

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name Flee
Synonym(s) EPA # 87093-1-53883
CAS # Mixture
Product use Flea and tick control
Manufacturer Control Solutions, Inc.
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Pasadena, TX 77507-1041
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CHEMTREC 1-866-897-8050

2. Hazards Identification

Emergency overview WARNING
FLAMMABLE LIQUID AND VAPOR.
Contents under pressure. Containers may explode when heated.
Harmful if absorbed through skin, if swallowed or if inhaled.
Causes moderate eye irritation.

Potential short term health effects

Routes of exposure Eye, Skin contact, Skin absorption, Inhalation, Ingestion.

Eyes Skin Causes moderate eye irritation.

Inhalation Harmful if absorbed through skin.

Ingestion Harmful if inhaled.
Harmful if swallowed. May cause stomach distress, nausea or vomiting.

Target organs Skin. Respiratory system. Eyes.

Chronic effects Prolonged or repeated exposure can cause drying, defatting and dermatitis.

Signs and symptoms Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

OSHA Regulatory Status This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential environmental effects See section 12.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Isopropanol	67-63-0	90 - 100
Diethylene glycol monoethyl ether	111-90-0	2.5 - 10
Butylated hydroxyanisole	25013-16-5	0.1 - 1
Fipronil	120068-37-3	0.1 - 1

4. First Aid Measures

First aid procedures

Eye contact Hold eye 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 eye. Obtain medical attention if irritation develops or persists.

Skin contact 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.

Inhalation Remove affected 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.

Ingestion

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.

General advice

Do not puncture or incinerate container. Keep away from sources of ignition. No smoking. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties

Flammable by OSHA criteria. Vapors may travel to a source of ignition and flash back.

Extinguishing media**Suitable extinguishing media**

Carbon dioxide. Alcohol foam. Dry chemical.

Unsuitable extinguishing media

Not available

Protection of firefighters**Specific hazards arising from the chemical**

Contents under pressure. Pressurized container may explode when exposed to heat or flame. Cool containers with flooding quantities of water until well after fire is out.

Protective equipment for firefighters

Firefighters should wear full protective clothing including self contained breathing apparatus.

Hazardous combustion products

May include and are not limited to: Oxides of carbon.

Explosion data**Sensitivity to mechanical impact**

Not available

Sensitivity to static discharge

Not available

6. Accidental Release Measures

Personal precautions

Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

Environmental precautions

Do not discharge into lakes, streams, ponds or public waters.

Methods for containment

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

Before attempting clean up, refer to hazard data given above and use appropriate personal protective equipment (PPE). Never return spills in original containers for re-use. Small Spills: Absorb with non-reactive absorbent and place in suitable, covered, labeled containers. Large Spills: Wet down with water and dike for later disposal. After removal flush contaminated area thoroughly with water. Contact emergency services and supplier for advice.

7. Handling and Storage

Handling

Use good industrial hygiene practices in handling this material. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks and open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting. Use only with adequate ventilation. Avoid breathing vapors or mists of this product. Wash thoroughly after handling.

Storage

Store in a cool dry place inaccessible to children and pets. Keep away from heat, open flames or other sources of ignition. Do not store at temperatures above 120°F (49°C).

8. Exposure Controls / Personal Protection

Exposure limits

Ingredient(s)	Exposure Limits
Butylated hydroxyanisole	ACGIH-TLV Not established OSHA-PEL Not established
Diethylene glycol monoethyl ether	ACGIH-TLV TW A: 25 ppm OSHA-PEL Not established
Fipronil	ACGIH-TLV Not established OSHA-PEL Not established
Isopropanol	ACGIH-TLV TW A: 200 ppm STEL: 400 ppm OSHA-PEL TW A: 400 ppm

Engineering controls

General ventilation normally adequate.

Personal protective equipment

Eye / face protection

Safety glasses if eye contact is possible.

Hand protection

Rubber gloves. Confirm with a reputable supplier first.

Skin and body protection

As required by employer code.

