SAFETY DATA SHEET

Advantage II

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	06/24/2020	122000001561	Date of first issue: 24.06.2020

SECTION 1. IDENTIFICATION

Product information
Product Name : Advantage II
SDS Number : 122000001561

Use : veterinary medicine

Company
Elanco Animal Health
2500 Innovation Way
Greenfield, IN 46140
USA
+1-877-Elanco1(+1-877-3526261)
elanco_sds@elanco.com

In case of emergency: CHEMTREC International: +1 703-527-3887 (24 hours)

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Eye irritation : Category 2A

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H302 + H332 Harmful if swallowed or if inhaled.
H319 Causes serious eye irritation.

Precautionary statements :

Prevention:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Benzyl alcohol	100-51-6	70,66
Propylene carbonate	108-32-7	15,08
Imidacloprid	138261-41-3	9,14

SECTION 4. FIRST AID MEASURES

General advice : No hazards which require special first aid measures.

If inhaled : Not an expected entry route.
In case of skin contact : If skin reactions occur, contact a physician.
In case of eye contact : Flush eyes with water as a precaution.
If swallowed : In case of accidental ingestion, contact your regional poison center or physician immediately.
Most important symptoms and effects, both acute and delayed : No information available.
Notes to physician : No information available.

SECTION 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

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.
Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Use with adequate ventilation.
No special precautions required.

Methods and materials for containment and 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.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : No special protective measures against fire required.

Advice on safe handling : Industrial uses:
Avoid formation of aerosol.
Use with local exhaust ventilation.
Avoid contact with skin, eyes and clothing.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Benzyl alcohol	100-51-6	TWA	10 ppm	US WEEL
		TWA	10 ppm	US WEEL
Benzyl alcohol	100-51-6	TWA	10 ppm	US WEEL
		TWA	10 ppm	US WEEL
Imidacloprid	138261-41-3	Bayer OES	0,7 mg/m³	TRGS901

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 : 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : solution
Colour : yellow, brownish
Odour : weak, characteristic
pH : neutral

Melting point / range : < -76 °F / -60 °C
Method: ISO 3016

Boiling point/boiling range	:	217 °F / 103 °C Method: DIN 53171
Flash point	:	> 239 °F / > 115 °C Method: ISO 2719
Vapour pressure	:	38 hPa (68 °F / 20 °C) Method: Regulation (EC) No. 440/2008, Annex, A.4
Density	:	1,096 g/cm³ (68 °F / 20 °C) Method: DIN 51757
Auto-ignition temperature	:	779 °F / 415 °C Method: DIN 51794
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	6,606 mPa.s (68 °F / 20 °C) Method: DIN 53019/1
Viscosity, kinematic	:	6,027 mm2/s (68 °F / 20 °C) Method: DIN 51562
Flow time	:	< 30 s Cross section: 3 mm Method: ISO 2431
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Impact sensitivity	:	No data available
Minimum ignition energy	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No data available
Chemical stability	:	No data available
Possibility of hazardous reactions	:	No data available
Conditions to avoid	:	Do not allow product to come in contact with: Heat
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	Hydrogen cyanide (hydrocyanic acid) Hydrogen chloride gas Nitrogen oxides (NOx) Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat, female): 1.000 mg/kg

LD50 (Rat, male): 1.283 mg/kg

Acute inhalation toxicity : Acute toxicity estimate (ATE): 2,05 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist/aerosol
Method: Calculation method

Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg
Assessment: No adverse effect has been observed in acute toxicity tests.

Components:

Benzyl alcohol:

Acute oral toxicity : LD50 (Rat, male): 1.620 mg/kg
Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity : Assessment: The component/mixture is moderately toxic after short term inhalation.

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
Method: OECD 401

Acute inhalation toxicity : LC50 (Rat): > 5,323 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist/aerosol
Method: OECD 403

Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg

Skin corrosion/irritation

Product:

Species : Rabbit
Result : Mild skin 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

Serious eye damage/eye irritation

Product:

Species : Rabbit
Result : Moderate 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

Respiratory or skin sensitisation

Product:

Test Type	:	Skin sensitisation
Species	:	Guinea pig
Result	:	Did not cause sensitisation on laboratory animals.

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.

Imidacloprid:

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

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

Components:

Imidacloprid:

Result	:	Animal testing did not show any carcinogenic effects.

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 on OSHA's list of regulated carcinogens.

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.

Reproductive toxicity

Components:

Imidacloprid:

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

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
Ataxia (uncontrolled movements)
Unconsciousness
cessation of breathing

Imidacloprid:

Pharmaceutic effects
Remarks : Insecticide

SECTION 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 microorganisms : EC50 (Photobacterium phosphoreum): 71,4 mg/l
Exposure time: 0,5 h

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

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 microorganisms : EC20 (Activated sludge micro-organism): > 800 mg/l
Exposure time: 0,5 h
Method: ISO 8192

Ecotoxicology Assessment

Acute aquatic toxicity : slightly hazardous to water

Imidacloprid:

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

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

Toxicity to microorganisms : EC50 (Activated sludge micro-organism): > 10.000 mg/l
Method: OECD 209

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: at25 °C

Degradation half life: > 1 a (25 °C) pH: 7
Hydrolysis: at25 °C

Degradation half life: ca. 1 h (25 °C) pH: 9
Hydrolysis: at25 °C

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 (77 °F / 25 °C)

Imidacloprid:

Bioaccumulation : Remarks: Low potential for bioaccumulation

Partition coefficient: n-octanol/water : log Pow: 0,57 (70 °F / 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:

Propylene carbonate:

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

Imidacloprid:

Adsorbed organic bound halogens (AOX) : Remarks: The product contains organic halogens.

SECTION 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)

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PYRIPROXYFEN)
Class	:	9
Packing group	:	III
Labels	:	9
Environmentally hazardous	:	yes

IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PYRIPROXYFEN)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 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 302 Extremely Hazardous Substances Threshold Planning Quantity

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

SARA 311/312 Hazards	:	Acute toxicity (any route of exposure) Serious eye damage or eye irritation
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.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

Benzyl alcohol	100-51-6	70,66 %

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

Benzyl alcohol	100-51-6

Pennsylvania Right To Know

Benzyl alcohol	100-51-6

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

New York City Hazardous Substances

2,6-Di-tert-butyl-p-cresol	128-37-0

International Regulations

Montreal Protocol (Ozone Depleting Substances)	:	Not applicable
Rotterdam Convention (Prior Informed Consent)	:	Not applicable
Stockholm Convention (Persistent Organic Pollutants)	:	Not applicable

The components of this product are reported in the following inventories:

TSCA	:	Substance(s) not listed on TSCA inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:

Health - 2	Flammability - 1	Instability - 0	Others -

HMIS® IV:

Health - 2	Flammability - 1	Instability - 0	Others -

Full text of other abbreviations

TRGS901	:	TRGS 901, Explanations and Basis for Exposure Limits in the Workplace Air
US WEEL	:	USA. Workplace Environmental Exposure Levels (WEEL)
TRGS901 / Bayer OES	:	BOES = Bayer Occupational Exposure Standard
US WEEL / TWA	:	8-hr TWA

Revision Date	:	06/24/2020

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.

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