

MATERIAL SAFETY DATA SHEET



Cardinal Professional Products
P.O. Box 782
Hollister, CA 95024

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT CODE: EPA REG. NO.: 8536-36
PRODUCT NAME: CARDINAL 25-5
PRODUCT DESCRIPTION: For indoor or outdoor applications as a space, area or contact spray. Dependent upon pests to be controlled. Applied through ULD generators as well as conventional fogging or spraying equipment.
CHEMICAL NAME: Mixture
SYNONYMS:
MANUFACTURER: CARDINAL PROFESSIONAL PRODUCTS
TELEPHONE M-F, 8:00-4:30 PDT (800) 548-2223
MSDS & Product Information, 8:00-4:30 PDT: (800) 548-2223, (831) 637-0195X3024

24 HOUR EMERGENCY PHONE (INFOTRAC) U.S. and CANADA:	(800)-535-5053	INFOTRAC (ALL OTHER AREAS):	(800) 535-5053
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For information regarding **MEDICAL EMERGENCIES** or **PESTICIDE INCIDENTS**, call the **INTERNATIONAL POISON Center** at: 1-888-740-8712

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT(s)	CAS #	EINECS	EXPOSURE LIMITS	% BY WT.
Piperonyl Butoxide [Alpha-(2-(2-butoxyethoxy)ethoxy)-4,5-methylenedioxy-2-propyltoluene]	000051-03-6	200-076-7	Not Available	25.00
Pyrethrum [Botanical Insecticide composed of the six constituents of Pyrethrum (Pyrethrin I, Pyrethrin II, Cinerin I, Cinerin II, Jasmolin I and Jasmolin II)]	008003-34-7	232-319-8	5 mg/m ³ (OSHA, ACGIH)	5.00
Petroleum Distillates	8052-41-3	Not available	OSHA PEL 500ppm TWA	70.00

PEL = Permissible Exposure Limits.
TLV = Threshold Limit Value.

TWA = Time Weighted Average (8 hr).
STEL = Short Term Exposure Limit (15 min.).

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3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS: EMERGENCY OVERVIEW

CAUTION: OSHA and DOT COMBUSTIBLE LIQUID. DO NOT use or store near heat, sparks, open flame, or any other ignition sources. Harmful if swallowed, inhaled, or absorbed through the skin. Contains petroleum distillates; DO NOT induce vomiting due to aspiration pneumonia hazard. Avoid contact with skin, eyes, and clothing. Avoid breathing vapors or spray mists of this product. Wear a pesticide respirator which is jointly approved by the Mining Enforcement and Safety Administration and the National Institute for Occupational Safety and Health, under the provisions of 30 CFR Part II.

EYES: May cause eye irritation. Take prudent precautions to avoid contact with eyes.

SKIN: Harmful if absorbed through the skin. Can cause a burning or prickling sensation on more sensitive areas (face, eyes, mouth).

INGESTION: Harmful if swallowed.

INHALATION: Harmful if inhaled.

CHRONIC EFFECTS: None known.

ECOLOGICAL: See Section's 12 and 15.

TOXICOLOGICAL: See Section 11.

4. FIRST AID MEASURES

FIRST AID PROCEDURES:

EYES: 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. Call a poison control center or doctor for treatment advice.

SKIN: 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: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

INGESTION: Immediately call a poison control center or doctor 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 PHYSICIANS:

This product contains Pyrethrins and Petroleum Distillates; Vomiting may pose an aspiration pneumonia hazard.

For skin effects, a highly efficient therapeutic agent for Pyrethrin exposure is topical application of Tocopherol Acetate (Vitamin E).

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5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLASH POINT: 124 °F/ 51.1 °C **METHOD:** TAG Closed Cup

This product is classified as an **OSHA-COMBUSTIBLE LIQUID**.

FLAMMABLE LIMITS:

LOWER FLAMMABLE LIMIT: not established.

UPPER FLAMMABLE LIMIT: not established.

AUTOIGNITION TEMPERATURE: not established.

SENSITIVE STATIC DISCHARGE: Yes, use proper bonding and/ or grounding procedures.

HAZARDOUS COMBUSTION PRODUCTS: This product is classified as combustible, and under fire conditions it may decompose to give off toxic gases such as carbon monoxide, carbon dioxide and nitrogen oxides.

