

DRAGNET[®] SFR Termiticide / Insecticide

Product Name: DRAGNET[®] SFR Termiticide / Insecticide

MATERIAL SAFETY DATA SHEET

This document has been prepared to meet the requirements of the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200; the EU Directive, 91/155/EU and other regulatory requirements. The information contained herein is for the concentrate as packaged, unless otherwise noted.

1. Company and Product Identification

FMC CORPORATION

Agricultural Products Group

1735 Market Street

Philadelphia, PA 19103 U.S.A.

Code Number: 1784

Active Ingredient: Permethrin

Chemical Family: Pyrethroid Pesticide

Formula: C₂₁H₂₀Cl₂O₃ (permethrin)

Synonyms: FMC 33297; (3-phenoxyphenyl) methyl (±) *cis-trans* 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate; IUPAC: 3-phenoxybenzyl (1*RS*)-*cis-trans*-3-(2,2-dichlorovinyl)-2,2-dimethyl cyclopropanecarboxylate

EMERGENCY TELEPHONE NUMBERS:

CHEMTREC

(800) 424-9300 (U.S.A. & Canada)

(202) 483-7616 (All Other Countries)

FMC CORPORATION

(800) 331-3148 (U.S.A. & Canada)

(716) 735-3765 (All Other Countries-*reverse charges*)

General Information: (800) 321-1362

2. Composition/Information on Ingredients

Ingredient Name	CAS #	EC Number	PEL/ TLV	EC Class
Permethrin (36.8%)	52645-53-1	613-058-00-2	None	R22
Alkyl biphenyl mixture (< 27.0%)	69009-90-1	None	None	None
Aromatic hydrocarbon (< 14.1%)	64742-47-8	None	None	None
Surfactant Blend (< 7.6%)	None	None	None	None

3. Hazards Identification

Emergency Overview:

- Amber liquid with a faint, mild petroleum odor.
- Moderately combustible. May support combustion if heated above the product's flash point (66-68°C/151-154°F).
- Thermal decomposition and burning may form toxic by-products.
- For large exposures or fire, wear personal protective equipment.
- Highly toxic to fish and aquatic organisms. Keep out of drains and water courses.
- Moderately irritating to the skin.

Potential Health Effects: Effects from overexposure result from ingestion or coming into contact with the skin or eyes. Symptoms of overexposure include increased hypersensitivity to touch and sound, tremors and convulsions. Contact with this product may rarely produce skin sensations such as numbing, burning or tingling. These skin sensations are reversible and usually subside within 12 hours.

Medical Conditions Aggravated by Exposure: None presently known.

4. First Aid Measures

Eyes: Flush with water for at least 15 minutes. If irritation occurs and persists, obtain medical attention.

Skin: Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

Inhalation: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

Ingestion: Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. See a medical doctor immediately.

Note to Medical Doctor: Dragnet SFR has low oral, dermal and inhalation toxicity. It is moderately irritating to the skin and minimally irritating to the eyes. Reversible skin sensations (paresthesia) may occur and ordinary skin salves have been found useful in reducing discomfort. Contains aromatic hydrocarbons that can produce a severe pneumonitis or fatal pulmonary edema if aspirated during vomiting. Consideration should be given to gastric lavage with an endotracheal tube in place. Treatment is otherwise controlled removal of exposure followed by symptomatic and supportive care.

5. Fire Fighting Measures

Flash Point: 66-68°C (151-154°F) (TAG)

Extinguishing Media: Foam, CO₂ or dry chemical. Soft stream water fog only if necessary. Contain all runoff.

Degree of Fire/Explosion Hazard: Moderately combustible. When heated above the flash point, this material releases vapors which, when mixed with air, can burn or be explosive.

Special Fire Fighting Procedures: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapor generated.

Hazardous Decomposition Products: Chlorine, hydrogen chloride, carbon dioxide, carbon monoxide, and aldehydes.

6. Accidental Release Measures

Isolate and post spill area. Wear protective clothing and personal protective equipment as prescribed in Section 8, "Exposure Controls/Personal Protection". Keep unprotected persons and animals out of the area. Keep material out of streams and sewers. Dike to confine spill and absorb with an absorbent such as clay, sand or soil. Vacuum, shovel or pump waste into a drum and label contents.

