



SAFETY DATA SHEET

FLIT® 10EC Broad-Spectrum Multi-Purpose Insecticide

Effective Date: 5 July 2018

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SECTION 1. Identification of the Substance/Mixture and of the Company

1.1 Product Identifier

Formulation Identifier: FLIT® 10EC Broad-Spectrum Multi-Use Insecticide

EPA Registration Number: 8329-67

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Identified use: Insecticide

Uses advised against: See product label for use restrictions

1.3 Details of the Supplier of the Safety Data Sheet

Clarke Mosquito Control Products, Inc.
675 Sidwell Court
St. Charles, IL 60174 U.S.A.
+1 (630) 894-2000
Email: Clarke@clarke.com

1.4 Emergency Telephone Number

24-Hour Medical Emergency: POISON CONTROL Toll-free (800) 214 – 7753

24-Hour Transportation Emergency: INFOTRAC (800) 535-5053

SECTION 2. Hazards identification

United States (US)

According to OSHA 29 CFR 1910.1200 HCS (2012)

2.1 Classification of the Substance or Mixture

Aspiration Hazard: Category 1

Skin irritation: Category 2

Flammable liquids: Category 4

Pictogram:



Signal Word: DANGER

Hazard Statements: May be fatal if swallowed and enters airways
Causes skin irritation
Combustible liquid

Precautionary Statements:

PREVENTION: Wear protective gloves and eye/face protection. Wash thoroughly after handling

Keep away from open flames/hot surfaces – No Smoking

Store locked up. Keep cool.

RESPONSE: IF SWALLOWED: Immediately call a POISON CONTROL CENTER/doctor/physician. DO NOT induce vomiting.



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IF ON SKIN: Wash with plenty of water/soap. If skin irritation occurs seek medical attention. Take off contaminated clothing and wash before reuse.

Specific Treatment: see supplemental first aid instructions on the product label.

If skin irritation occurs: Get medical advice/attention.

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

STORAGE: Store locked up, in a well-ventilated place. Keep cool. Keep container tightly closed.

DISPOSAL: Dispose of contents and container in accordance with local/regional/national regulations.

2.2 Other Hazards Not Classifiable Under OSHA 2012 HCS

No other hazards known

SECTION 3. Composition/Information on Ingredients

3.1 Components

Substance Name	CAS No.	Concentration wt%
Permethrin	52645-53-1	10.0
Distillates (petroleum) Hydrotreated light	64742-47-8	82.0
Nonylphenol ethoxylate	9016-45-9	4.4

Ingredients not identified are non-hazardous and/or are not required to be disclosed pursuant to 29 CFR 1910.1200 (2012), and are withheld as trade secret.

SECTION 4. First Aid Measures

4.1 Description of First Aid Measures

General advice: When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Inhalation: Move to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. Call a physician or poison control center immediately.

Skin contact: Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

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. Call a poison control center/doctor for treatment advice.

Ingestion: Call a physician or a poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed.

Symptoms: To date no symptoms known..

4.3 Indication of Immediate Medical Attention and Special Treatment

Risks: This product contains a pyrethroid. Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard.

Treatment: Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5. Fire-Fighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media: Water Fog, Carbon Dioxide (CO₂), Dry Chemical, Foam



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Unsuitable Extinguishing Media: None known

5.2 Special Hazards Arising From the Substance or Mixture

Specific Hazards: Dangerous gases are evolved in the event of a fire.

5.3 Special Protective Equipment and Precautions for Fire-Fighters

Protection Against Fire: Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

Special Procedures: 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 to enter drains or water courses

Flash point: 85 °C (185 °F)

Autoignition temperature: No data available

Lower explosion limit: No data available

Upper explosion limit: No data available

Explosivity: Not applicable

SECTION 6. Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

General Precautions: Remove all sources of ignition. Isolate hazard area. Keep unauthorized people away. avoid contact with spilled product or contaminated surfaces.

Environmental Precautions: Prevent product from entering into drains and waterways. Collect and dispose of this material and its container in accordance with national and regional regulations. If the product has contaminated surface water, inform the appropriate authorities. See Section 12 for additional ecological information.

6.2 Methods and Material for Containment and Cleaning Up

Clean Up Methods: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labeled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice: Use personal protective equipment. Do not allow to enter soil, waterways or waste canal.

References to other sections: Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7. Handling and Storage

7.1 Precautions for Safe Handling

Handling: Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner to prevent spillage.

Advice on protection against fire and explosion: Keep away from heat and sources of ignition

Hygiene Measures: Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet or applying cosmetics. Remove personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.



