



ENDURE Sweat-Resistant Fly Spray for Horses

Safety Data Sheet

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SECTION 1: Identification

1.1. Identification

Product form : Mixtures
Trade name : ENDURE Sweat-Resistant Fly Spray for Horses :
Synonyms : EPA Reg. No.: 270-251, 100528257, 3002431, 3002221, 100526254, 100526253

1.2. Recommended use and restrictions on use

Recommended use : Insecticide.
Restrictions on use : Keep out of reach of children, Avoid contact with eyes, skin or clothing, Use only outdoors or in a well-ventilated area.

1.3. Supplier

Farnam Companies, Inc.
1501 E. Woodfield Road, Suite 200W
Schaumburg, IL 60173 - United States
www.farnam.com

1.4. Emergency telephone number

Emergency number : 1-800-234-2269
1-800-424-9300 - CHEMTREC
1-703-527-3887 - CHEMTREC - Outside North America - Collect Calls Accepted

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Gases under pressure Compressed gas : Contains gas under pressure; may explode if heated
Serious eye damage/eye irritation Category 2B : Causes eye irritation

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS04

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : Contains gas under pressure; may explode if heated
Causes eye irritation
Precautionary statements (GHS-US) : Wash hands, forearms and face thoroughly after handling
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
Protect from sunlight. Store in a well-ventilated place

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : This product is extremely toxic to fish and aquatic vertebrates. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

Name	Product identifier	%
Cypermethrin	(CAS No) 52315-07-8	0.15
Piperonyl butoxide	(CAS No) 51-03-6	1.6
Butoxypolypropylene glycol	(CAS No) 9003-13-8	5
Pyrethrins	(CAS No) 8003-34-7	0.2
Other ingredients	(CAS No) N/A	Balance

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- First-aid measures after skin contact : IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice and attention.
- First-aid measures after ingestion : IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/injuries after eye contact : mild eye irritation.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
- Unsuitable extinguishing media : Avoid heavy hose streams.

5.2. Specific hazards arising from the chemical

- Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Approach leaking or punctured pressurized containers cautiously. Isolate leaking container from all sources of ignition. Avoid breathing fumes. Ventilate enclosed areas.

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

6.1.2. For emergency responders

- Protective equipment : Contents under pressure. Aerosols exposed to high temperatures may rupture, rocket and cause secondary hazards. Do not attempt to take action without suitable protective equipment. At temperatures above 130°F, container may rupture.
- Emergency procedures : As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : SMALL SPILLS: Take up with sand or other non-combustible absorbent material and place into containers for later disposal.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Do not use or store near heat or open flame. Exposure to temperatures above 130°F may cause bursting. Do not smoke while using this product. Do not allow product to freeze. Contents under pressure, do not crush, puncture or incinerate. Avoid breathing fumes.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a cool, dry place. Keep out of reach of children. Keep away from sources of ignition – No Smoking. Store in a well-ventilated place. Keep container tightly closed. Keep at a temperature not exceeding 120°F. Keep from freezing. NFPA Aerosol Classification: Level 1.
- Incompatible materials : Heat, sparks, open flame.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Cypermethrin (52315-07-8)		
Not applicable		
Piperonyl butoxide (51-03-6)		
Not applicable		
Butoxypolypropylene glycol (9003-13-8)		
Not applicable		
Pyrethrins (8003-34-7)		
ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³
OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
IDLH	US IDLH (mg/m ³)	5000 mg/m ³
NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³
Other ingredients (N/A)		
Not applicable		

8.2. Appropriate engineering controls

- Appropriate engineering controls : Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing



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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Fine aerosol spray; concentrate is milky white liquid.
Color	: White
Odor	: Mild solvent
Odor threshold	: No data available
pH	: 5.8
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 0.998
Solubility	: Not applicable.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: < 100 cP
Explosion limits	: No data available
Explosive properties	: Not applicable.
Oxidizing properties	: No data available

9.2. Other information

VOC content	: 0.49 % w/w
Other properties	: Flame extension: 0 inches. No flashback.
Additional information	: Heat of combustion: 0.7 kJ/g

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Aerosols exposed to high temperatures may rupture, rocket and cause secondary hazards.

10.4. Conditions to avoid

Heat, sparks, open flame. Excess heat.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

ENDURE Sweat-Resistant Fly Spray for Horses	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5 mg/l/4h

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pH	5.8
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GHS-US Properties	Classification
Acute toxicity	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Causes eye irritation.
Respiratory or skin sensitization	Not classified.
Germ cells mutagen	Not classified (Pyrethrins were not found to be genotoxic and did not damage DNA in any study conducted which included: Ames assay, chromosome aberration in Chinese hamster ovaries (CHO) cells and in the unscheduled DNA synthesis (UDS) assay in cultured human liver cells. Cypermethrin is not a mutagen. Piperonyl butoxide was not mutagenic in a battery of tests. Butoxypolypropylene glycol is not a mutagen.)
Carcinogenicity	Not classified (Pyrethrins are not listed as a carcinogen by OSHA, IARC, or NTP. Cypermethrin is not listed as a carcinogen by OSHA, IARC or NTP. Piperonyl butoxide is not classified as carcinogen by OSHA, IARC or NTP. Butoxypolypropylene glycol is not listed as a carcinogen by OSHA, IARC or NTP.)
Reproductive toxicity	Not classified (Pyrethrins did not produce any birth defects or adverse effects on reproductive parameters in tests with rats and rabbits. Cypermethrin does not cause birth defects or adverse effects on reproduction. Piperonyl butoxide did not produce any birth defects or adverse effects on reproductive parameters in tests with rats and rabbits. Butoxypolypropylene glycol does not cause birth defects.)
Specific target organ toxicant (single exposure)	Not classified
Specific target organ toxicant (repeated exposure)	Not classified
Aspiration hazard	Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : This product is extremely toxic to fish and aquatic vertebrates. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds.