Respiratory protection

Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance	Clear, Non viscous
Color	Colorless
Form	Liquid
Odor	Alcoholic.
Odor threshold	Not available
Physical state	Liquid
pH	6.3
Freezing point	Not available
Boiling point	Not available
Pour point	Not available
Evaporation rate	Not available
Flash point	53 °F (11.66 °C)
Auto-ignition temperature	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	Not available

Relative density	0.789 g/mL (6.59 lb/gal)
Octanol/water coefficient	Not available
Solubility (H2O)	Non soluble
Viscosity	2.29 mPa.s

10. Stability and Reactivity

Reactivity	None known.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Aerosol containers are unstable at temperatures above 49°C (120.2°F). Do not mix with other chemicals.
Incompatible materials	Acids. Oxidizers.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Butylated hydroxyanisole	Not available
Diethylene glycol monoethyl ether	5240.0001 mg/l/4h rat
Fipronil	0.68 mg/l/4h rat
Isopropanol	16970 mg/l/4h rat

Component analysis - Oral LD50

Ingredient(s)	LD50
Butylated hydroxyanisole	2000 mg/kg rat
Diethylene glycol monoethyl ether	5500 mg/kg rat
Fipronil	100 mg/kg rat
Isopropanol	4396 mg/kg rat

Effects of acute exposure

Eye	Causes moderate eye irritation.
Skin	Harmful if absorbed through skin.
Inhalation	Harmful if inhaled.
Ingestion	Harmful if swallowed. May cause stomach distress, nausea or vomiting.
Sensitization	Non-hazardous by OSHA criteria.
Chronic effects	Non-hazardous by OSHA criteria.
Carcinogenicity	Contains a potential carcinogen.

ACGIH - Threshold Limit Values - Carcinogens

Isopropanol 67-63-0 A4 - Not Classifiable as a Human Carcinogen

IARC - Group 2B (Possibly Carcinogenic to Humans)

Butylated hydroxyanisole 25013-16-5 Supplement 7 [1987]; Monograph 40 [1986]

IARC - Group 3 (Not Classifiable)

Isopropanol 67-63-0 Monograph 71 [1999]; Supplement 7 [1987]; Monograph 15 [1977]

NTP (National Toxicology Program) - Report on Carcinogens - Reasonably Anticipated to be Human Carcinogens

Butylated hydroxyanisole 25013-16-5 Reasonably Anticipated To Be A Human Carcinogen

U.S. - California - Proposition 65 - Carcinogens List

Butylated hydroxyanisole 25013-16-5 carcinogen, initial date 1/1/90

Mutagenicity Non-hazardous by OSHA criteria.

Reproductive effects Non-hazardous by OSHA criteria.

Teratogenicity Non-hazardous by OSHA criteria.

Name of Toxicologically Synergistic Products Not available

12. Ecological Information

Ecotoxicity	Components of this product have been identified as having potential environmental concerns.	
Ecotoxicity - Freshwater Algae - Acute Toxicity Data		
Isopropanol	67-63-0	96 Hr EC50 Desmodesmus subspicatus: >1000 mg/L; 72 Hr EC50 Desmodesmus subspicatus: >1000 mg/L
Ecotoxicity - Freshwater Fish - Acute Toxicity Data		
Diethylene glycol monoethyl ether	111-90-0	96 Hr LC50 Oncorhynchus mykiss: 11400-15700 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 11600-16700 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 10000 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 19100-23900 mg/L [flow-through]; 96 Hr LC50 Salmo gairdneri: 13400 mg/L [flow-through]
Isopropanol	67-63-0	96 Hr LC50 Pimephales promelas: 9640 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 11130 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: >1400000 µg/L
Ecotoxicity - Water Flea - Acute Toxicity Data		
Diethylene glycol monoethyl ether	111-90-0	48 Hr EC50 Daphnia magna: 3940 - 4670 mg/L
Isopropanol	67-63-0	48 Hr EC50 Daphnia magna: 13299 mg/L
Persistence / degradability	Not available	
Bioaccumulation / accumulation	Not available	
Mobility in environmental media	Not available	
Environmental effects	Not available	
Aquatic toxicity	Not available	
Partition coefficient	Not available	
Chemical fate information	Not available	

13. Disposal Considerations

Disposal instructions	Review federal, state and local government requirements prior to disposal. Typically municipal landfill will be appropriate. Do not reuse or refill this container.
Waste from residues / unused products	Review federal, state and local government requirements prior to disposal.
Contaminated packaging	Review federal, state and local government requirements prior to disposal.