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7.2 Conditions for Safe Storage, Including Any Incompatibilities

Storage: Store in a cool, dry, place in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

SECTION 8. Exposure Controls / Personal Protection

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

8.1 Control Parameters

Component Name	CAS No.	TWA	Basis
Permethrin	52645-53-1	5 mg/m ³	ACGIH
Permethrin	52645-53-1	5mg/m ³ (REL)	NIOSH
Permethrin	52645-53-1	5 mg/m ³ (PEL)	OSHA Z1
Permethrin	52645-53-1	5mg/m ³ (TWA)	OSHA Z1A
Distillates (petroleum), Hydrotreated light (non-aerosol)	64742-47-8	200 mg/m ³ (TWA)	ACGIH
Distillates (petroleum), Hydrotreated light (non-aerosol)	64742-47-8	100 mg/m ³ (REL)	NIOSH

8.2 Exposure controls

In normal use and handling conditions refer to the label and/or leaflet. In all other cases the following recommendations apply.

Respiratory Protection: When respirators are required, select NIOSH approved equipment based on actual potential airborne concentrations and in accordance with the appropriate regulatory standards and /or industry recommendations.

Hand Protection: Chemical resistant nitrile gloves.

Eye Protection: Tightly fitting safety goggles.

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

General protective measures: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Appearance: beige to brown

Physical State: Liquid

Odor: mild

Odor Threshold: no data available

pH: 7.0 - 8.5

Melting Point: not determined

Freezing Point: not determined

Initial Boiling Point: not determined

Flash Point: 85 °C

Evaporation Rate: not determined

Explosion limits [U/L]: no data available

Vapor Pressure: no data available

Vapor Density: no data available



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Density:	ca. 0.84g/cm ³ at 20 °C
Solubility:	emulsifiable
Partition Coefficient:	not applicable
Auto-Ignition Temperature:	not applicable
Viscosity:	2.2 mPa.s
Decomposition Temperature:	not available
Explosive Properties:	not applicable
Oxidizing Properties:	not available

SECTION 10. Stability and Reactivity

10.1 Reactivity

Thermal decomposition: not applicable

10.2 Chemical Stability

Stable under normal conditions.

10.3 Possibility of Hazardous Reactions

Hazardous Reactions: None under normal conditions

Hazardous Polymerization: Not known to occur

10.4 Conditions to avoid

Extremes of temperature and direct sunlight. Heat, flames and sparks.

10.5 Incompatible materials

Avoid contact with strong oxidizing agents.

10.6 Hazardous decomposition products

No decomposition products under normal conditions of storage and use.

SECTION 11. Toxicological information

11.1 Information on Likely Routes of Exposure

Exposure Routes: Eye Contact, Skin contact, Inhalation, Ingestion

Immediate Effects

Eye: Moderate eye irritation.

Skin: Causes skin irritation.

Inhalation: Harmful if inhaled.

11.2 Information on Toxicological Effects

Acute Oral toxicity (Rat) LD₅₀ > 5,000 mg/kg

Acute Inhalation toxicity, Rat LC₅₀ (rat) > 1.6. mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol
Highest attainable concentration
No deaths

LC₅₀ (rat) > 6.4 mg/l
Exposure time: 1 h
Determined in the form of liquid aerosol
Extrapolated from the 4 hr. LC₅₀



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Acute Dermal toxicity, Rabbit	LD ₅₀ > 5,050 mg/kg
Skin Corrosion/Irritation:	Severe skin irritation (rabbit)
Serious Eye Damage/Irritation:	Mild eye irritation (rabbit)
Skin Sensitization:	Not a skin sensitizer (guinea pig)
Germ Cell Mutagenicity:	Permethrin was not a mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Assessment repeated dose toxicity:	Permethrin did not cause specific target organ toxicity in experimental animal studies.
Carcinogenicity	Permethrin caused at high dose levels an increase of tumors in mice in the following organ(s): liver, Lungs. The mechanism that triggers tumors in rodents is not relevant for the low exposure encountered under normal use conditions ACGIH: Distillates (petroleum), hydrotreated light 64742-47-8 Group A3 NTP: None IARC: Permethrin, 52645-53-1, Evaluation: 3 Distillates (petroleum), hydrotreated light, 64742-47-8, Evaluation: 3 OSHA: None
Reproductive toxicity:	Permethrin did not cause reproductive toxicity in a two-generation study in rats.
Developmental toxicity:	Permethrin did not cause developmental toxicity in rats and rabbits.
Further information:	Only acute toxicity studies have been performed on the formulated product. The non-acute information pertains to the active ingredient(s).

