



COMBIREPEL[®]™

The non toxic, non hazardous anti-rodent
and anti-termite masterbatch

Combirepel^{®™} is a non-toxic, non-hazardous, non-dangerous and environmentally safe animal, bird and termite repellent. This unique state-of-the-art product is popularly offered as anti-rodent and anti-termite masterbatch for plastics. Combirepel^{®™} 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 1400°C.



This RoHS compliant product is chemosensory type of repellent based on most advanced technology of repellency through sensory mechanisms, without causing harm to either the animals or the environment.

Effectiveness:

Laboratory tests conducted with Combirepel^{®™} incorporated plastic objects (read: wire/ cable/ tubing/ pipes/ sheets/ other injection molded hollow objects) demonstrate the repellent effect of Combirepel^{®™} containing polymeric

materials. The observations on Gnawing Factor based on the loss of weight of samples post the 30 day test period conclude that objects containing Combirepel^{®™} in the outer most sheath have almost negligible weight losses as compared to samples without this anti-rodent and anti-termite additive.

Field tests have also been carried out wherein the samples are subjected to conditions simulated as close as to the real application. Cables samples were buried in a mud/ gravel enclosure with a high density of wild rodents. It has been concluded in such tests that samples containing Combirepel^{®™} pass while the control (placebo) fails to demonstrate any resistance.

Combirepel^{®™} has proven to be effective against a wide variety of animals, ranging from woodpeckers to grizzly bears and against many insects especially termites ranging from subterranean to Formosan covering various species from different regions such as the *Odonototermes obesus*, the *Coptotermes gestroi*, and so on

Combirepel^{®™} is effective at very low concentrations; the dispersion of Combirepel^{®™} in polymers requires dosages from 1% to 5% of masterbatch depending on the dispersion process and application. **A 5-7% Combirepel^{®™}**

solution is generally recommended for application in wires and cables.

Toxicology & Safety:

Combirepel[®]™ is comprised of natural ingredients, and natural extracts, floral extracts and essential oils. Essential oils are highly concentrated, volatile oils that can be extracted from aromatic plants. Their use dates back to ancient times, and their wide variety of therapeutic, medicinal and culinary uses has ensured



their continued popularity. There are several methods employed to extract them, the most common of which is distillation. An essential oil is a concentrated hydrophobic liquid containing volatile aroma compounds from plants. Essential oils are also known as volatile oils, ethereal oils or aetherolea, or simply as the "oil of" the plant from which they were extracted, such as oil of clove. An oil is "essential" in the sense that it carries a distinctive scent, or essence, of the plant. Essential oils do not form a distinctive category for any medical, pharmacological, or culinary purpose.

Essential oils are generally extracted by distillation. Other processes include expression, or solvent extraction. The antimicrobial activity of plant oils and extracts has been recognized for many years. However, few investigations have compared large numbers of oils and extracts using methods that are directly comparable. These essential oils are generally based on various classes of compounds. No pyrethroids or other harmful insecticides used.

1. Combirepel[®]™ contains no lead or heavy metal toxic compounds.
2. Combirepel[®]™ contains no toxic or environmentally harmful pesticides.
3. Combirepel[®]™ is soil stable and do not degrade.
4. Combirepel[®]™ is designed to repel effectively and not kill the rodents or any other animal or human; it doesn't harm any target or non target species in any way.
5. Combirepel[®]™ is minimally soluble in water.
6. COMBIREPEL[®]™ is ROHS compliant as per EU Directive 2002/95/EC.

It must be noted that Combirepel[®]™ 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 animals, it is nonetheless safe even if ingested. Hence, these masterbatches can even be ingested without any harm.

Application area:

Some of the industries where Combirepel[®]™ has demonstrated its requirement:

1. Telecommunication and power-wires and cables
2. Agriculture- drip/ micro irrigation systems
3. Gas sector- gas hauling pipes
4. Defense components- mine casing
5. Heritage construction preservation- bird repellent coating
6. Railway carriages
7. Aircraft arrestor systems
8. Automobile- wiring harness and other engine components
9. OEMs (Original Equipment Manufacturing)- wiring of domestic/ industrial appliances
10. Trash bags and bins

Combirepel[®]™ 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.

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.

ASIA PACIFIC REGION

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