TERMIREPEL™

Non Toxic Anti-Insect and Anti –Termite Concentrate

CTECHCORPORATION
uncompromising quality

Termirepel™ is a non-toxic, non- hazardous, non- dangerous and environmentally safe insect aversive. This unique state-of-the- art product is popularly offered as anti-rodent and anti-termite masterbatch for plastics. Termirepel™ is manufactured in India by C-Tech Corporation and consumed globally for myriad applications. It is a product resulting from smart technology and green chemistry. The active is stable upto 1800°C and stable in the polymer matrix. The product is complaint with international standards like RoHS, RoHS2, REACH, etc. The product is designed especially for polymeric applications.

This non toxic product is chemosensory type of aversive based on advanced technology through careful synchronization of hormones and physiological changes, without causing any harm to insects or the environment.

Effectiveness:

Laboratory tests conducted at various reputed testing institutes such as Haffkine institute of training research and testing and Indian Institute of Chemical Technology with Termirepel™ incorporated plastic objects (read: wire/ cable/ tubing/ pipes/ sheets/ other objects) demonstrates the termite aversive effect of Termirepel™ containing polymeric materials. The observations were evaluated visually under magnification for any feeding marks such as gnawing, surface nibbling, scraping, pittings and perforation by termites and rodents in samples containing Termirepel™ in the outer most sheath (test) as against the samples without Termirepel™ (control). Mean value, and standard deviation of weights of each sample (control as well test) were carefully studied. The suitability of the data was evaluated to examine individual variables (initial & final) for the difference among sample replicates by ANOVA and multiple comparison post- hoc tests (Turkey's HSD).

The test was carried out in the simulated field condition laboratory developed by C Tech Corporation. The samples were divided into two categories that of test and control wherein the test samples were incorporated with Termirepel™ whereas the control samples without any additive for anti-rodent resistance. It was evident from the results that Termirepel™ cables Field tests have also been carried out wherein the samples were placed in bait

Termirepel™ is effective at concentrations as low as 500 to 2000 ppm

Bioactivity:

It acts as a broad spectrum bio aversive **controlling more than 600 species of insects/pests** including termites, caterpillars, beetles, whiteflies, leafhoppers, aphids, mites, thrips, leaf borer, leaf folders, and many more.

Salient Features:

- Repels rather than killing insects
- Long term protection against termites and other insects
- Available also as customized client specific concentrate
- Ease of incorporation into extrusion process
- No modification of process required
- Good Thermal stability
- Low vapor pressure
- Low concentrations required
- Electrically neutral
- Does not leach out of polymer matrix
- Soil stable, does not degrade
- Soil condition does not affect product
- Superior to armoring and existing alternatives

Mechanism:

1) **Feeding disruption:**

   Termirepel™ triggers unpleasant reactions in termites and other insects who try to feed or damage

the application. It dissuades the insect from feeding on the application. Because of the unpleasant reactions experienced by the insects they do not feed or destroy the application in search of food.

2) **Oviposition Deterrence:**

Insects specially like termites, ants and many more are present along with their entire colony near the application. The size of the colony increases continuously which poses a great threat to the application. Termirepel™ temporarily inhibits the ability of the colony to grow in size. They temporarily disrupt the oviposition cycle of the insects. However, once the insect colony moves away from the application, the normal oviposition cycle continues.

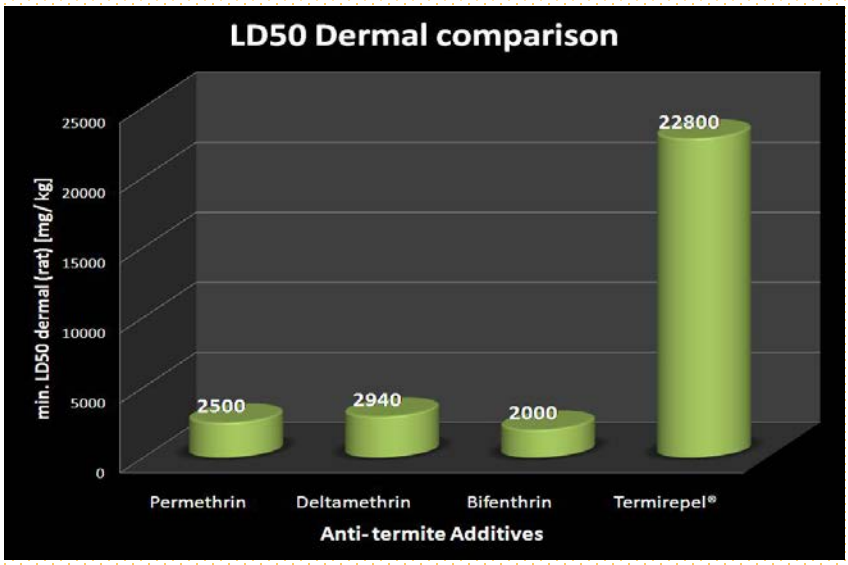
3) **Growth inhibition**: The insect life goes through various stages i.e. egg to pupa to maturity. The insects when present near the application treated with Termirepel™, suffers from temporary deferral in their growth cycle. Termirepel™ prevents the insect from reaching the maturity stage which helps to prevent the increase of the insect colony size. Once the insects' moves away from the Termirepel™ treated application, their growth continues.

