

Material Safety Data Sheet

ENFORCER

Zep Commercial Sales & Service
A unit of Zep Inc.
1310 Seaboard Industrial Blvd.
Atlanta, GA 30318
1-888-805-HELP (4357)
www.enforcer.com

Section 1. Chemical Product and Company Identification

Product name Enforcer Flea & Tick Spray for Dogs II

Product code FT24

Date of issue 02/25/10 **Supersedes** 05/24/04

EPA Registration Number: 40849-34

Emergency Telephone Numbers

For MSDS Information:

Compliance Services 404-352-1680

For Medical Emergency

(877) 541-2016 Toll Free - All Calls Recorded

For Transportation Emergency

CHEMTREC: (800) 424-9300 - All Calls Recorded

In the District of Columbia (202) 483-7616

Prepared By

Compliance Services
1420 Seaboard Industrial Blvd.
Atlanta, GA 30318

Section 2. Hazards Identification

Emergency overview

*Hazard Determination System (HDS): Health, Flammability, Reactivity

CAUTION



HARMFUL IF INHALED OR ABSORBED THROUGH SKIN.

NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse effects are lessened by following all prescribed safety precautions, including the use of proper personal protective equipment.

Acute Effects

Routes of Entry

Dermal contact. Eye contact. Inhalation.

Eyes

May cause eye irritation. Inflammation of the eye is characterized by redness, watering and itching.

Skin

May cause skin irritation. Harmful if absorbed through the skin. Skin inflammation is characterized by itching, scaling, or reddening.

Inhalation

Avoid breathing vapors, spray or mists. Over-exposure by inhalation may cause respiratory irritation.

Ingestion

May be harmful if swallowed. Can cause gastrointestinal disturbances.

Chronic effects

No known chronic effects from exposure.

Carcinogenicity

Contains material which may cause cancer.

Product/ingredient name

ACGIH

IARC

EPA

NIOSH

NTP

OSHA

Permethin

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Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

Name of Hazardous Ingredients

CAS number

% by Weight

PIPERONYL BUTOXIDE; alpha-(2-(2-butoxyethoxy)ethoxy)-4,5-(methylenedioxy)-2-propyl-
toluene 51-03-6 0.40

PYROCIDE (R) 175; Pyrethrins 8003-34-7 0.02

PERMETHRIN; (3-phenoxyphenyl) methyl-cis, trans-3-(2,2-dichloroethenyl)-2,2-
dimethylcyclopropanecarboxylate 52645-53-1 0.10

Section 4. First Aid Measures

Eye Contact

Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin Contact

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation develops.

Inhalation

Move exposed person to fresh air. If irritation persists, get medical attention.

Ingestion

Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5. Fire Fighting Measures

National Fire Protection Association (U.S.A.)



Flash Point	Not available.
Flammable Limits	Not available.
Flammability	Non-flammable.
Fire hazard	In a fire or if heated, a pressure increase will occur and the container may burst.
Fire-Fighting Procedures	Use an extinguishing agent suitable for the surrounding fire.

Section 6. Accidental Release Measures

Spill Clean up	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container.
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Section 7. Handling and Storage

Handling	Put on appropriate personal protective equipment (see section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Do not reuse container. Observe label precautions. Wash thoroughly after handling. Apply this product only as specified on the label.
Storage	Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection**Product name**

PYROCIDE (R) 175; Pyrethrins

Exposure limits

ACGIH TLV (United States).

: 5 mg/m³

OSHA PEL (United States).

: 5 mg/m³**Personal Protective Equipment (PPE)**

Eyes	Safety glasses.	
Body	Rubber gloves.	
Respiratory	A respirator is not needed under normal and intended conditions of product use.	

Section 9. Physical and Chemical Properties

Physical State	Liquid. [Emulsion.]	Color	Milky-white
pH	7.0 - 8.0	Odor	Characteristic. [Slight]
Boiling Point	37.1°C (98.8°F)	Vapor Pressure	3.6 kPa (27 mm Hg)
Specific Gravity	0.98	Vapor Density	2.45 [Air = 1]
Solubility	Partially soluble in the following materials: cold water and hot water.	Evaporation Rate	Not determined.
		VOC (Consumer)	0 % (w/w)

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Incompatibility	None known.
Hazardous Polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur.
Hazardous Decomposition Products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological Information**Acute Toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Permethrin	LD Intravenous	Rat	>270 mg/kg	-
	LD50 Dermal	Rabbit	>2 g/kg	-
	LD50 Dermal	Rat	1750 mg/kg	-
	LD50 Oral	Rat	383 mg/kg	-
	LD50 Subcutaneous	Rat	6600 mg/kg	-
	LD50 Unreported	Rat	1200 mg/kg	-
	LD50 Unreported	Rat	537 mg/kg	-
	TDL _o Intraperitoneal	Rat	60 mg/kg	-
	TDL _o Oral	Rat	180 mg/kg	-
	TDL _o Oral	Rat	50 mg/kg	-

Section 12. Ecological Information

Environmental Effects

Not available.

