

EFFICACY REVIEW

DATE: IN 10/29/80 OUT 12/12/80

FILE OR REG. NO. 6836-53

PETITION OR (EXP. PERMIT NO.) _____

DATE DIV. RECEIVED 4-8-80

DATE OF SUBMISSION 3-31-80

DATE SUBMISSION ACCEPTED _____

TYPE PRODUCT(S): I, (D,) H, (F,) N, R, S _____

DATA ACCESSION NO(S). _____

PRODUCT MGR. NO. 31

PRODUCT NAME(S) Bardac 2280

COMPANY NAME Lonza Inc.

SUBMISSION PURPOSE Formulation of Wood Preservative Fungicides for above-
ground wood

CHEMICAL & FORMULATION Didecyl dimethyl ammonium chloride80% } Liquid
Ethanol.....10% }
[6.687 pounds active/gallon]

EFFICACY REVIEW -- Fungicides

- 200.0 Introduction. -- The purpose of this submission is to amend the registration to add a claim for use in the formulation of wood preservatives. At present the product label is the only acceptable labeling and contains claims for use in repackaging and formulation of certain types of pesticides. Although the product label refers to a Technical Bulletin, no such bulletin has previously been submitted for review prior to this submission. Since the repackaging use claim would necessitate that the Technical Bulletin contain end use labeling directions for each use pattern, Mr. Irv Gottlieb agreed to delete this claim rather than provide specimen labels with complete directions for use in the bulletin. Accordingly, the wood preservative use was only reviewed in the context of a formulation use only use pattern.
- 200.1 Use. -- Formulation of Wood Preservatives to control fungal rot on wood to be used in aboveground situations. See technical bulletin for complete directions.
- 201.0 Data Summary. -- No data were submitted by the registrant, however, since the bulk of the available efficacy data were readily available in the public literature this information was reviewed.

The public literature reports indicate the following: (1) quaternary ammonium compounds very similar to the one(s) contained in the subject product have been tested for use as a wood preservative; (2) The test data reflect laboratory studies which show that these chemicals may have the potential of being used as wood preservatives; (3) only laboratory vacuum impregnation methods of application were used in studies; (4) the minimum retention levels which prevented wood rot in these studies varied from test to test, as well as for the various wood rot fungi used in the tests, but generally ranged from 0.06 to 0.4 pounds active per cubic foot of wood (1 to 6.4 Kg/m³) with 0.25 to 0.4 pounds active per cu. ft. (4.1 to 6.4 Kg/m³) generally needed to control the most difficult wood rot fungi in each test; (5) use concentrations of 0.17, 0.29, 0.47, 0.62, and 1.0% (w/w) were generally needed to provide retention levels of 0.06, 0.125, 0.187, 0.256, and 0.4 pounds active/cu. ft., respectively, using the laboratory vacuum impregnation method of application.

- 202.0 Conclusions and Recommendations. -- The proposed amendment to add a claim for use in the formulation of a wood preservative is unacceptable for the following reasons:
- (1) The Technical Bulletin in general must be amended to clearly state that the product is intended solely for use in the formulation of the specific types of pesticide products described in the bulletin. One acceptable approach would be to move the "General Information" portion of the bulletin to the first page and insert additional information under this heading which clarifies the

intended usage of the product. Additionally, most of the use pattern writeups in the bulletin are written as though the product(s) is to be used as is (i.e., without changing the formulation). If the end-use formulations to be developed from the subject product(s) will generally contain lower percentages of active ingredients, the use pattern writeups should refer to the levels of active ingredient to be used rather than technical product.

- (2) Change the phrase "in aboveground areas" to "in aboveground situations" and expand by providing a list of typical aboveground wood uses (e.g., fence rails, deck roof, porch rails, siding). Also need to specify that treatments are to be limited to exterior wood.
- (3) Change "application level" to "retention level." You must also specify the basis for the retention level(s) being recommended. for example: "Laboratory studies indicate that retention levels of _____ to _____ pounds active per cubic foot (_____ to _____ Kg/M³) were needed to control selected wood rot test fungi." Note: A review of the public literature on the utility of quaternary ammonium compounds for wood preservation indicates the need for retention levels up to 0.4 pounds active per cubic foot to control all the test fungi used in the various tests. The formulators should be advised of this plus the fact that the studies were all short term laboratory studies which utilized a vacuum impregnation method of application. Your recommended retention level should be increased to reflect the results of these studies, or you must submit data to substantiate your proposed rate of 0.05 pounds active per cubic foot.
- (4) The label should only specify methods of application which have been proven to provide sufficient retention levels to control wood rot fungi. If brush or soak methods are recommended as being adequate for this purpose, the thoroughness of such applications must also be stated (e.g., two flowing brush coats, 30-minute soak). If known, it would be helpful to the formulator to indicate the minimum use-dilution concentrations (% active on w/w basis), for each recommended method of application, that are needed to obtain the desired retention level.

203.0 Note to Product Manager. -- In a telephone conversation with Mr. Irv Gottlieb on 8/7/80 he stated that he intended to delete the claim for "Repackaging Use" on the label. Accordingly, the above review comments are only applicable to the wood preservative use as it pertains to "Formulation Use." The registrant must be reminded that he agreed to

delete the "Repackaging Use" claim. If he changes his mind we would need to make additional labeling comments, as repackaging use labeling would require that detailed end-use directions appear in the Technical Bulletin. Also note that the Technical Bulletin has never been accepted.

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E 12/22/80

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12/12/80