PRODUCT PERFORMANCE / EFFICACY REVIEW
Mark Suarez, Entomologist - IB

DATE: 20 November 2007
EPA REG. NUMBER: 71653-6
PRODUCT NAME: Genics CuB
REGISTRANT: Genics Inc.
PM: Adam Hayward, RM 34
REVIEWER: Stacey Grigsby
DECISION #: 362915
DP BARCODE: 327808
ACTION: A55
ACTIVE INGREDIENT(S): 011103, Boron Sodium Oxide, tetrahydrate.........................9.1%
011101, Boric Acid.......................0.51%
023401, Copper Hydroxide.............0.96%
TYPE: Wood Composite Additive
OPPTS GUIDELINE(S): 810.3500
810.3600, as applicable

MRID:

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**SITES & PESTS**
- Indoors/Outdoors: Termites &
- Wood & Wood other Wood
- Composites Destroying
- Insects

**STUDY APPLICATION RATE:** Variable, see individual summaries

**LABEL APPLICATION RATE:** RTU: Spray, Brush, Dip, Roller (or other thorough coverage of surface)


The data provided in MRID 47105701 were developed from laboratory trials involving the treatment of wood wafers with Cobra Crush [EPA Reg. No. 71653-4] and Zinc Borate. The treated and control wafers were exposed to 400 Formosan subterranean termites (*Coptotermes formosanus*) for 4 weeks in a no choice test. The trial was replicated three times with two samples from each of three replicates.

The data generated are not applicable to the subject registration to differences between the test and subject formulations.


The data provided in MRID 47105707 were generated from field trials in which telephone poles were treated with CobraRods. Tests for mold and decay resistance were conducted, but not termite data were generated.

The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations and the fact that the study provided not data on termites.


The information contained in MRID 47105708 can be most accurately characterized as a position paper on the suitability of borates for use as a wood preservative.

The paper provided no product specific information about the subject formulation.

The study, MRID 47105709, tested the effectiveness of a borate pressure treatment of southern yellow pine (SYB) or oriented strand board (OSB) against Carpenter ant (Camponotus modoc). The 12 week test demonstrated that 0.28 lb/ft^3 B_2O_3 (~0.5% BAE) was adequate to protect woods from carpenter ants.

The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations.


The information contained in MRID 47105710 can be most accurately characterized as a position paper on the suitability of borates for use against beetles.

The paper provided no product specific information about the subject formulation.


The study, MRID 47105711, tested the diffusion of borates and copper (from Cobra and Impel rods) in pine and cedar woods. The test demonstrated that boron migrated farther (6x) than copper in the wood.

The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations.


The study, MRID 47105712, tested the effectiveness of treating OSB with copper borate and other pesticides against mold, decay, and C. formosanus in laboratory studies. The data indicate that the Cu/B formulations tested were somewhat effective against the Formosan termite; however significant damage (AWPA Rating <9) occurred in 8 of 11 treatments within 28 days. Additional data were provided on chemistry occurring with treated OSB and the efficaciousness of the test formulations against mold and decay.

The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations. Additionally, the laboratory data provided do not provide the data necessary to evaluate a product as a stand alone termite pretreatment.


The data provided in MRID 47105713 were generated from field trials in which woods were treated with borates or chromated copper arsenate (CCA) and exposed to termite pressure in Canada. The treated woods demonstrated moderate resistance to termite attack, according to the AWPA damage rating scale. However, the control damage observed was minimal.

The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations and the limited termite pressure documented.


The data provided in MRID 47105714 were generated from laboratory trials in which concrete was treated with BoraCare and exposed to foraging termites. The trial was designed to evaluate the effectiveness of a BoraCare application as a deterrent to termite foraging tube construction. The treated concrete demonstrated reduced tunneling.

The data provided in this study were not applicable to the desired amendment due to differences between the test and subject formulations.


The data provided in MRID 47105715 were generated from field trials in Hawaii. Woods were treated with borates, DOT + DDAC, ACZA, or chromated copper arsenate (CCA) placed in weatherproof enclosures, but exposed to termite pressure for 3 years. The treated woods demonstrated moderate resistance to termite attack, according to the AWPA damage rating scale. However, the control damage observed was minimal. (A concurrent test was run in Japan, but data were not provided.)

The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations.

The data provided in MRID 47105716 were a continuation of the data reported in MRID 47105715, generated from field trials in Hawaii. Woods were treated with borates, DOT + DDAC, ACZA, or chromated copper arsenate (CCA) placed in weatherproof enclosures, but exposed to termite pressure for 6 years. The treated woods demonstrated moderate resistance to termite attack, according to the AWPA damage rating scale.