To clean and neutralize spill area, tools and equipment, wash with a suitable solution of bleach or soda ash and an appropriate alcohol (methanol, ethanol or isopropanol). Follow this by washing with a strong soap and water solution. Absorb, as above, any excess liquid and add to the drums of waste already collected. Repeat if necessary. Dispose of drummed waste according to the method outlined in Section 13, "Disposal Considerations".

7. Handling and Storage

Store in a cool, dry, well-ventilated place. Do not use or store near heat, open flame or hot surfaces. Store in original containers only. Store at temperatures above 40°F (5°C). If crystals form, warm to room temperature (70°F/21°C), by room heating only, for 24-48 hours and shake occasionally until crystals dissolve and product appears uniform. Do not use external sources of heat for warming container. Keep out of reach of children and animals. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

8. Exposure Controls/Personal Protection

Personal protective recommendations for mixing or applying this product are prescribed on the product label. Information stated below provides useful, additional guidance for individuals whose use or handling of this product is not guided by the product label.

Ventilation: Use local exhaust at all process locations where vapor or mist may be emitted. Ventilate all transport vehicles prior to unloading.

Work Clothing: Depending upon concentrations encountered, wear coveralls or long-sleeved uniform and head covering. For larger exposures as in the case

of spills, wear full body cover barrier suit, such as a PVC rain suit. Leather items - such as shoes, belts and watchbands - that become contaminated should be removed and destroyed. Launder all work clothing before reuse (separately from household laundry).

Eye Protection: For splash, spray or mist exposure, wear chemical protective goggles or a face shield.

Respiratory Prot.: For splash, spray or mist exposure wear, as a minimum, a properly fitted half-face or full-face air-purifying respirator which is approved for pesticides (U.S. NIOSH/MSHA, EU CEN or comparable certification organization). Respirator use and selection must be based on airborne concentrations.

Gloves: Wear chemical protective gloves made of materials such as nitrile, neoprene or Viton[®] brand. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

Personal Hygiene: Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking or using tobacco. Shower at the end of the workday.

9. Physical/Chemical Properties

Appearance: Amber liquid

Odor: Faint, mild petroleum

Specific Gravity: 1.033 @ 20°C (water = 1)

pH: 4.0 @ 20°C (5% in water)

Solubility (H₂O): Emulsifies

Molecular Weight: 391.3 (permethrin)

Flash Point: 66-68°C (151-154°F)

Weight per Volume: 8.61 lb/gal (1033 g/L)

10. Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions/Materials to Avoid (Incompatibility): Excessive heat and fire.

11. Toxicological Information

Rat Acute Oral: LD50 = 998 mg/kg

Rabbit Acute Dermal: LD50 > 2000 mg/kg

Rat Acute Inhalation: LC50 > 4.30 mg/L/4hr

Acute Effects From Overexposure: Dragnet SFR has low oral, dermal and inhalation toxicity. It is moderately irritating to the skin and minimally irritating to the eyes. Experience to date indicates that contact with Dragnet SFR has rarely produced skin sensations such as numbing, burning or tingling. These skin sensations are reversible and usually subside within 12 hours. Large toxic doses of Dragnet SFR administered to laboratory animals have produced central nervous system effects with symptoms that include hypersensitivity to touch and sound, tremors, and clonic convulsions. Overexposure to animals via inhalation has also produced symptoms such as squinting eyes, irregular and rattling breathing and ataxia. Inhalation of aromatic hydrocarbon vapors may cause dizziness, disturbances in vision, drowsiness, respiratory irritation, and eye, skin and mucous membrane irritation. Vomiting after ingestion of this product may cause aspiration of aromatic hydrocarbons into the lungs which may result in fatal pulmonary edema.