EXTINGUISHING MEDIA: Foam, carbon dioxide, or dry chemical.
FIRE FIGHTING INSTRUCTIONS: Treat as an oil fire. Use a full-faced self-contained breathing apparatus along with full protective gear. Keep nearby containers and equipment cool with a water stream. Contain the run-off, if possible, for proper disposal.

6. ACCIDENTAL RELEASE MEASURES:

SMALL SPILL: Shut off ignition sources. Stop release, if possible without risk. Dike or contain release, if possible, and if immediate response can prevent further damage or danger. Isolate and control access to the release area. Take actions to reduce vapors. Absorb with appropriate absorbent. Clean spill area of residues and absorbent.

LARGE SPILL: Shut off ignition sources. Stop release, if possible without risk. Dike or contain release, if possible, and if immediate response can prevent further damage or danger. Isolate and control access to the release area. Take actions to reduce vapors. Collect product into drums, etc. via drains, pumps, etc. Absorb with appropriate absorbent. Clean spill area of residues and absorbent

WASTE DISPOSAL METHOD: Contaminated absorbent and wash water should be disposed of according to local, state and federal regulations.

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7. HANDLING AND STORAGE

GENERAL PROCEDURES: DO NOT USE THIS PRODUCT IN OR ON ELECTRICAL EQUIPMENT DUE TO POSSIBILITY OF SHOCK HAZARD.

HANDLING: Take prudent precautions to avoid contact with skin, eyes and clothing. Take prudent precautions to avoid breathing vapors and/ or spray mists of this product. Wear a pesticide respirator which is jointly approved by the Mining Enforcement and Safety Administration and the National Institute for Occupational Safety and Health, under the provisions of 30 CFR Part II. Mechanical ventilation should be used when handling this product in enclosed spaces. Do not contaminate water, food or feedstuffs by storage, handling or disposal. Read and observe all precautions and instructions on the label.

STORAGE: Store containers upright and closed. Store in areas that are cool, dry and well-ventilated. Keep away from heat, open flame, ignition sources, and strong oxidizers. Emptied containers may retain product residues.
KEEP OUT OF REACH OF CHILDREN.

WORK HYGIENIC PRACTICES: DO NOT SMOKE, EAT, DRINK OR APPLY COSMETICS IN WORK AREA! Wash Promptly if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking and using the toilet.

ELECTROSTATIC ACCUMULATION: This product contains petroleum distillates for which there is the potential for electrostatic accumulation. Proper grounding procedures should be used when transferring this material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS: Not established by OSHA or ACGIH (see Section 2 for individual components).

ENGINEERING CONTROLS: Mechanical ventilation should be used when handling this product in enclosed spaces. Local exhaust ventilation may be necessary.
RESPIRATORY PROTECTION: Wear a pesticide respirator which is jointly approved by the Mining Enforcement and Safety Administration and the National Institute for Occupational Safety and Health, under the provisions of 30 CFR Part II.

SKIN PROTECTION: Take prudent precautions to avoid contact with skin and clothing.

EYE PROTECTION: Take prudent precautions to avoid contact with eyes.

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9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Amber color.
ODOR: Sweet smell.
PHYSICAL STATE: Liquid
VAPOR PRESSURE: Not available
VOC: 70%
VAPOR DENSITY: Not available
BOILING POINT: Not available
MELTING POINT: Not applicable
SOLUBILITY IN WATER: Immiscible in water
SPECIFIC GRAVITY: Not available
COLOR, (GARDNER): Not available
pH: Not available
VISCOSITY: Not available
REFRACTIVE INDEX: Not available

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.
INCOMPATIBILITY: Not compatible with strong acids or bases. Not compatible with strong oxidizers.
HAZARDOUS DECOMPOSITION PRODUCTS: Not applicable.
HAZARDOUS POLYMERIZATION: Will not occur

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11. TOXICOLOGICAL INFORMATION

ACUTE STUDIES:

INGESTION:

Acute Oral LD₅₀ (rat) Not available

SKIN:

Acute Dermal LD₅₀ (rabbit): Not available

Primary skin irritation (rabbit): Slight irritation at 72 hours. Primary skin irritation index = 1.58.

Dermal Sensitization (guinea pig): Not available

INHALATION:

Acute Inhalation LC₅₀ (rat) Not available

EYE:

Primary eye irritation (rabbit): Not available

CHRONIC:

CARCINOGENICITY:

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as being carcinogens.