The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations.


The data provided in MRID 47105717 were a continuation of the data reported in MRIDs 47105715 and 47105716, generated from field trials in Hawaii. Woods were treated with borates, DOT + DDAC, ACZA, or chromated copper arsenate (CCA) placed in weatherproof enclosures, but exposed to termite pressure for 8 years. The treated woods demonstrated moderate resistance to termite attack, according to the AWPA damage rating scale. The termite pressure observed in untreated controls was only marginally acceptable in years 6, 7, and 8.

The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations.


The study submitted under MRID 47105718 provided data on the effectiveness of Borosol 9 as a treatment for cerambycid infestations. The data provided indicate that the test formulation is efficacious against these organisms.

The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations.


The study submitted under MRID 47105719 provided data on the effectiveness of Borosol 9 as a treatment against fungi. The data provided indicate that the test formulation is efficacious against these organisms.

The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations.

Koppers-Hickson Timber Protection Ltd. and Research Institute for Sustainable Humanosphere. 8 p.

The study, MRID 47105720, examined the diffusion of borates through poles for fused borate rods in the presence and absence or a liquid borate treatment.

The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations.


The information contained in MRID 47105721 can be most accurately characterized as a review paper on the use of borates and other wood preservatives. Fungi and termites are specific foci of the review.

The paper provided no product specific information about the subject formulation.


The data provided in MRID 47105722 were from a companion study of the data reported in MRIDs 47105715, 47105716, and 47105717, generated from field trials in Hawaii. In this trial, woods were treated with borates, DOT + DDAC, ACZA, or chromated copper arsenate (CCA) placed in weatherproof enclosures, but exposed to termite pressure for 10 years in Japan. No data tables were provided, but the narrative indicates that the treated woods demonstrated adequate resistance to termite attack.

The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations.


The study, MRID 47105724, examined the efficaciousness of boric acid mixed with voriconazole and ethanolamine against termites.

The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations.

The data provided in MRID 47105724 demonstrated the diffusion of boric acid from fused rods and liquid form into wood.

The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations.


The information contained in MRID 47139703 can be most accurately characterized as a position paper presenting the benefits of using borates for wood protection. The low mammalian toxicity of borates was a focus of the review.

The paper provided no product specific information about the subject formulation.


The data provided in MRID 47139704 demonstrated a reduction in the leaching of boric acid from wood pressure treated with ammoniacal copper borate in both above and below ground applications over 11 years.

The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations.


The data provided in MRID 47139705 were generated by exposing leached or unleached wood treated with ammoniacal copper borate to decay and termites in the laboratory for 4 weeks.

The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations.


The information contained in MRID 47139706 can be most accurately characterized as a review paper discussing borates for wood protection. The results of research published to the time of publication (circa 1997) of the paper were discussed in an effort to synthesize a comprehensive understanding of borate use for termite control.

The paper provided no product specific information about the subject formulation.


The data provided in MRID 47139707 were generated from laboratory trials assessing the toxicity of boric acid in a sucrose solution to carpenter ants, Camponotus abdominalis floridanus.
The data provided in the aforementioned study were not applicable to the desired amendment due to differences between the test and subject formulations and the fact that not directions for use are provided on the subject label for use as a carpenter ant bait.


The data provided in MRID 47148701 were the result of an 8 week laboratory test of copper borate treated OSB panels exposed to mold.

The data provided in the aforementioned study were not applicable to the desired amendment due to fact that the study was against mold.


The data provided in MRID 47148701 were the result of an 8 week laboratory test of copper borate treated OSB panels exposed to mold.

The data provided in the aforementioned study were not applicable to the desired amendment due to fact that the study was against decay.

ENTOMOLOGIST'S COMMENTS AND RECOMMENDATIONS:
The determination of the efficacy reviewer is provided below by taxonomic group.
1. Termites (Isoptera)
The data and review papers provided in the submission fail to adequately support the addition of claims that the product may be used as a termiticide. The fundamental deficiency is the fact that product specific data demonstrating that the product provides complete protection from termite attack in field trials with adequate termite pressure. Remove remedial and preventive termite claims from the label.

The registrant is encouraged to contact the Registration Division Insecticide Branch in order to follow or develop an appropriate protocol through which the subject formulation can be tested.

2. Carpenter ants (Camponotus spp.)
The data provided support the claim that the product is effective as a preventative and curative treatment against carpenter ants.

3. Beetles (Coleoptera)
The data provided support claims against wood boring beetles.

Enclosure
075653-0009.310764.ER

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