

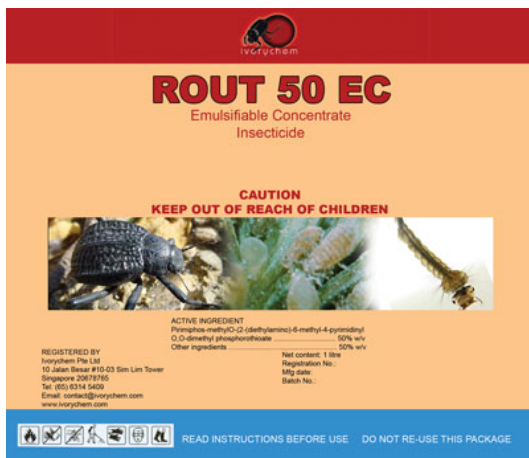
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READ THE ENTIRE LABEL BEFORE USING THIS PRODUCT.

USE ONLY IN ACCORDANCE WITH INSTRUCTIONS.

KEEP OUT OF REACH OF CHILDREN

ROUT 50 EC



INGREDIENTS

Pirimiphos Methyl50% w/v
Other ingredients50% w/v

ROUT 50 EC is a **cost effective insecticide with a wide variety of uses on storage grain, poultry sheds against darkling beetles and as a general disinfectant.** The active ingredient in ROUT 50 EC is Pirimiphos Methyl 50 EC

Trade names for products containing Pirimiphos methyl include Actellic®, Actellifog®, Blex®, PP511 (discontinued name), Silosan®, Sybol®, OMS 1424.

What is Pirimiphos Methyl and how does it work?

An insecticide which is active by contact, ingestion, and vapor action, and causes phosphorylation of the acetylcholinesterase enzyme of tissues, allowing accumulation of acetylcholine at cholinergic neuro-effector junctions (muscarinic effects), and at skeletal muscle myoneural junctions and autonomic ganglia. Poisoning also impairs the central nervous system function.

Key Benefits of ROUT 50 EC:

1. Immediate knock down effect.
2. Offers effective residual control

PRECAUTIONS

Harmful if swallowed, inhaled or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash before reuse. Keep children or pets away from treated area until dry.

SYMPTOMS OF POISONING

Irritation on skin or eyes.

MEDICAL TREATMENT

No specific antidote is available. Treatment is symptomatic.

FIRST AID

If on skin, remove contaminated clothes. Rinse and then rinse skin immediately with plenty of water and soap for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

If inhaled, move person for fresh air. If person is not breathing, call for an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control centre or doctor for further treatment advice.

If in eyes, first hold eye open and rinse with plenty of water for 15-20 minutes (remove contact lenses if easily possible). Call poison control center or doctor for treatment advice.

If ingested, call a poison control centre 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 poison control center or doctor. Do not give anything to an unconscious person.

DIRECTIONS OF USE

Insects controlled

Coleoptera

| | |
|-----------------------|-----------------------|
| Cigarette beetle | Maize weevil |
| Confused flour beetle | Merchant grain beetle |
| Corn sap beetle | Red flour beetle |
| Flat grain beetle | Rice weevil |
| Granary weevil | Sawtoothed beetle |
| Hairy fungus beetle | |

Lepidoptera

| |
|----------------------|
| Almond moth |
| Angoumois grain moth |
| Indian meal moth |

Admixture or top dressing (only ONE application)

method may be used per load). The best practices to protect stored corn and grain sorghum from insect infestation is to use an admixture treatment of ROUT 50 EC. However as it may not always be possible to move grain, a surface treatment of this product will help prevent the establishment of migrating insects. The top dressing application will not substitute for a treatment of the entire amount of stored corn or grain sorghum. But within your current stored grain management system, it will help protect the surface from invasion by insects.

Notice: Either treatment should only be used if the corn or grain sorghum has not previously received an application of this product. To determine whether the crop has been previously treated, test a sample of the grain.

Admixture treatment

Apply spray solution uniformly with suitable application equipment as grain enters storage or export containers. Select nozzle size and operating pressure to adjust the application rate with flow of grain. Prepare desired dilution of this product in spray tank and mix well. Make sure spray solution stays mixed, especially in large holding tanks. Apply the spray solution as a coarse uniform low-pressure spray in order to minimize drift. Shield nozzle if necessary. Apply the specified amount of this product in 5 gallons of water or 3-5 gallons of at least twice refined soybean oil to each 30 tons of grain according to the following rates:

| | Fluid ounces | Ppm concentration |
|---|---------------|--|
| Shelled corn (field corn, seed corn, popcorn) | 9.2 – 12.3 | 6 - 8 |
| Grain sorghum | 9.2 – 12.3 | 6 – 8 |
| Grain | No of bushels | approximately equal to 30 tones of grain |
| Shelled corn (field corn, seed corn, popcorn) | 1071 | |
| Grain sorghum | 1071 | |

Top dressing treatment

To each 1,000 square feet of grain surface, apply 3 fluid ounces of this product diluted in 2 gallons of water. The treatment should be split as follows: Spray half of the mixture evenly over the surface and rake into the grain to a depth of 4 inches. Apply the remaining half of the mixture (1 gallon) to the raked surface.

