

RODREPEL®TM

Non- Toxic Anti- Animal & Anti- Bird Masterbatches



$R_{\text{odrepel}^{\mathbb{R}^{\text{\tiny{TM}}}}}$ is a non- toxic, non-

hazardous, nondangerous and environmentally safe animal and bird aversive. This unique state-of- the- art product is popularly offered as antirodent or anti- vermin masterbatch for plastics. Rodrepel®™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 aversive based on most

advanced technology of keeping away through sensory mechanisms, without causing harm to either the animals or the environment.

Effectiveness:

Laboratory tests conducted at various reputed testing institutes with Rodrepel^{®™} incorporated plastic objects (read: wire/ cable/ tubing/ pipes/ sheets/ other injection molded hollow objects)

the aversive effect of demonstrate $Rodrepel^{\mathbb{R}^{\text{TM}}}$ 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 Rodrepel®™ in the outer most sheath have almost negligible weight losses as compared to samples without this antirodent 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 been buried in a mud/ gravel enclosure with a high density of wild rodents. It has been concluded in such tests that samples containing Rodrepel®TM pass while the control (placebo) fails to demonstrate any resistance.

Rodrepel^{®™} has proven to be effective against a wide variety of animals, ranging from woodpeckers to grizzly bears.

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

*Gnawing Factor- Weight loss of sample per week ÷ Sample initial weight

The Mechanism:

Unlike the conventional "rodenticides", Rodrepel^{®™} works from a distant. The strategy is to thwart the animal away before it comes in contact of bites the object. Rodrepel^{®™} works on the following 5 principles:

- 1. Fear: The primary and the most pivotal defense against rodent attack. Rodrepel^{®™} is a potent mixture of compounds which mimic the smell of predator urine thus exploiting the olfactory response of the animals which would approach an application. Thus rodents in majority of the cases tend to stay away from the application thus preventing damage.
- 2. **Discomfort:** By adding a component which causes severe distress to the mucosa of the animal in case of contact which could be accidental/ despite the fear mechanism.
- 3. **Aversion:** Rodrepel^{®™} triggers an unpleasant reaction within any rodent which might try to gnaw away at the application, ensuring that it won't bite again. Our labs

have confirmed that in almost all such cases where the rodent might try to chew the substance incorporated with Rodrepel^{®™}, it won't bite again.

- 4. **Training:** After encountering the above mentioned emotions the animal instinctively perceives that Rodrepel^{®™} is something it should stay away from and stores this information for future reference.
- 5. **Association and Conditioning:**The unpleasant experience with Rodrepel^{®™} is imprinted within the animal's memory and passed on to its progeny. The next generation of evolved animals would therefore be effectively kept away.



Toxicology & Safety:

- Rodrepel^{®™} contains no lead or heavy metal toxic compounds.
- Rodrepel^{®™} contains no toxic or environmentally harmful pesticides.
- 3. Rodrepel^{®™} is soil stable and do not degrade.
- 4. Rodrepel^{®™} is designed to keep the rodents away 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. Rodrepel sis minimally

soluble in water.

6. Rodrepel^{®™} is ROHS compliant as per EU Directive 2002/95/EC.

Infact, it is the world's one and only completely non-toxic animal aversive.

It must be noted that Rodrepel^{®™} 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.

${f A}$ pplication area:

Some of the industries where Rodrepel^{®™} has demonstrated its requirement:

- 1. Telecommunication and powerwires and cables
- 2. Agriculture- drip/ micro irrigation systems
- 3. Gas sector- gas hauling pipes
- 4. Defense components- mine casing
- 5. Heritage construction preservation- bird aversive 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

Rodrepel $^{\otimes m}$ 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.

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