

# Material Safety Data Sheet



MSDS Number: R000032840

MSDS Version: 2.0

## Black Flag Mosquito Spray & Mist

### SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name** Black Flag Mosquito Spray & Mist  
**Chemical Name**  
**Common Name**  
**MSDS Number** R000032840  
**Chemical Family**  
**Chemical Formulation**  
**EPA Registration No.** 72155-24-79529  
**Product Use** Insecticide for the use on lawns, flowers, shrubs and vegetables.

Black Flag Brands, LLC  
25 Garden St.  
NY Mills, NY 13417  
USA

For MEDICAL, TRANSPORTATION or Other EMERGENCY call 1-800-334-7577 24 hours/day  
For Product Information call 1-800-887-3524

### SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS No.</u>	<u>Concentration % by Weight</u>	
		<u>Minimum</u>	<u>Maximum</u>
Cyfluthrin Technical	68359-37-5	0.6700	0.8300
Naphthalene	91-20-3		0.0960

### SECTION 3. HAZARDS IDENTIFICATION

*NOTE: Please refer to Section 11 for detailed toxicological information.*

**Emergency Overview** Caution! Harmful if inhaled. Harmful if swallowed. Causes eye irritation. Avoid contact with skin, eyes and clothing.

**Physical State** Liquid  
**Odor** slight or weak  
**Appearance** Off-white  
**Routes of Exposure** Ingestion, Eye contact, Skin contact, Inhalation  
**Immediate Effects**  
**Eye** Causes eye irritation. Do not get in eyes.

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<b>Skin</b>	May cause a transient, localized paresthesia, characterized by tingling, burning or numbness sensation in some individuals. May cause irritation, redness. Avoid contact with skin and clothing.
<b>Ingestion</b>	Do not take internally. Harmful if swallowed.
<b>Inhalation</b>	Do not breathe vapours or spray mist. Harmful if inhaled.
<b>Chronic or Delayed Long-Term</b>	Based on animal studies, no adverse effects or symptoms would be expected from chronic exposure to this material.
<b>Medical Conditions Aggravated by Exposure</b>	No specific medical conditions are known which may be aggravated by exposure to this product. As with all materials which can cause upper respiratory tract irritation, persons with a history of asthma, emphysema, or hyperreactive airways disease may be more susceptible to overexposure.

### SECTION 4. FIRST AID MEASURES

<b>General</b>	Have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Eye</b>	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Call a physician if irritation persists.
<b>Skin</b>	Take off all contaminated clothing immediately. Rinse immediately with plenty of water for at least 15 minutes. Call a physician if irritation develops or persists.
<b>Ingestion</b>	Have person sip a glass of water if able to swallow. Call a poison control center or doctor immediately for treatment advice.
<b>Inhalation</b>	Move 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.

#### Notes to Physician

<b>Hazards</b>	This product/preparation contains a pyrethroid.
<b>Treatment</b>	Treat symptomatically. Published data indicate Vitamin E acetate can prevent and/or mitigate symptoms of paresthesia (skin irritation) caused by synthetic pyrethroids.

### SECTION 5. FIRE FIGHTING MEASURES

<b>Flash Point</b>	> 93 °C / > 199 °F
<b>Suitable Extinguishing Media</b>	Foam, Dry chemical
<b>Fire Fighting Instructions</b>	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Equipment or materials involved in pesticide fires may

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become contaminated.

Wear self-contained breathing apparatus and protective suit.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

**General and Disposal** Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

**Land Spill or Leaks** Avoid breathing vapors and avoid skin contact. Use personal protective equipment. Dike contaminated area with absorbent granules, soil, sand, etc. Carefully sweep up absorbed spilled material. Place in covered container for reuse or disposal. Scrub contaminated area with soap and water. Rinse with water. Use dry absorbent material such as clay granules to absorb and collect wash solution for proper disposal. Contaminated soil may have to be removed and disposed. Do not allow material to enter streams, sewers, or other waterways or contact vegetation.

### SECTION 7. HANDLING AND STORAGE

**Handling Procedures** Food utensils such as teaspoons or measuring cups must not be used for food purposes after use in measuring pesticides.

Do not freeze.

**Storing Procedures** Store in a cool, dry secured storage area. Store in original container and out of the reach of children, preferably in a locked storage area.

