TECHNICAL SUPPORT SECTION EFFICACY REVIEW - I

Disinfectants Branch

IN 07-03-78 OUT 05-07-79

Dennis G. Guse WEG 5/10/79

Reviewed by Dennis G. Guse Date 05-07-79

EPA Reg. No. or File Symbol 34292-1

EPA Petition or EUP No. None

Date Division Received 04-06-77

Type Product(s): I, (D), H, (F), N, R, S Industrial Antimicrobial

Data Accession No(s). 232332

Product Mgr. No. 31 (Lee)

Product Name(s) Dow Corning 5700 Antimcrobial Agent

Company Name(s) Dow Corning Corporation

Submission Purpose Added durability data

Chemical & Formulation Technical chemical

Active Ingredient(s): %

3-(Trimethoxysilyl)-propyldimethyl-octadecyl ammonium chloride 42

200.0 Introduction

200.1 Use(s): The product is registered as a bacteriostat, algistat, and fungistat for manufacturing use as a preservative for unfinished textile fabrics, and threads. Claims have also been accepted for its use in finished socks to prevent deterioration and discoloration caused by fungi, and to inhibit odor-causing bacteria.

The current submission consists of a test report intended to demonstrate the durability of the treatment with this product to fabrics subjected to repeated laundering and/or to simulated human sweat. The claim that this product forms a durable and leach-resistant attachment to a wide variety of textiles has already been accepted in connection with the registration.

200.2 Background Information: Several previous efficacy reviews and meetings have addressed the impregnation of finished textile articles with this product, and have delineated the type of efficacy data required to document the pesticidal purpose (odor control, deterioration control, etc.) which is intended for the impregnated articles. The current submission does not address these issues.

201.0 Data Summary

201.1 Abstract of Test Report: Polyester/cotton (50/50) sheets were treated with DC-5700 in production equipment by a continuous padding operation (the concentration of DC-5700 in the sheets was not specified). The sheets were then subjected to commercial laundering for a specified number of cycles of washing and ironing. Sheeting samples representing the various numbers of cycles, together with unwashed controls, were then evaluated (AATCC Method 100-1974) for residual bacteriostatic activity. The bacteriological raw data was not provided in the report, only a summary showing "percent bacterial reduction" for the various treatments. See Table I for these results. It should be noted that after 25 washings, most of the sheeting was no longer usable.

Table I

DURABILITY OF DOW CORNING® Q9-5700 TREATMENT TO COMMERCIAL LAUNDERING

| Test Organism | Percent Bacterial Reducton | | | |
|---|---|---|---|---|
| | 0 Wash | 25 Wash | 50 Wash | 75 Wash |
| Klebsiella pneumoniae (ATCC 4352) | 96 | 94 | 94 | 82 |
| Staphylococcus aureus (ATCC 6538) | 91 | 90 | 91 | 86 |

Note to PM-31: It should be emphasized that the above summary concerns only that portion of the test report involving microbiological testing. The remainder of the report concerning radiochemical leaching studies should be referred to Residue Chemistry and/or Human Safety for evaluation.

TECHNICAL SUPPORT SECTION EFFICACY REVIEW - II

Disinfectants Branch

IN 07-03-78 OUT 05-07-79

EPA Reg. No. or File Symbol 34292-1

Date Division Received 04-06-77

Product Manager No. 31 (Lee)

Product Name Dow Corning 5700 Antimicrobial Agent

Company Name Dow Corning Corporation

202.0 Recommendations

202.1 Efficacy Supported by the Data: None.

The submitted test report consists of a summary of results (not actual test data) which show presumptive evidence that the bacteriostatic properties of treated (actual concentration not given) cotton/polyester (50/50) sheets is substantially retained through up to 50 commercial laundering cycles. However, these presumptive results cannot be related to any specific efficacy claims or patterns of use.