SAFETY DATA SHEET

1. IDENTIFICATION

Trade Name: Residual Flea and Tick Spray for Dogs
Product identifier: see EPA registration number
Synonym: XH1
Brand Names: Sergeant's
EPA Registration #: 2517-71

Manufacturer:
The Perrigo Company
515 Eastern Avenue
Allegan, MI 49010 USA
Tel: 269-673-8451
Email SDSRequest@Perrigo.com

Manufacturing Site:
Sergeant's Pet Care Products, Inc.
10077 South 134th Street
Omaha, NE 68138 USA

Emergency phone numbers
First aid or Spill: 888-464-2986 (U.S. calls)
+1 760-476-3962 Code 333304 (International calls)

Pet emergency/
Adverse event report: 1-800-781-4738

Recommended use: Control fleas and ticks in pets
Restrictions on use: Use only as directed.

2. HAZARD(S) IDENTIFICATION

Classification:

Physical	Health
Flammable Liquid Category 3	Skin Sensitizer Category 1

Label Elements:
Warning!

Hazard statement(s)
Flammable liquid and vapor.
May cause an allergic skin reaction.

Precautionary statement(s)
Keep away from heat, sparks, open flames and hot surfaces. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof electrical, ventilating and lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.

Precautionary statement(s)
Avoid breathing mists or spray.
Wear protective gloves.
Contaminated clothing must not be allowed out of the workplace.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. If skin irritation or rash occurs: Get medical attention.
In case of fire: Use water spray, carbon dioxide or alcohol-resistant foam to extinguish.
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep cool.
Dispose in accordance with local and national regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Concentration
Permethrin	52645-53-1	0.101%
Pyrethrins	8003-34-7	0.112%
Isopropanol	67-63-0	5-<10%
Non-Hazardous and other ingredients below the disclosure limits	Mixture	Balance

The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

Inhalation: Remove person to fresh air. If irritation occurs or symptoms develop, get medical attention.
Skin contact: Wash with soap and water. If irritation or rash develops and persists, get medical attention. Remove and contaminated clothing and launder it before reuse.
Eye contact: Flush eyes with water while lifting the upper and lower lids. Remove contact lenses if present and easy to do, then continue rinsing. Get medical attention if irritation persists**.**
Ingestion: Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to a person who is unconscious or convulsing. Get medical attention if large amount is swallowed.

Most important symptoms/effects, acute and delayed: May cause eye and skin irritation. Ingestion may cause intestinal upset with nausea and vomiting and nervous system effects. Prolonged or repeated skin contact may cause allergic sensitization. Inhalation of vapors or mists may cause respiratory irritation and nervous system effects.

Indication of immediate medical attention and special treatment, if necessary: Immediate medical attention is not generally required.

5. FIRE-FIGHTING MEASURES

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

Specific hazards arising from the chemical: Flammable liquid and vapor. Vapors are heavier than air and can flow to remote ignition sources and flash back. Vapors may be explosive in confined areas. Vapors will collect in low areas. Vapors may be ignited by static sparks. Flames may be invisible in daylight.

Special protective equipment and precautions for fire-fighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for all fires involving chemicals. Cool fire exposed containers with water.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Wear appropriate protective clothing and equipment as described in Section 8. Eliminate all ignition sources and ventilate the area with explosion-proof equipment. Prevent entry into basements or confined areas.

Environmental Precautions: Prevent spill from entering sewers and water courses. Report releases as required by local and national authorities.

Methods and materials for containment and cleaning up: Contain and **c**ollect with an inert absorbent material. Use non-sparking tools and equipment. Place in appropriate container for disposal. Clean area thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid breathing vapors or mists. Avoid contact with eyes, skin and clothing. Rinse thoroughly with water after handling. Use only with adequate ventilation. Remove contaminated clothing and launder before re-use. Keep product away from heat, sparks and all other sources of ignition. Electrically bond and ground transfer equipment, Use appropriately rated electrical equipment in areas where this material is handled and stored. Keep containers closed when not in use.

Conditions for safe storage, including any incompatibilities: Store as indicated on product packaging.
PESTICIDE STORAGE: Store this product in original container in a cool dry area away from heat or open flame inaccessible to children and pets.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines:

Permethrin	Perrigo OEB4 (1-10 ug/m3) TWA
Pyrethrins	5 mg/m3 TWA OSHA PEL and ACGIH TLV
Isopropanol	400 ppm TWA OSHA PEL 200 ppm TWA, 400 ppm STEL ACGIH TLV

Appropriate engineering controls: Use with adequate general or local exhaust ventilation to minimize exposures levels. Use explosion-proof equipment where required.

Individual protection measures:
Respiratory protection: None needed under normal use conditions. If exposure levels are excessive and irritation is experienced, a NIOSH approved particulate respirator is recommended. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with OSHA 1910.134 and good Industrial Hygiene practice.
Skin protection: Impervious gloves recommended.
Eye protection: Chemical safety goggles recommended if needed to avoid eye contact and for bulk processing.
Other: None known.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.): Colorless, water thin liquid
Odor: Faint chemical

Odor threshold: Not determined	**pH:** 7.0-8.0
Melting point/freezing point: Not determined	**Boiling Point:** Not determined
Flash point: 102°F (38.9°C)	**Evaporation rate:** Same as water
Flammability (solid, gas): Not applicable	**VOC:** Not determined
Flammable limits: LEL: 2% (isopropanol)	**UEL:** 12.7% (isopropanol)
Vapor pressure: 45.4 mmHg @ 25°C (isopropanol)	**Vapor density:** 2.1 (isopropanol)
Relative density: 0.970 – 1.005	**Solubility(ies):** Soluble in water
Partition coefficient: n-octanol/water: Not available	**Auto-ignition temperature:** Not available
Decomposition temperature: Not available	**Viscosity:** Not determined