**Work/Hygienic Procedures** Wash thoroughly with soap and water after handling.

Do not allow children and pets to enter the treated area until it has dried.

**Min/Max Storage Temperatures** No minimum / 30 day average temperature not to exceed 38°C (100°F)

### SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls** Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

**Eye/Face Protection** Tightly fitting safety goggles.

**Hand Protection** Suitable chemical resistant gloves

**Body Protection** Wear long-sleeved shirt and long pants and shoes plus socks.

**Respiratory Protection** When respiratory protection is necessary under the conditions of use, wear a respirator approved by the National Institute for Occupational Safety and Health (NIOSH).

**General Protection** Educate and train employees in safe use of the product. Follow all label instructions

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### Exposure Limits

Naphthalene	91-20-3	ACGIH	TWA		10 ppm
		ACGIH	STEL		15 ppm
		NIOSH	REL	10 ppm	50 mg/m3
		NIOSH	STEL	15 ppm	75 mg/m3
		OSHA Z1	PEL	10 ppm	50 mg/m3
		OSHA Z1A	TWA	10 ppm	50 mg/m3
		OSHA Z1A	STEL	15 ppm	75 mg/m3
		US CA OEL	TWA PEL	10 ppm	50 mg/m3
		US CA OEL	STEL	15 ppm	75 mg/m3
		LU OEL	TWA	10 ppm	50 mg/m3
		PT OEL	TWA	10 ppm	50 mg/m3

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Off-white
<b>Physical State</b>	Liquid
<b>Odor</b>	slight or weak
<b>pH</b>	3.5
<b>Specific Gravity</b>	1.00 at 20 °C
<b>Viscosity</b>	5 mPa.s 20 °C

## SECTION 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable
<b>Incompatibility</b>	Alkaline Oxidizing agents
<b>Hazardous Polymerization (Conditions to Avoid)</b>	Will not occur.

## SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity studies for this product have been bridged from other products containing the active ingredient, Cyfluthrin. The acute eye irritation study has been performed on a formulation containing 0.1% Cyfluthrin. All other acute toxicity data have been bridged from a formulation containing 24% Cyfluthrin. The non-acute information pertains to Cyfluthrin technical.

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<b>Acute Oral Toxicity</b>	Male Rat: LD50: 647 mg/kg Female Rat: LD50: 695 mg/kg	
<b>Acute Dermal Toxicity</b>	Male/Female Rabbit: LD50: > 2,000 mg/kg	
<b>Acute Inhalation Toxicity</b>	Male Rat: LC50: 4-hr exposure to liquid aerosol: 0.716 mg/l (actual) Female Rat: LC50: 4-hr exposure to liquid aerosol: 0.924 mg/l (actual) Male/Female Rat: LC50: 1-hr exposure to liquid aerosol: > 2.029 mg/l (actual)	
<b>Skin Irritation</b>	Rabbit: Moderate skin irritation	
<b>Eye Irritation</b>	Rabbit: Minimal irritant.	
<b>Sensitization</b>	Guinea pig: Skin sensitizer.	
<b>Subchronic Toxicity</b>	In a 3-week dermal toxicity study in rats treated with cyfluthrin, effects observed included clinical signs of toxicity, as well as, topical and microscopic alterations in the treated tissue at the dose site.  In a 13-week inhalation study in rats exposed to cyfluthrin, effects included reduced body weight gains and non-specific behavioral disturbances at the mid- and high concentrations (0.71 and 4.5 mg/m <sup>3</sup> ).	
<b>Chronic Toxicity</b>	In chronic dietary studies in rats treated with cyfluthrin, compound-related effects included decreased body weight gains and slight changes in clinical chemistries.  In chronic dietary studies in dogs treated with cyfluthrin, compound-related effects were observed at the higher concentrations (>=360 ppm). These effects included an increased incidence of vomiting, decreased body weights, soft feces and clinical neurological symptoms.	
<b>Assessment Carcinogenicity</b>	In oncogenicity studies in rats and mice, cyfluthrin was not considered carcinogenic in either species.	
<b>ACGIH</b>		
Naphthalene	91-20-3	Group A4
<b>NTP</b>		
Naphthalene	91-20-3	
<b>IARC</b>		
Naphthalene	91-20-3	Overall evaluation: 2B
<b>OSHA</b>		
None		
<b>Reproductive &amp; Developmental Toxicity</b>	REPRODUCTION: In reproduction studies in rats treated with cyfluthrin, reproductive effects occurred in conjunction with parental toxicity. These effects included reductions in viability, lactation, litter size, feed consumption and body weights. In addition, coarse tremors were observed in offspring at higher concentrations (>=125 ppm).	

