SAFETY DATA SHEETS

This SDS packet was issued with item:

078945889

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

078945890 078945891

SAFETY DATA SHEET

SERESTO COLLAR

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	06/23/2020	122000005913	Date of first issue: 23.06.2020

SECTION 1. IDENTIFICATION

Product information
Product Name : SERESTO COLLAR
SDS Number : 122000005913

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
Not a hazardous substance or mixture.

GHS label elements
Not a hazardous substance or mixture.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Imidacloprid	138261-41-3	10
Flumethrin	69770-45-2	4,5
Titanium dioxide	13463-67-7	0,5

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 : No hazards which require special first aid measures.
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 : Any

Specific hazards during fire-fighting : Fire may cause evolution of:
Carbon monoxide (CO)
Carbon dioxide (CO2)

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.
Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Avoid dust formation.

SECTION 7. HANDLING AND STORAGE

Further information on storage conditions : Store in a cool dry place, away from oxidizing agents and flammable liquids.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Polyvinylchloride	9002-86-2	TWA (Respirable fraction)	1 mg/m³	ACGIH
		TWA (Respirable fraction)	1 mg/m³	ACGIH
Imidacloprid	138261-41-3	Bayer OES	0,7 mg/m³	TRGS901
Flumethrin	69770-45-2	Bayer OES	0,02 mg/m³	
Stearic acid	57-11-4	TWA (Inhalable fraction)	10 mg/m³	ACGIH
		TWA (Inhalable fraction)	10 mg/m³	ACGIH
		TWA (Respirable fraction)	3 mg/m³	ACGIH
		TWA (Respirable fraction)	3 mg/m³	ACGIH
Titanium dioxide	13463-67-7	TWA (total dust)	15 mg/m³	OSHA Z-1
		TWA (total dust)	15 mg/m³	OSHA Z-1
		TWA (Total	10 mg/m³	OSHA P0

		dust)		
		TWA (Total dust)	10 mg/m³	OSHA P0

Personal protective equipment

Respiratory protection : Recommended Filter type:
HEPA
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 : None required for consumer use of this product.

Protective measures : Please consult label for end-user requirements.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : solid

Colour : grey

pH : neutral

Melting point / range : 284 °F / 140 °C
Method: DIN ISO 3146

Burning number : 3 (68 °F / 20 °C)
Local combustion without spreading

5 (212 °F / 100 °C)
Complete combustion with flames

Bulk density : 550 kg/m3Method: ISO 697

Auto-ignition temperature : No data available

Decomposition temperature : 365 °F / 185 °C
Heating rate: 3 K/min
Decomposition energy (mass): 440 KJ/kg

Explosive properties : No statements available.

Oxidizing properties : No data available

Impact sensitivity : No data available

Dust explosion class : St 2 (= dust explosion tendency)

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 : Extremes of temperature and direct sunlight.

Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	Carbon monoxide (CO) Carbon dioxide (CO2)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate (ATE): 2.011 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate (ATE): 10,23 mg/l Exposure time: 4 h Test atmosphere: dust/mist/aerosol Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate (ATE): > 5.000 mg/kg Method: Calculation method

Components:

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

Flumethrin:

Acute oral toxicity	:	LD50 (Rat): 175 mg/kg Test substance: in corn oil
Acute inhalation toxicity	:	LC50 (Rat): 0,572 mg/l Exposure time: 4 h Test atmosphere: dust/mist/aerosol Method: OECD 403
Acute dermal toxicity	:	LD50 (Rat, female): 1.436 mg/kg

Titanium dioxide:

Acute oral toxicity	:	LD50 (Rat): > 10.000 mg/kg
Acute dermal toxicity	:	LD50 (Rabbit): > 10.000 mg/kg

Skin corrosion/irritation

Components:

Imidacloprid:

Species	:	Rabbit
Result	:	No skin irritation

Flumethrin:

Species	:	Rabbit
Result	:	No skin irritation

Titanium dioxide:

Result	:	No skin irritation

Serious eye damage/eye irritation

Components:

Imidacloprid:

Species	:	Rabbit
Result	:	No eye irritation

Flumethrin:

Species	:	Rabbit
Result	:	No eye irritation

Titanium dioxide:

Result	:	No eye irritation
Remarks	:	Mechanical irritation of the eyes is possible.