Chronic Effects From Overexposure: No data available for Dragnet SFR. In studies with laboratory animals, permethrin did not cause reproductive toxicity or teratogenicity. Analysis of chronic feeding studies in both mice and rats with permethrin resulted in the conclusion that permethrin's potential for induction of oncogenicity in experimental animals is low, and that the likelihood of oncogenic effects in humans is nonexistent or extremely low. Long-term feeding studies in animals resulted in increased liver and kidney weights, induction of the liver microsomal drug metabolizing enzyme system, and histopathological changes in the lungs and liver. An overall absence of genotoxicity has been demonstrated in mutagenicity testing with permethrin. Chronic exposure to stoddard solvents may cause headaches, dizziness, loss of sensations or feelings (such as numbing), and liver and kidney damage.

Carcinogenicity:

IARC: No

NTP: No

Other (OSHA): No

12. Environmental Information

Unless indicated, the information presented below is for the active ingredient, permethrin.

Physical/Environmental Properties:

In soil, permethrin is stable over a wide range of pH values. When applied at agricultural use rates, permethrin has a moderate rate of degradation in soil. At termiticidal use rates, permethrin degrades at a slower rate which is governed by soil characteristics. Due to its high affinity for organic matter ($K_{oc} = 86,000$), there is little potential for movement in soil or entry into ground water. Permethrin has a Log P_{ow} of 6.1, but a low potential to bioconcentrate ($BCF = 500$) due to the ease with which it is metabolized.

Environmental Toxicology:

Permethrin is highly toxic to fish ($LC_{50} = 0.5 \mu\text{g/L}$ to $315 \mu\text{g/L}$) and aquatic arthropods ($LC_{50} = 0.02 \mu\text{g/L}$ to $7.6 \mu\text{g/L}$). Marine species are often more sensitive than the freshwater species. Bacteria, algae, mollusks and amphibians are much more tolerant of permethrin than the fish and arthropods. Care should be taken to avoid contamination of the aquatic environment. Permethrin is slightly toxic to birds and oral LD_{50} values are greater than 3600 mg/kg. Longer dietary studies showed that concentrations of up to 500 ppm in the diet had no effect on bird reproduction.

13. Disposal Considerations

Open dumping or burning of this product or its packaging is prohibited. If spilled material cannot be disposed of by use according to label instructions, an acceptable method of disposal is to incinerate in accordance with local, state and national environmental laws, rules, standards and regulations. However, because acceptable methods of disposal may vary by location, and regulatory requirements may change, the appropriate regulatory agencies should be contacted prior to disposal.

Non-returnable containers which held this material should be cleaned, prior to disposal, by triple-rinsing. Containers which held this material may be cleaned by being triple-rinsed, and recycled, with the rinsate being incinerated. Do not cut or weld metal containers. Vapors that form may create an explosion hazard.

14. Transportation Information

This material is not regulated in transportation when shipped via highway, railroad or air. For these modes describe the material as: Insecticides, NOI, other than Poison. NMFC Item 102120

For shipment via ocean vessel described as: Environmentally hazardous substances, liquid, n.o.s. (permethrin 36.8%), 9, UN3082, III, Marine Pollutant. NAERG Guide 171.

MARPOL Designation: Severe Marine Pollutant

Reportable Quantity: Not listed.

Insecticide, NOI, other than Poison. NMFC Item 102120. Dagnet® SFR

15. Regulatory Information

Australian Hazard Code: 3XE

U.S. CERCLA Reportable Quantity (RQ) (40 CFR Table 302.4): Not listed

U.S. EPA Signal Word: CAUTION

U.S. SARA Title III

Section 302 Extremely Hazardous Substances (40 CFR 355): Not listed

Section 302.4 Reportable Quantity (RQ) (40 CFR 355): Not listed

Section 311 Hazard Categories (40 CFR 370): Immediate, Delayed, Fire

Section 312 Threshold Planning Quantity (40 CFR 370): The threshold planning quantity (TPQ) for this product, if treated as a mixture, is 10,000 lb. This product contains the following ingredients with a TPQ of less than 10,000 lb.: None.

Section 313 (40 CFR 372): This product contains the following ingredients subject to Section 313 reporting requirements: permethrin (36.8%)

MSDS #: 52645-53-1-26

Rev. #: 0

Date: 05-1-97

Viton - E.I. du Pont de Nemours & Co. Trademark;
Dagnet and FMC Logo - FMC Trademarks