Before making a surface application of this product, it will be necessary to remove any webbing and break up crusting that exists on the

grain surface. If high numbers of Indian Meal Moth worms exist, it will be best to remove the webbing, fumigate, and then apply this product as a surface application. Mix the following amount of this product with 2 gallons of water for a total mixture to treat 1000 sq ft of grain surface.

| | Fluid ounces | Ppm concentration |
|------------------|--------------|-------------------|
| Corn and sorghum | 3.0 | 8 |

DISPOSAL METHODS

Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

STORAGE CONDITION

Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Store in a locked room or place away from children, animals, flood, feedstuffs, seed and fertilizers. Triple or preferably pressure rinse containers before disposal. Add rinsing to spray tank.

For More Details including effects on environment email contact@ivorychem.com with Subject "ROUT 50 EC DETAILS".

More Details:

USE PATTERNS AND FORMULATIONS

- **Application sites:** Stored grain products - corn, rice, wheat, and grain sorghum intended for export only. Poultry houses and as a general disinfectant.
- **Types of formulations:** emulsifiable concentrate
- **Types and methods of application:** sprays
- **Application rates:** 0.006 to 0.015 lbs. a.i./1,000 lbs. of grain
- **Usual carriers:** petroleum solvents

TOXICOLOGICAL EFFECTS

- **Acute oral LD50:** 2050 mg/kg, Toxicity Category III

- **Acute dermal LD50:** 1505 mg/kg, Toxicity Category II
- **Primary dermal irritation:** No irritation, Toxicity Category III
- **Primary eye irritation:** Corneal opacity persisted to 14 days. Toxicity Category III.
- **Skin sensitization:** Not a sensitizer.
- **Acute inhalation:** Uncharacterized. The use pattern precludes inhalation exposure.
- **Neurotoxicity:** Not an acute delayed neurotoxic agent at doses up to 10 mg/kg/day for 90 doses.
- **Oncogenicity:** Not shown to be an oncogen in rat or mouse studies at dose levels up to 300 and 500 ppm (highest dose tested) respectively.
- **Teratogenicity:** The Agency has determined that this chemical is not teratogenic at levels up to 16 mg/kg/day; however, an additional study in a second species (rats) is still required.
- **Reproduction, 3-generation:** Two studies adequately demonstrate that pirimiphos-methyl does not produce reproductive effects. No effects were demonstrated at dose levels up to 100 ppm.
- **Metabolism:** The studies suggest that pirimiphos-methyl is rapidly excreted, and no evidence of bioaccumulation was noted.
- **Mutagenicity:** This chemical has been determined to be non-mutagenic in all three required studies.

ECOLOGICAL EFFECTS

- **Effects on Birds:** Avian oral: mallard duck, 76.6 mg/kg. Ring-necked pheasant, 17.7 mg/kg. Avian dietary: mallard duck, 633 ppm. Bobwhite quail, 207 ppm.
- Freshwater fish: coldwater fish (rainbow trout), 0.40 ppm
- Freshwater fish: warmwater fish (bluegill sunfish), 2.9 ppm.
- Acute freshwater invertebrates: Daphnia, 0.21 ppb

ENVIRONMENTAL FATE

- Uncharacterized. This use pattern precludes exposure to the environment.

PHYSICAL PROPERTIES AND

GUIDELINES

Physical Properties:

- **Generic Name:** O-[2-(diethylamino)-6-methyl-4-pyrimidinyl]O,O dimethylphosphorothioate
- **Common Name:** pirimiphos-methyl
- **EPA Shaughnessy Code:** 108102
- **Chemical Abstracts Service (CAS) Number:** 29232-93-7
- **Year of Initial Registration:** 1984
- **Pesticide Type:** Insecticide
- **Chemical Family:** organophosphate
- **Physical state:** liquid
- **Color:** amber
- **Odor:** putrid - a typical organophosphorothioate odor. Odorless when pure.
- **Molecular weight:** 305
- **Melting point:** 15-18 degrees C
- **Boiling point:** Decomposes above 100 degrees
- **Vapor pressure:** 1.1 x 10⁽⁻⁴⁾ tor at 30 degrees C
- **Flash point:** Not reported
- **Solubility in various solvents:** Solubility in water is 5 ppm at 30 degrees C. Miscible in all proportions with methanol, ethanol, chloroform, acetone, benzene, toluene, and xylene.

Physiological and Biochemical

Behavioral Characteristics

- **Mechanism of pesticidal action:** An insecticide which is active by contact, ingestion, and vapor action, and causes phosphorylation of the acetylcholinesterase enzyme of tissues, allowing accumulation of acetylcholine at cholinergic neuro-effector junctions (muscarinic effects), and at skeletal muscle myoneural junctions and autonomic ganglia. Poisoning also impairs the central nervous system function
- **Symptoms of poisoning include:** Headache, dizziness, extreme weakness, ataxia, tiny pupils, twitching, tremor, nausea, slow heartbeat, pulmonary edema, and sweating. Continual absorption at intermediate dosages may cause influenza-like illness which includes symptoms like weakness, anorexia, and malaise.
- **Metabolism and persistence in plants and animals:** The metabolism of pirimiphos-methyl in plants and animals is not, at this time, adequately

understood in order to establish a tolerance for grain crops.



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