14. Transport Information

U.S. Department of Transportation (DOT)

Basic shipping requirements:

Proper shipping name	Consumer commodity
Hazard class	9
UN number	ID8000
Additional information:	
Special provisions	None
Limited quantity	1L
Excepted quantity	1oz



IMDG (Marine Transport)

Basic shipping requirements:

Proper shipping name	AEROSOLS, Limited Quantity
Hazard class	2.1
UN number	1950
Additional information:	
Special provisions	63,190,277,327,959
Limited quantity	1L
Excepted quantity	E0
Stowage location	Cat A

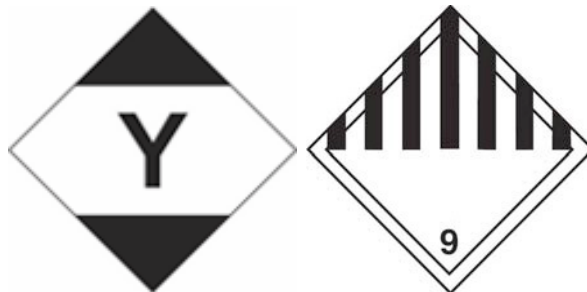


IATA/ICAO (Air)**Basic shipping requirements:**

Proper shipping name	Consumer commodity
Hazard class	9
UN number	ID8000

Additional information:

Special provisions	A112
Excepted quantity	E0
Limited quantity passenger/cargo aircraft	30 kg gross



15. Regulatory Information

Occupational Safety and Health Administration (OSHA)**US Federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Isopropanol	67-63-0	1.0 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification)
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CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No
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Section 302 extremely hazardous substance	No
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Section 311 hazardous chemical	No
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Clean Air Act (CAA)	Not available
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Clean Water Act (CWA)	Not available
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State regulations	WARNING: This product contains a chemical known to the State of California to cause cancer.
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U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

Butylated hydroxyanisole	25013-16-5	Present
Isopropanol	67-63-0	Present

U.S. - California - Proposition 65 - Carcinogens List

Butylated hydroxyanisole	25013-16-5	carcinogen, initial date 1/1/90
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U.S. - Illinois - Toxic Air Contaminant Carcinogens

Butylated hydroxyanisole	25013-16-5	IARC 2B Carcinogen; NTP Anticipated Carcinogen
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U.S. - Massachusetts - Right To Know List

Butylated hydroxyanisole	25013-16-5	Carcinogen; Extraordinarily hazardous
Isopropanol	67-63-0	Present

U.S. - Minnesota - Hazardous Substance List

Butylated hydroxyanisole	25013-16-5	Carcinogen
Diethylene glycol monoethyl ether	111-90-0	Present
Isopropanol	67-63-0	Present

U.S. - New Jersey - Right to Know Hazardous Substance List

Butylated hydroxyanisole	25013-16-5	sn 3563
Isopropanol	67-63-0	sn 1076

U.S. - Pennsylvania - RTK (Right to Know) List

Isopropanol	67-63-0	Environmental hazard
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U.S. - Rhode Island - Hazardous Substance List

Isopropanol	67-63-0	Toxic; Flammable
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Inventory status**Country(s) or region**

United States & Puerto Rico

Inventory name

Toxic Substances Control Act (TSCA) Inventory

On inventory (yes/no)*

No

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

**LEGEND
HMIS**

Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Disclaimer

Health	*	1
Flammability		3
Physical Hazard		0
Personal Protection		X

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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Prepared by

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Other information

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.

Revision date

Sections revised

Supersedes MSDS dated