STEL): 500 ppm, 1,225 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 400 ppm, 980 mg/m3

Pyrethrum Extract (8003-34-7)

US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 5 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards
Recommended exposure limit (REL): 5 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 5 mg/m3

Pyrethrum Extract (8003-34-7)

US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 5 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards
Recommended exposure limit (REL): 5 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 5 mg/m3

Respiratory protection:
Recommended Filter type: Organic vapor with prefilter

Hand protection:
Chemically resistant gloves.

Eye protection:
Safety glasses

Other protective measures:
No special safety precautions are required during handling of pharmaceuticals in their intended finished form (tablets or liquid formulations) by chemists, the hospital's medical staff or patients.
For the intake of ready for use pharmaceuticals or the external use on the skin please read the label and the package leaflet.

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>clear, yellowish</td>
</tr>
<tr>
<td>Odour</td>
<td>Alcohol</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>No applicable information is available</td>
</tr>
<tr>
<td>Density</td>
<td>0.788 g/cm³ at 68 °F (20 °C)</td>
</tr>
<tr>
<td>Bulk density</td>
<td>No applicable information is available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No applicable information is available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>7.5 mPa.s at 69.26 °F (20.7 °C)</td>
</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>
<td>in all proportions</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No applicable information is available</td>
</tr>
<tr>
<td>pH</td>
<td>9.6 at 50 g/l</td>
</tr>
<tr>
<td>Relative density</td>
<td>No applicable information is available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No applicable information is available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>No applicable information is available</td>
</tr>
<tr>
<td>Flash point</td>
<td>60.08 °F (15.6 °C) closed cup</td>
</tr>
<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:** Oxidizing agents

**Hazardous reactions:** None known.

**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:  
Propan-2-ol  
Breathing of the fumes may lead to narcotic symptoms. 

After absorption headaches, Nausea, Unconsciousness, Dizziness 

Acute oral toxicity:  
LD50 rat : 3,980 mg/kg  
May be harmful if swallowed. 

Acute inhalation toxicity:  
LC50 > 9.66 mg/l, 4 h  
The substance or mixture has no acute inhalation toxicity  

Acute dermal toxicity:  
LD50 rabbit: > 2,000 mg/kg  

Skin irritation:  
rat  
Result: Mild skin irritation  

Eye irritation:  
Result: Irritation to eyes, reversing within 7 days  

Sensitisation:  
guinea pig  
Result: Does not cause skin sensitization. 

Genotoxicity in vitro:  
Propan-2-ol  
Ames test  
Result: negative  

Micronucleus test  
Result: No indication of clastogenic effects.
Genotoxicity in vivo:
Propan-2-ol
Micronucleus test, mouse
Result: No indication of clastogenic effects.
Method: OECD TG 474

Reproductive toxicity:
Propan-2-ol
Result: Animal testing did not show any effects on fertility.
Toxicological Evaluations (Institute for Toxicology of Bayer Pharma AG)

Teratogenicity:
Propan-2-ol
Result: Evidence of an embryotoxic effect in animal studies at doses which are harmful to the parent animals.
Toxicological Evaluations (Institute for Toxicology of Bayer Pharma AG)

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

STOT - single exposure:
Components:
67-63-0:
Assessment: May cause drowsiness or dizziness.

STOT - repeated exposure:
no data available

12. ECOLOGICAL INFORMATION

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

Toxicity to fish:
Propan-2-ol
Acute Fish toxicity: LC50 > 100 mg/l
Test species: Leuciscus idus (Golden orfe) Duration of test: 48 h

Acute Fish toxicity: LC50 1,400 mg/l
Test species: Lepomis macrochirus (Bluegill) Duration of test: 96 h

Tradesecret
Acute Fish toxicity: LC50 > 1,000 mg/l
Test species: Salmo gairdneri Duration of test: 96 h

Toxicity to daphnia and other aquatic invertebrates:
Propan-2-ol
EC50 > 100 mg/l
Test species: Daphnia magna (Water flea) Duration of test: 48 h
Trade-secret
EC50 > 1,000 mg/l
Duration of test: 48 h

Toxicity to algae:
Propan-2-ol
IC50 > 1,000 mg/l
tested on: Desmodesmus subspicatus (green algae) Duration of test: 72 h

Toxicity to bacteria:
Propan-2-ol
EC0 1,050 mg/l
tested on: Pseudomonas putida
Duration of test: 24 h

Biodegradability:
Propan-2-ol
> 70 %, 10 d
According to the results of tests of biodegradability this product is considered as being readily biodegradable.

13. DISPOSAL CONSIDERATIONS

If discarded in its purchased form, this product would be a hazardous waste. 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)
Proper shipping name: ISOPROPANOL SOLUTION
Hazard Class or Division: 3
UN/NA Number: UN1219
Packaging group: II
Hazard Label(s): Flammable Liquid

US Sea transport (IMDG)
Proper shipping name: ISOPROPANOL SOLUTION
Hazard Class or Division: 3
UN number: UN1219
Packaging group: II
Hazard Label(s): FLAMMABLE LIQUIDS

US Air transport (ICAO / IATA cargo aircraft only)
Proper shipping name: ISOPROPANOL SOLUTION
Hazard Class or Division: 3
UN/ID Number: UN1219
Packaging group: II
Hazard Label(s): FLAMMABLE LIQUIDS

US Air transport (ICAO / IATA passenger and cargo aircraft)
Proper shipping name: ISOPROPANOL SOLUTION
Hazard Class or Division: 3
UN/ID Number: UN1219
Packaging group: II
Hazard Label(s): FLAMMABLE LIQUIDS

International IATA
UN Number 1219
Description of the goods ISOPROPANOL SOLUTION
Class 3
Packaging group II
Dangerous goods labels 3
Environmentally hazardous no

International IMDG
UN Number 1219
Description of the goods ISOPROPANOL SOLUTION
Class 3
Packaging group II
IMDG-Labels 3
Marine Pollutant no

15. REGULATORY INFORMATION

Other regulations: No statements available.

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

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

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.