SECTION 12. Ecological Information

12.1 Ecotoxicity

Toxicity to Fish:	LC ₅₀ (<i>Poecilia reticulata</i> (guppy)) 0.0076 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient permethrin.
Toxicity to Aquatic Invertebrates:	EC ₅₀ , Water Flea (<i>Daphnia magna</i>) 0.00017 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient permethrin
Toxicity to Aquatic Plants:	EC ₅₀ 8.1 mg/L, (Algae) 0.5 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient permethrin

12.1 Persistence and Degradability

Biodegradability:	Permethrin: not rapidly biodegradable
Koc:	Permethrin: Koc: 100 000
Bioaccumulation:	Permethrin: Bioaccumulation factor (BCF) 300; does not bioaccumulate
Mobility in soil:	Permethrin: Immobile in soil

SECTION 13. Disposal Considerations

13.1 Waste Treatment and Disposal methods

Product:	Do not contaminate water, food, or feed by disposal. Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.
Contaminated packaging:	Triple rinse containers.



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Puncture container to avoid re-use.
Dispose of empty containers in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning.
If burned stay out of smoke.
Follow advice on product label and/or leaflet.

RCRA information:

Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, state and local laws and are the user's responsibility, RCRA classification may apply.

SECTION 14. Transport Information

14.1 DOT (US) 49 CFR

NA-Number: NA 1993
Hazard Class: (Combustible Liquid)
Packing group: III
Proper shipping name: Combustible Liquid, N.O.S. (Petroleum Distillates)

14.2 IMDG (Vessel)

UN Number: 3082
Hazard Class: 9
Packing Group: III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S.(Permethrin)
Marine Pollutant: Yes

14.3 ICAO/IATA (Air transport)

UN Number: 3082
Hazard Class: 9
Packing Group: III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Permethrin)
Environmental Hazard: Yes

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.S., OTHER THAN POISON

SECTION 15. Regulatory Information

FIFRA Information: This chemical is a pesticide product regulated by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information for safety data sheet, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Signal Word: WARNING
KEEP OUT OF REACH OF CHILDREN

First Aid

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-214-7753 for emergency medical treatment information.

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.



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IF IN EYES	<ul style="list-style-type: none">• 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 the eye.• Call a poison control center or doctor for treatment advice.
IF INHALED	<ul style="list-style-type: none">• 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 SWALLOWED	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice.• Do not induce vomiting unless told to do so by a poison control center or doctor.• Do not give any liquid to the person.• Do not give anything by mouth to an unconscious person.

Note to Physician: Contains petroleum distillate – vomiting may cause aspiration pneumonia. Do not administer or instill milk, cream or other substances containing vegetable or animal fats which enhance absorption of lipophilic substances.

PRECAUTIONARY STATEMENTS: HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING. Causes skin irritation. Do not get on skin, or on clothing. Harmful if inhaled. Avoid breathing vapor or spray mist. Causes moderate eye irritation. Avoid contact with eyes. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wear Coveralls worn over long sleeved shirt and long pants, socks, chemical resistant footwear, and chemical resistant gloves (barrier laminate, nitrile rubber, neoprene, rubber, Viton, selection category F*).

Personal Protective Equipment (PPE): Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber greater or equal to 14 mils, and nitrile rubber greater or equal to 14 mils. If you want more options, follow the instructions for category F on an EPA chemical-resistance category selection chart.

Applicators using ULV cold foggers or fog/mist generators in indoor spaces must wear:

- Coveralls over long-sleeved shirt and long pants,
- Chemical resistant gloves,
- Chemical-resistant footwear plus socks, and
- Chemical resistant headgear, if overhead exposure.

Applicators using ULV cold foggers and/or fog/mist generators in outdoor spaces must wear:

- Long-sleeve shirt and long pants,
- Shoes plus socks, and
- Chemical-resistant gloves

All other mixers, loaders, applicators, and other handlers must wear:

- Long-sleeve shirt and long pants,
- Shoes plus socks,
- Chemical-resistant gloves for all handlers except for applicators using motorized ground equipment, pilots, and flaggers.
- Chemical resistant apron for mixers/loaders, persons cleaning equipment, and persons exposed to the concentrate and for handlers performing animal dip.

See engineering controls for additional requirements.

User Safety Requirements: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.



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Entry Restrictions:

For space spray use: Do not enter or allow others to enter until vapors, mists, and aerosols have dispersed, and the treated area has been thoroughly ventilated.

For surface spray use: Except when applying to livestock, do not enter or allow others to enter treated area until sprays have dried.

Other US Federal Regulations

SARA Title III – Section 302: None
SARA Title III Section 313 Toxic Chemical Release Reporting
Permethrin 52645-53-1

CERCLA RQ: None

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

U.S. California Proposition 65: Not listed

STATE RIGHT-TO-KNOW : National, state, provincial or local emergency planning, community right-to-know or other laws, regulations or ordinances may be applicable--consult applicable national, state, provincial or local laws.

SECTION 16. Other Information

NFPA 704 (National Fire Protection Association):
Health – 2 Flammability – 2 Instability – 0 Others – none

HMS (Hazardous Materials Identification System, based on Third Edition Ratings Guide)
Health – 2 Flammability -2 Physical Hazard – 0 PPE-

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