

Product Performance Data Evaluation Review

by
Kevin J. Sweeney, Entomologist, IB

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Reviewer: Patricia Quarles

Product: Disodium Octaborate Tetrahydrate

EPA File Symbol: 79628-1

PM: Richard Gebken, PM 10

Dec# 346223

DP 306343 and 307697

Chemical: DOT 99.98%

Formulation: Concentrate for dilution; used to treat wood by pressure and surface treatment.

Sites: lumber and wood

Pests: wood destroying insects

Request: registrant submitted label to add exterior use applications when product is used with the patented "Envirosafe Plus" process. Literature was submitted explaining the process. Registrant submitted studies from the public domain to support these claims.

GLP: no

OPPTS Guideline: 810.36

Studies submitted:

Some company literature was submitted to explain the use of the Envirosafe process in conjunction with DOT product application to wood.

In addition, public domain studies were submitted and assigned the following MRIDs.

MRID 46326502 Efficacy Reports in the Public Domain by Jack Rombaugh.

MRID 46352101 Efficacy Reports

Entomologist's Recommendations:

1. As described in OPPTS Guideline 810.3600, at least two years of efficacy data are required for the EPA to consider a conditional registration for wood treatments that are in contact with soil. Therefore, these data do not support any below ground or soil contact uses against termites.

2. The process for use with the subject product involves the use of a sealant applied to DOT treated wood to keep water out and DOT in the wood. (DOT treated wood loses borate content when it becomes wet because the DOT leaches out of the wood.) The results of accelerated leaching and aging with wood treated in this manner were submitted. These data are required to show that the product performs as claimed on the label in order for DOT treated wood to be used in exterior/outdoor applications. Wood preservative treatments must protect wood from termite and other wood destroying insects as well as wood-decay fungi. The studies showed that about 50% of the borate treatment was retained. This retention resulted in a BA load of about 0.1-0.24 pcf. This is partially within the range recommended by AWWA (0.17-0.28 pcf). These data are limited and are not supported by field testing with the product when mixed with the sealant. Instead, a field study from Hawaii was submitted that showed that DOT treated wood provided good protection against above ground termite attack. Other studies from Hawaii have shown that this is not the case.

3. Based on the scope of the submitted data and general knowledge of DOT wood treatments, the following claims would be acceptable:

- a. Treated wood resists termite attack.
- b. Not for use on wood in contact with soil or for treating wood that is used in below ground applications.

The following claims would not be acceptable.

c. Any length of time claim for exterior wood. For a length of time claim, a field study is required to show that the product can withstand weathering and termite attack.

4. The final issue regards the load of boric acid in the wood required for efficacy. The label should state the BA pcf must be within the AWWA acceptable range of 0.17- 0.28pcf in order for the wood to resist termite attack. Seems to me that any waterproof oil based sealant (paint and stain) would retain the DOT in the wood. Therefore, I still don't understand why treating the wood with a sealant named by this manufacturer is considered special or better than any other sealant. For that reason, I don't believe the EPA should endorse the use of any sealant product. Perhaps a statement like, "use of a waterproof sealant after treatment will help retain the DOT content and help prevent or resist termite attack."