Carcinogenicity/

Oncogenicity: Py and PBO

Pyrethrum has been tested in chronic feeding studies in mice and rats. Slightly elevated incidences of benign tumors of the thyroid and liver were seen in rats following high doses of Pyrethrum. Further detailed scientific studies into the mechanism causing these responses indicate that these effects in the animals only occur at doses greatly exceeding the likely human exposure levels. Thus, the effects seen in animals are of little relevance to humans.

Marginally higher incidences of benign liver tumors in mice were observed following lifetime high dose exposures to PBO. The significance of these observations is questionable and under review. The doses at which tumors were observed for pyrethrum and PBO greatly exceeded potential human exposure from labeled uses.

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12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: This product is toxic to fish, birds, and other wildlife. Do not apply directly to water. Do not contaminate water when disposing of equipment washwaters. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

PERSISTENCE IN THE ENVIRONMENT

BIODEGRADATION: Unknown
CHEMICAL DEGRADATION: Unknown

TOXIC EFFECTS ON ORGANISMS: Unknown

FISH: LC₅₀ Not established
BIRD: LC₅₀ Not established

TOXICITY TO USEFUL INSECTS: Unknown

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Triple rinse (or equivalent) and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by other approved State and Local procedures.

RCRA \ CERCLA HAZARDOUS WASTE:

INGREDIENT
Pyrethrins

RCRA ID#: CERCLA RQ-VALUE
1 Lb.

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14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT) INFORMATION:

PROPER SHIPPING NAME: INSECTICIDES, INSECT OR ANIMAL REPELLENT,
Quantities 2.8 gallons and less per container LIQUID, N.O.S.
HAZARD CLASS: Non-Hazardous
IDENTIFICATION NUMBER (UN or NA): N/A
PACKING GROUP: N/A
REPORTABLE QUANTITY (RQ) UNDER CERCLA: 1 Lb.

OTHER SHIPPING INFORMATION: This product is not regulated as hazardous by the DOT when Pyrethrin content is less than < 1 pound per shipping container (*i.e.*, 100 Lbs. per shipping container, or less).

PROPER HAZARDOUS SHIPPING NAME: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., RQ (PYRETHRINS)
Quantities 2.9 gallons and over per container

HAZARD CLASS: 9
IDENTIFICATION NUMBER (UN or NA): UN 3082
PACKING GROUP: III

INTERNATIONAL TRANSPORTATION REGULATIONS:

ICAO / IATA DESCRIPTION: Non-Hazardous
PROPER SHIPPING NAME: Insecticides, Insect or Animal Repellent, Liquid, N.O.S.

IMO DESCRIPTION (IMDG CODE): Not Available.

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

SARA TITLE III: (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/ 312 HAZARD CATEGORIES:

FIRE: YES **PRESSURE NO GENERATING:** NO **REACTIVITY:** NO **ACUTE:** YES

SECTION 313 REPORTABLE INGREDIENTS: This product contains the following toxic chemicals of the subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372:
CAS#: **CHEMICAL NAME:** **% BY WEIGHT:**

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000051-03-6 **Piperonyl Butoxide** [Alpha-(2-(2-butoxyethoxy)ethoxy)-4,5-methylenedioxy-2-propyltoluene] 25.00

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302/ 304 EMERGENCY PLANNING

EMERGENCY PLAN: There are no SARA Title III Section 302 extremely hazardous substances present in this formulation (40 CFR 355).

See Section 13 of this MSDS for the components that are subject to emergency requirements under CERCLA Section 103(a)(40 CFR 302.4).

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS: All chemical substances found in this product comply with the Toxic Substances Control Act's inventory reporting requirements.

STATE

REGULATIONS:

VOLATILE ORGANIC COMPOUNDS 70%
(VOC):

16. OTHER INFORMATION

HMIS RATINGS:

We assign HMIS ratings to this product based on the hazards of its ingredients(s). Since the customer is most aware of the applications and conditions of use, he must ensure that the proper personal protective equipment is provided consistent with information contained in Section's 7 and 8 of this MSDS.

HMIS RATINGS:	Health	1
	Flammability	2
	Reactivity	1

The data contained herein is based on information currently available to Cardinal Professional Products, and believed to be factual and the opinions expressed to be those of qualified experts; however, this data is not to be taken as a warranty or representation for which Cardinal Professional Products assumes legal responsibility.

Supersedes: 3/96

Material Safety Data Sheet prepared by