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**DEVELOPMENTAL TOXICITY:** In developmental toxicity studies in rats treated with cyfluthrin, there were no embryotoxic or teratogenic effects via the oral route of exposure. When rats were exposed to cyfluthrin via inhalation, embryotoxic effects occurred in conjunction with maternal toxicity. In rabbits treated orally with cyfluthrin, there was an increased incidence of post-implantation losses at maternally toxic dose levels.

### Neurotoxicity

In neurotoxicity studies with cyfluthrin, minimal nerve damage occurred in rats and hens treated by oral gavage. In dermal and inhalation studies, which are more relevant to field exposure, there was no evidence of delayed neurotoxicity in hens treated with cyfluthrin.

In a special investigative inhalation study with cyfluthrin in neonatal mice, effects observed included clinical signs of toxicity, mortality and neurobehavioral effects indicative of treatment-related hyperactivity. There were no correlating morphological changes in neural tissues in mice at 4 months of age.

### Mutagenicity

Numerous in vitro and in vivo mutagenicity studies have been conducted on cyfluthrin, all of which are negative.

## SECTION 12. ECOLOGICAL INFORMATION

### Environmental Precautions

Highly toxic to fish. Do not apply directly to water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. This product is highly toxic to bees exposed to direct treatment. Do not apply this product while bees are actively visiting the treated area. Apply this product only as specified on the label.

## SECTION 13. DISPOSAL CONSIDERATIONS

### General Disposal Guidance

It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow any applicable state or local guidelines.

### Container Disposal

Do not re-use empty containers. Rinse empty containers with water and use the rinse-water to prepare the working solution. Place empty container in trash.

### RCRA Classification

91-20-3 Naphthalene

US. EPA Resource Conservation and Recovery Act (RCRA) U List of Hazardous Wastes (40 CFR 261.33(f) and 40 CFR 302 [CERCLA]): U165

## SECTION 14. TRANSPORT INFORMATION

DOT CLASSIFICATION:  
Not Regulated

FREIGHT CLASSIFICATION:  
Insecticides or Fungicides, N.O.I., other than poison

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### SECTION 15. REGULATORY INFORMATION

EPA Registration No. 72155-24-79529

#### US Federal Regulations

##### TSCA list

Naphthalene 91-20-3

##### US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None

##### SARA Title III - section 302 - notification and information

None

##### SARA Title III - section 313 - toxic chemical release reporting

Cyfluthrin Technical 68359-37-5 1.0%

Naphthalene 91-20-3 1.0%

#### US States Regulatory Reporting

##### CA Prop65

This product contains a chemical known to the State of California to cause cancer.

Naphthalene 91-20-3

This product does not contain any substances known to the State of California to cause reproductive harm.

##### US State right-to-know ingredients

Naphthalene 91-20-3 CA, CT, IL, MN, NJ, PA, RI

#### Canadian Regulations

##### Canadian Domestic Substance List

Naphthalene 91-20-3

#### Environmental

##### CERCLA

Naphthalene 91-20-3 100 lbs

##### Clean Water Section 307 Priority Pollutants

Naphthalene 91-20-3

##### Safe Drinking Water Act Maximum Contaminant Levels

Naphthalene 91-20-3

#### International Regulations

##### EU Classification

Naphthalene 91-20-3 Harmful Dangerous for the environment

R-pharse(s) Harmful if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-pharse(s) Keep out of the reach of children. Wear suitable protective clothing and gloves. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

##### European Inventory of Existing Commercial Substances (EINECS)

Cyfluthrin Technical 68359-37-5

Naphthalene 91-20-3

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### SECTION 16. OTHER INFORMATION

NFPA 704: (National Fire Protection Association)

Health - 2      Flammability - 1      Reactivity - 0      Others - None

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

MSDS REVISION INDICATOR: New Format and Update Sections as Needed.

Approval Date: 10/19/2004

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