10. STABILITY AND REACTIVITY

Reactivity: Not reactive under normal conditions of use.
Chemical stability: Stable.
Possibility of hazardous reactions: None known.
Conditions to avoid: Avoid heat, sparks, flames, and all other sources of ignition.
Incompatible materials: Avoid oxidizing agents.
Hazardous decomposition products: Thermal decomposition may yield carbon and nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Acute effects of exposure:
Inhalation: Inhalation of vapors or mists may cause minor irritation of the mucous membranes and upper respiratory tract and nervous system effects such as drowsiness and dizziness.
Ingestion: Swallowing may cause gastrointestinal distress with nausea and diarrhea and nervous system effects such as excitation, twitching, tremors, drowsiness and dizziness.
Skin contact: May cause irritation on prolonged contact. Prolonged or repeated skin contact may cause allergic sensitization.
Eye contact: Contact may cause irritation with redness and tearing.
Chronic Effects: None known.
Sensitization: Permethrin is a skin sensitizer. Some individuals may be sensitive to pyrethrins although they are not classified as skin sensitizers.
Germ Cell Mutagenicity: Components are not germ cell mutagens.
Reproductive Toxicity: Ingredients are not reproductive toxins.

Carcinogenicity: None of the components are listed as carcinogens or suspected carcinogens by IARC, NTP, ACGIH or OSHA.

Acute Toxicity Values:
Permethrin: LD50 oral rat 430-4000 mg/kg; LD50 dermal rat >2000 mg/kg
Pyrethrins: LD50 oral rat 1030 mg/kg; LD50 dermal rat 2000 mg/kg
Isopropanol: LD50 oral rat 5045 mg/kg; LD50 dermal rabbit 12,800 mg/kg.

12. ECOLOGICAL INFORMATION

Ecotoxicity values: Very toxic to aquatic organisms.
Permethrin: LC50 Orconectes immunis (Crayfish) 0.00031 mg/L/48 hr; LC50 pimephales promelas 0.003 mg/L/96 hr. Classified as Acute/Chronic Aquatic Toxicity Category 1 (M=1000)
Pyrethrins: LC50 daphnia magna 0.01 mg/L/48 hr; LC50 rainbow trout 0.0051 mg/L/96 hr. Classified as Acute/Chronic Aquatic Toxicity Category 1 (M=100)
Persistence and degradability: The biodegradation half-life of permethrin in a sediment-seawater solution was less than 2.5 days. Pyrethrins have low persistence in the environment.
Bioaccumulative potential: BCF values for rainbow trout and sheepshead minnow of approx 560 and 480, respectively, suggest bioconcentration of permethrin in aquatic organisms is high.
Mobility in soil: No data is available.
Other adverse effects: This product is toxic to fish and other aquatic invertebrates. Do not apply directly to water. Do not contaminate water by cleaning of equipment or disposal of wastes.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all local, state and federal regulations. Nonrefillable container. Do not reuse or refill this
container. Do not Puncture or Incinerate! **If empty:** Place in trash or offer for recycling if available. **If partly filled:** Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

14. TRANSPORT INFORMATION

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT	None	Not regulated per aqueous alcohol solution 49CFR173.150(e)			** RQ
TDG	None	Not regulated per aqueous alcohol exemption 1.36(b)			
IMDG	UN1987	Alcohols, n.o.s. (isopropanol)	3	III	Marine Pollutant
IATA	UN1987	Alcohols, n.o.s. (isopropanol)	3	III	Yes

Note: This product is classified as a Marine Pollutant (Environmentally Hazardous Substance) in accordance with the IMDG Code and the UN Model Regulations. However, it is packaged in either single packages or inner packagings in combination packages containing net quantities of less than 5 kg/5 L (IMDG Code 2.10.2.7; ICAO Special Instruction A197, 49CFR 171.4(c)(2)). Shipment may be regulated if contents are removed from inner packaging and combined into containers exceeding 5 L or 5 kg.

** Packaged containing 892 lbs of this product are Hazardous Substances and subject to RQ provisions.

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

Special precautions: None known.

15. REGULATORY INFORMATION

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

FIFRA Labeling: CAUTION. KEEP OUT OF REACH OF CHILDREN.
CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing. Harmful if absorbed through skin. Wash thoroughly with soap and water after handling. Do not use or store near heat or open flame.

Safety, health, and environmental regulations specific for the product in question.

CERCLA: Pyrethrins have an RQ of 1 lb. Many states have more stringent release reporting requirements. Report spills as required under federal, state and local regulations.

SARA Hazard Category (311/312): Refer to section 2 for the OSHA Hazard Classification

EPA SARA 313: This product contains the following chemicals regulated under SARA Title III, section 313:
Permethrin 0.101%

EPA TSCA Inventory: All components are listed on the TSCA inventory**.**

16. OTHER INFORMATION

NFPA Rating: Health = 1 Flammability = 3 Instability = 0
HMIS Rating: Health = 2 Flammability = 3 Physical Hazard = 0

SDS Revision History: New SDS.
Date of Preparation: August 31, 2017

Disclaimer: This SDS has been prepared for occupational exposure. Consumers: Refer to the package insert or product label for appropriate consumer-specific information about this product when used according to manufacturer's directions. Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequence of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).