CIR-181747/2021-Chlorpyrifos (EC) (428)-1842

**Chlorpyrifos 50% E.C.**

**( Insecticide )**

Chlorpyrifos 50% EC is used to control Termites in Buildings, during construction and in existing buildings and bollworm in cotton crops. *Caution : Toxic to aquatic organisms hence should not be used near water bodies, aquaculture or pisciculture. It is toxic to honeybees, spray application should be avoided during foraging period of bees. Product is highly toxic to birds hence avoid use near bird habitat.

**Recommendation**

For protecting buildings from termite attack at pre and post construction stages, apply chlorpyrifos 50% EC @ 0.5% concentration

| Crop(s) | Common Name of Pest | Dosage/HA | | Dilution in Water (Litr) | Waiting Period between last spray to harvest (in days) | Re-entry after each Application (In Hours) |
|---|---|---|---|---|---|---|
| | | AI (gm) | Formulation (ml) | | | |
| Pre and post construction buildings | Termite | 0.25% | 0.50% | 1 Lit formulation in 99 Lit | | |

**Direction of Use**

1. EQUIPMENT USED IN APPLICATION:Knapsack sprayer, Knapsack power sprayer, motorized Knapsack sprayer cum duster, compression Knapsack sprayer, compression Knapsack battery sprayer, wheel barrow sprayer and HTP power sprayer.

2. For Termite control - Methods of application and equipment for use : 1. During construction : Mix 1 Ltr. of chlorpyrifos 50% EC with 99 L of water to get a 0.5% chlorpyrifos emulsion and apply at the following stages. Satge 1 - Treat the bottom surface and sides (upto 30cm. Height) of the excavations made for column pits, wall trenches and basements @ 5L per sq. m of surface area. Stage 2 - Treat the refill. Earth on both sides of all built up walls (approximately width 30cm and depth 45cm) @ 7.5 per sq.m of substructure. Stage 3 - Treat the entire levelled surface (before laying the floor) @ 5L per sq.m In case of RCC framed structures with columns and plinth beams and RC basements, the treatment can start at a depth of 50cm, below ground level. Wherever pipes, wastes and conduits enter soil, loosen the soil for a distance of 15cm. And 7.5cm deep and thoroughly drench with chlorpyriphos 50% EC emulsion. Note:All applications should be done when the surface is dry to facilitate better absorption. Treatment of existing build i) Dig shovel width trenches along the external wall of the building exposing the foundation wall surfaces upto a depth of 50 cm. And made 30 cm-50cm, deep rod holes. 15 cm apart all along this trench and pour Chlorpyriphos 50% Ec emulsion @1.75 litrs per running meter. ii) treat the back fill each with earth Chlorpyrifos 50% EC emulsion @ 0.5 L per running meter as it is returned to the trench directing the spray towards the wall surface. PS- If there is concrete or masonry apron around the building, drill 12mm holes as close as possible to the plinth wall 30 cm apart and pump insecticides.. A) RCC framed Structures: Excavate shovel width trenches exposing the sides of the column and plinth beams upto 30 cm. (or bottom of the plinth beams) and treat the back fill earth with Chlorpyrifos 50% emulsion as it is returned to the trench, @ 7.5 L per sq.m of the vertical surface of the structure. B) Internal treatment (Soil under floors): Soil below any openings of the floor is to be charged with the chemical so as to deny access to termites. 1. Drill 12 mm holes at the junction of floor and walls along the cracks on the floor and along constructional joints at 30 cm. Intervals to reach the soil below. Squirt the emulsion @ 1 L per hole or till refusal and seal the holes properly. 2. Drill holes in the masonary wall at about 45% angle preferably from both sides of the plinth wall at 30 cm. Interval and soak the masonary with Chlorpyrifos 50% Ec properly as above. Upper Floors:- Termites damages upper floors, flats passing through casings of telephone, pipe, woodson walls stair cases, false ceiling etc.. To prevent damage treat ground floor of existing building as in above section.

**Time of Application**

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**Precaution**

1. Keep away from foodstuffs, empty foodstuff containers and animals food.
2. Avoid contact with mouth, eyes and skin.
3. Avoid inhalation the spray mist. Spray in the direction of wind.
4 . Wash thoroughly the contaminated clothes and parts of the body after spraying.
5. Do not smoke, drink, eat and chew anything while spraying. 6. Wear full protective clothing while mixing and spraying.

**Symptoms Of Poisoning**

Headache, giddiness, vertigo,nausea, vomiting, blurred vision, diarrhoea, convulsions, sweating,excessive lacrimation, and salivation may occur.

**First Aid**

1. If swallowed, induce vomiting by tickling the back of throat. Repeat it until the vomitus is clear. Do not induce vomiting if the patient is unconscious. 2. If clothing and skin are contaminated, remove the clothes and wash the contaminated skin with copious amount of soap and water. 3. If eyes are contaiminated, flush with plenty of saline/clean water for about 10 to 15 minutes. 4. If inhaled, remove the patient to fresh air.

**Phytotoxicity**

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**Antidote**

1. Atropinize the patient immediately and maintain full atropinization by repeated doses of 2 to 4 mg. of atropine sulphate intravenously at 5 to 10 minutes interval. As much as 25 to 50 mg. of atropine may be required in a day. The need for further atropine administration is guided by the continuance of symptoms. Extent of salivation is a useful criterion for dose adjustment. 2. Dissolve 1-2 gm of 2 PAM in 10 ml distilled water and inject intravenously very slowly for 10-15 minutes.

**Disposal Of Used Container**

The empty containers should never be reused and should be destroyed and burried in a safe place. Dispose off packages or surplus material and washings in safe manner so as to prevent environmental and water pollution

**Storage Conditions**

The package containing the formulated grade insecticides should be stored in original containers in a separate room or almirah under lock and key depending on the quantity of insecticides, away from the reach of children, food stuffs, animal feeds and other articles and keep in cool and dry place. The premises for storage should be well built well lit sufficient in dimension and well ventilated

**Chemical Composition:**

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|---|---|---|
| Chlorpyrifos a.i. | | 50.00 % w/w |
| Emulsifier A | Blend of hydrocarbon and non ionic sulphonated hydrocarbon | 5.60 % w/w |
| Emulsifier B | Blend of ethoxylated hydrocarbon & non-ionic sulphonated hydrocarbon | 2.40 % w/w |
| Aromatic hydrocarbon solvent | Aromax | Q.S % |
| | **Total:** | **100.000% w/w** |