Aquatic Ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Permethrin	-	Acute EC50 0.76 ppb Fresh water	Daphnia - Water flea - Daphnia magna - 12 hours	48 hours
	-	Acute EC50 0.6 ppb Fresh water	Daphnia - Water flea - Daphnia magna - 12 hours	48 hours
	-	Acute EC50 0.32 ppb Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute EC50 0.112 ppb Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute IC50 1.09 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - Instar	48 hours
	-	Acute LC50 1.908 ppb Marine water	Crustaceans - Daggerblade grass shrimp - Palaemonetes pugio	48 hours
	-	Acute LC50 1.627 ppb Marine water	Crustaceans - Daggerblade grass shrimp - Palaemonetes pugio	48 hours
	-	Acute LC50 1.5 ppb Fresh water	Fish - Atlantic salmon - Salmo salar	96 hours
	-	Acute LC50 0.79 ppb Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours
	-	Acute LC50 0.733 ppb Marine water	Crustaceans - Daggerblade grass shrimp - Palaemonetes pugio	48 hours
	-	Acute LC50 0.731 ppb Marine water	Crustaceans - Daggerblade grass shrimp - Palaemonetes pugio	48 hours
	-	Acute LC50 0.604 ppb Marine water	Crustaceans - Daggerblade grass shrimp - Palaemonetes pugio	48 hours
	-	Acute LC50 0.548 ppb Marine water	Crustaceans - Daggerblade grass shrimp - Palaemonetes pugio	48 hours
	-	Acute LC50 5 ug/L Fresh water	Crustaceans - Calanoid copepod - Spicodiantomus chilospinus - Adult - 2.2 to 2.8 mm	48 hours
	-	Acute LC50 4 ug/L Fresh water	Crustaceans - Water flea - Alonella sp.	48 hours
	-	Acute LC50 3 ug/L Fresh water	Crustaceans - Crayfish - Orconectes sp.	48 hours
	-	Acute LC50 1.6 ug/L Fresh water	Fish - Lahontan cutthroat trout - Oncorhynchus clarki henshawi - 0.46 g	96 hours
	-	Acute LC50 1.58 ug/L Fresh water	Fish - Lahontan cutthroat trout - Oncorhynchus clarki henshawi	96 hours
	-	Acute LC50 1.25 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - Instar - <=24 hours	48 hours
	-	Acute LC50 1.1 ug/L Fresh water	Fish - Channel catfish - Ictalurus punctatus - 14 to 17 mm - 0.02 g	96 hours
-	Acute LC50 >1 ug/L Fresh water	Fish - Greenback cutthroat trout - Oncorhynchus clarkii stomias - 0.31 g	96 hours	
-	Acute LC50 0.69 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 0.89 g	96 hours	
-	Acute LC50 0.62 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 0.89 g	96 hours	
-	Acute LC50 0.6 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - <24 hours	48 hours	

-	Acute LC50 0.54 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - Instar	48 hours
-	Acute LC50 0.2 to 0.6 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling) - 1 to 2 mm	48 hours

Section 13. Disposal Considerations

Waste Information

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities for additional information.

Waste Stream Non-regulated waste

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label
DOT Classification	Not regulated.	Not regulated.	-	-	
TDG Classification	Not regulated.	-	-	-	

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.

PG* : Packing group

Section 15. Regulatory Information

U.S. Federal Regulations

SARA 313 toxic chemical notification and release reporting:

Product name

Piperonyl Butoxide
Permethrin

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

[All Components of this product are listed or exempt from listing on TSCA Inventory.](#)

United States inventory (TSCA 8b): Not determined.

State Regulations

California Prop 65 No products were found.

Canada

WHMIS (Canada)

Class D-1B: Material causing immediate and serious toxic effects (Toxic).

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

*NOTE: Hazard Determination System (HDS) ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HDS ratings are to be used with a fully implemented program to relay the meanings of this scale.