4)

5) **Mating Disruption:**

The Higher LD50 value, lower the toxicity!

Termirepel™ temporarily disrupts the mating cycle of the insects in order to restrict the increase of colony size of the insects. This disrupts is temporary and the mating cycle continues once the colony moves away from the application.



Toxicity & Safety:

Termirepel™ is comprised of essential oil extracts. Essential oils are highly concentrated, volatile oils that can be extracted from aromatic plants. Their use back in ancient times and their wide variety of therapeutic, medicinal and culinary uses has ensured their continued popularity. About 700 different kinds of plants contain useful essential oils, and there are several methods employed to extract them, the most common of which is distillation.

Most often toxicologists use Lethal Dose and Lethal Concentration to gauge the toxicity of most chemicals; evaluated on many kinds of animals but most often testing is done with rats and mice. The LD50 or LC50 is one way to measure the short-term poisoning potential (acute toxicity) of a material.

It is usually expressed as the amount of chemical administered (e.g., milligrams) per 100 grams (for smaller animals) or per kilogram (for bigger test subjects) of the body weight of the test animal. The LD50 can be found for any route of entry or administration but dermal (applied to the skin) and oral (given by mouth) administration methods are the most common.

Please Note:

- No pyrethroids or other harmful insecticides used
- Termirepel™ contains no lead or heavy metal toxic compounds.

The lethal dosage and lethal concentration values of Termirepel™ masterbatches are very high.

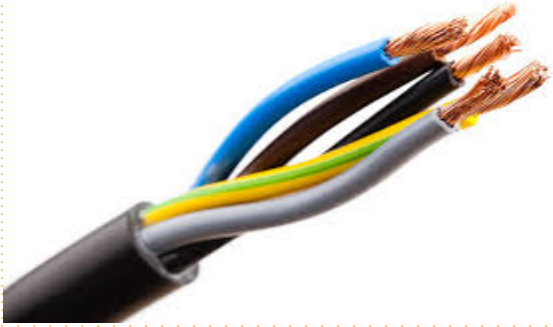
It must be noted that Termirepel™ masterbatches are safe to handle. However, because of its aversive properties, normal precautions should be taken to prevent it from adhering to skin. Moreover, bearing in mind that the product is intended to be extremely objectionable to all insects, it is nonetheless safe even if ingested.

Availability:

- Masterbatch Form
- Liquid Solution
- Lacquer Form

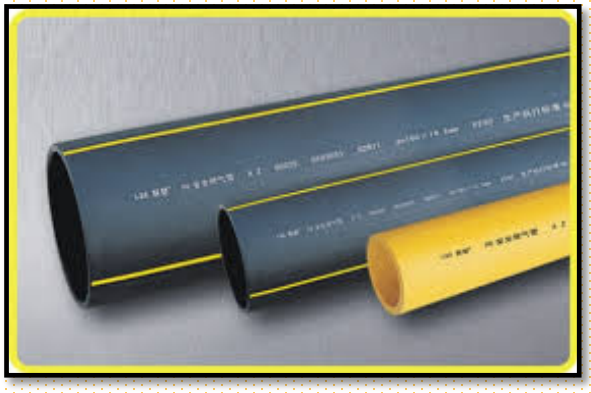
Application Areas:

Telecommunication and power- wires and cables



Agriculture- drip/ micro irrigation systems

Gas sector- gas hauling pipes



Railway carriages

Agriculture films

Aircraft arrestor systems

Trash bags and bins

Automobile- wiring harness and other engine component

Note: Special Grades for defense and nuclear applications.

To reach us:

We provide customized solutions for each application. We have stood steadfastly by the principle of ***uncompromising quality*** since we believe that customers deserve the best. Besides commitment to the safety of the environment has formed the bedrock of all our business practices and principles.

GLOBAL REGION

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Termirepel™ is a product of C-Tech Corporation. C-Tech Corporation is an ISO 9001:2000 and ISO 14001:1996 registered company.

We have made uncompromising quality a trademark & a religion for our company. C-Tech Corporation understands that products must be priced competitively & we ensure that, we offer the best possible quality at very competitive prices.

C-Tech Corporation is committed to continuous improvement in the environment, health, and safety (EHS) of our employees, customers and our community. Our goal of no accidents, or harm to the environment is the foundation of our business principles and practices. We are committed to comply with applicable local, national and international environmental and legislative requirements and continual improvement in our environmental performance.