Cypermethrin (52315-07-8)	
LC50 Acute fish 1	0.00039 mg/l (Exposure time: 96h - Rainbow trout)
LC50 Acute fish 2	0.00095 mg/l (Exposure time: 96h - Sheepshead minnow)
EC50 Acute crustacea 1	0.00000475 mg/l (Exposure time: 96h - Mysid shrimp)
EC50 Acute crustacea 1	0.0000036 mg/l (Exposure time: 48h - Hyalella Azteca)
NOEC Chronic fish 1	0.00014 mg/l (Fathead minnow)
NOEC Chronic crustacea 1	0.00000781 mg/l (Mysid shrimp)
Piperonyl butoxide (51-03-6)	
LC50 Acute fish 1	1.9 mg/l (Exposure time: na - Rainbow trout)
LC50 Acute fish 2	3.94 mg/l (Exposure time: na - Sheepshead minnow)
LC50 Acute crustacea 1	0.49 (Exposure time: na - Mysid shrimp)
LC50 Acute crustacea 2	0.51 mg/l (Exposure time: na - Gammarus fasciatus (amphipod))
NOEC Chronic fish 1	0.04 mg/l (Fathead minnow)
NOEC Chronic crustacea 1	0.03 mg/l (Daphnia magna)
Pyrethrins (8003-34-7)	
LC50 Acute fish 1	0.0051 mg/l (Exposure time: 96h - Rainbow trout)
LC50 Acute fish 2	0.016 mg/l (Exposure time: 96h - Sheepshead minnow)
LC50 Acute crustacea 1	0.0116 mg/l (Exposure time: 48h - Daphnia magna)
LC50 Acute crustacea 2	0.0014 mg/l (Exposure time: 96h - Mysid shrimp)
NOEC Chronic fish 1	0.0019 mg/l Fathead minnow
NOEC Chronic fish 2	0.0059 mg/l (Sheepshead minnow - Estimated)
NOEC Chronic crustacea 1	0.00086 mg/l (Daphnia magna)
NOEC Chronic crustacea 2	0.0001 mg/l (Mysid shrimp - Estimated)

12.2. Persistence and degradability

No additional information available

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12.3. Bioaccumulative potential

Piperonyl butoxide (51-03-6)

Log Kow	4.75
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1950 Aerosols, 2.2

UN-No.(DOT) : UN1950

Proper Shipping Name (DOT) : Aerosols

Class (DOT) : 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115

Hazard labels (DOT) : 2.2 - Non-flammable gas



Emergency Response Guide (ERG) Number : 126

Other information : Limited quantity 1 L or less.

Transport by sea

Transport document description (IMDG) : UN 1950 AEROSOLS, 2.2

UN-No. (IMDG) : 1950

Proper Shipping Name (IMDG) : AEROSOLS

Class (IMDG) : 2 - Gases

Limited quantities (IMDG) : SP277

Air transport

Transport document description (IATA) : UN 1950 Aerosols, non-flammable, 2.2

UN-No. (IATA) : 1950

Proper Shipping Name (IATA) : Aerosols, non-flammable

Class (IATA) : 2

SECTION 15: Regulatory information

15.1. US Federal regulations

Piperonyl butoxide (51-03-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 313 - Emission Reporting	1 %
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Butoxypolypropylene glycol (9003-13-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Inventory Update Reporting Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(C)).
Pyrethrins (8003-34-7)	
CERCLA RQ	1 lb listed under Pyrethrins
Other ingredients (N/A)	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory	
FIFRA Labelling	
EPA Registration Number	270-251
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 Signal Word	Caution
FIFRA Hazard Statement	KEEP OUT OF REACH OF CHILDREN.
FIFRA Hazards to Humans and Domestic Animals	Harmful if inhaled. Avoid breathing spray mist. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wear long-sleeved shirt and long pants, socks and shoes, and chemical-resistant gloves made of any waterproof material. HORSES: Do not allow product to contact animal's eyes, nose, mouth, or sores during application. Do not use on foals under 12 weeks. Use only in well-ventilated areas.
FIFRA First Aid	If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice. If in eyes: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice. If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
FIFRA Environmental Hazards	This product is extremely toxic to fish and aquatic vertebrates. To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are foraging the treatment area.
FIFRA Physical Hazard	Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130° F may cause bursting.

15.2. US State regulations

No additional information available

SECTION 16: Other information

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SDS US (GHS HazCom 2012) - CGP

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