Respiratory or skin sensitisation

Components:

Imidacloprid:

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

Flumethrin:

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

Titanium dioxide:

Method	:	OECD 406
Remarks	:	Non-sensitizer

Germ cell mutagenicity

Components:

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.

Flumethrin:

Genotoxicity in vitro : Result: No evidence of a genotoxic effect.

Genotoxicity in vivo : Result: No evidence of a genotoxic effect.

Carcinogenicity

Components:

Imidacloprid:

Result : Animal testing did not show any carcinogenic effects.

Flumethrin:

Species : Rat
Result : Animal testing did not show any carcinogenic effects.

IARC Group 2B: Possibly carcinogenic to humans
Titanium dioxide 13463-67-7
Group 2B: Possibly carcinogenic to humans
Titanium dioxide 13463-67-7

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:

Flumethrin:

Effects on fertility : Species: Rat
Result: Animal testing did not show any effects on fertility.

STOT - single exposure

Components:

Flumethrin:

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

STOT - repeated exposure

Components:

Imidacloprid:

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

Flumethrin:

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

Further information

Components:

Imidacloprid:

Pharmaceutic effects
Remarks : Insecticide

Flumethrin:

Pharmaceutic effects
Remarks : Antiparasitic agent

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

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

Flumethrin:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0,17 mg/l Exposure time: 96 h Test Type: Acute Fish toxicity Method: OECD 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0,0027 mg/l Exposure time: 48 h Method: OECD 202
Toxicity to algae/aquatic plants	:	IC50 (Desmodesmus subspicatus (green algae)): 0,59 mg/l Exposure time: 72 h Method: OECD 201

Titanium dioxide:

Toxicity to fish	:	LC50 (Cyprinodon sp. (minnow)): 240 - 370 mg/l Exposure time: 96 h Test Type: Acute Fish toxicity
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Mysidopsis almyra (Opposum shrimp)): 300 - 400 mg/l Exposure time: 96 h
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD 201 EC50 (Skeletonema costatum (marine diatom)): > 10.000 mg/l Exposure time: 72 h Method: ISO 10253

Persistence and degradability

Components:

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

Flumethrin:

Biodegradability	:	Result: Not rapidly biodegradable Biodegradation: 0 %

Exposure time: 28 d
Method: OECD 301F

Titanium dioxide:

Biodegradability : Remarks: Pigments are practically not biodegradable.

Bioaccumulative potential

Components:

Imidacloprid:

Bioaccumulation : Remarks: Low potential for bioaccumulation

Partition coefficient: n-octanol/water : log Pow: 0,57 (70 °F / 21 °C)
Method: OECD 107

Flumethrin:

Partition coefficient: n-octanol/water : log Pow: 6,2

Titanium dioxide:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Mobility in soil

No data available

Other adverse effects

Components:

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 3077

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(FLUMETHRIN)

Class	:	9
Packing group	:	III
Labels	:	9
Environmentally hazardous	:	yes

IMDG-Code

UN number	:	UN 3077
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (FLUMETHRIN)
Class	:	9
Packing group	:	III
Labels	:	9
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	:	No SARA Hazards
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

No components are subject to the Massachusetts Right to Know Act.

New York City Hazardous Substances

Titanium dioxide	13463-67-7

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 - 1	Flammability - 1	Instability - 0	Others -

HMIS® IV:

Health - 1	Flammability - 1	Instability - 0	Others -

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
OSHA P0	:	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
TRGS901	:	TRGS 901, Explanations and Basis for Exposure Limits in the Workplace Air
ACGIH / TWA	:	8-hour, time-weighted average
OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average
TRGS901 / Bayer OES	:	BOES = Bayer Occupational Exposure Standard

Revision Date : 06/23/2020

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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