

US EPA ARCHIVE DOCUMENT

2-1-93

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

DP BARCODE: D185505, D182330, D178299, D174419, D180026
EFGWB # : 93-0225, 92-1360, 92-0926, 92-0522, 92-1114

MEMORANDUM

SUBJECT: Response to Waiver Request
Methylene-bis(thiocyanate) (Chemical #068102)

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THRU: Emil Regelman, Supervisory Chemist *Q 1/13/93*
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The registrant, Buckman Laboratories International, has requested waivers for the data requirements that were triggered by the Aquatic Nonfood Industrial uses of Methylene-bis(thiocyanate). These include pulp and paper mill water cooling systems, industrial waste and disposal systems, industrial scrubbing systems, secondary oil recovery injection water and sewage systems. The waiver request is based on the new EFGWB Branch Policy that requires only hydrolysis data to satisfy the EFGWB data requirements for all Aquatic Nonfood Industrial use chemicals which have NPDES license restrictions and are monitored by the Office of Water. Since all of the Aquatic Nonfood Industrial uses of Methylene-bis(thiocyanate) are covered by the NPDES license restrictions, EFGWB concurs with the waiver request.

The LUIS report also lists the use of this chemical for wood protection treatment of residential buildings and as a wood preservative for forest products. Although, the LUIS report lists the use pattern as Indoor/Outdoor Residential and Terrestrial Nonfood use, the wood treatment chemicals are considered special use chemicals and require a different set of data to satisfy the EFGWB data requirements. The following data is, therefore, needed for the registration of Methylene-bis(thiocyanate) as a wood preservative:

Hydrolysis
Aqueous Availability
Photodegradation on Wood Surfaces

The registrant has also submitted the following studies:

- 161-3 Photodegradation on Soil (MRID #422934-01)
- 162-1 Aerobic Soil Metabolism (MRID #421840-01)
- 162-3 Anaerobic Aquatic Metabolism (MRID #423592-01)
- 162-4 Aerobic Aquatic Metabolism (MRID #423563-01)

As per conversation with Shaun Helmhout (Manager Regulatory Affairs, Buckman Laboratories International, Inc.) on Jan 6, 1993, the registrant has voluntarily agreed to withdraw the submitted studies since they are no longer required for the registration of the chemical. Therefore, the unreviewed studies are being returned to RD.

The registrant has also submitted data under FIFRA Section 6(a)2 to notify the Agency of potential adverse effects of methylene-bis(thiocyanate) in aquatic organisms not previously reported. Preliminary results from a Daphnia 21-Day Life-Cycle Study indicate that Methylene-bis(thiocyanate) affected Daphnia survival and length at nominal concentrations of 100 and 50 ug/L, and reproduction at >25 ug/L. EFGWB has made a note of it and will take appropriate action when a comprehensive review of the chemical is conducted.

Data Requirements for Methylene-bis(thiocyanate)

| Data Requirement | Use Pattern | Does EPA have data to satisfy this requirement? | Bibliographic citation | Additional data required by EPA |
|------------------|-------------|---|------------------------|---------------------------------|
|------------------|-------------|---|------------------------|---------------------------------|

158.290 Environmental Fate

| | | | | |
|---|----|----|--|------------------|
| 161-1 Hydrolysis | FC | No | | Yes |
| <u>SPECIAL STUDIES-LAB:</u> | | | | |
| Aqueous Availability | C | No | | Yes ² |
| Photodegradation on treated wood surfaces | C | No | | Yes ³ |

FOOTNOTES:

- 1 The use pattern is coded as follows: Aquatic Non-Food Industrial = F; Terrestrial Non-Food Crop = C
- 2 For applied end use products, tests are to be made after product is applied by normal processing techniques and allowed to cure in usual manner. Products to be tested will be the treated wood or wood products as available in the marketplace and typical metal surfaces. Attached, please find a protocol for the aqueous availability test for treated wood products.
- 3 A generally acceptable protocol for this type of study can be found in Environmental Science and Technology Vol. 14(2):196-200

AQUEOUS AVAILABILITY TEST FOR THE WOOD TREATMENT CHEMICALS

There are no official guidelines for the determination of availability of pesticides from treated wood products. However, EFGWB recommends that the study be conducted as follows:

1. The maximum label application rate should be used.
2. The treated material should be then allowed to dry or cure according to label instructions.
3. Each of the treated products to be tested should be immersed in the following solutions:
 - a. Unbuffered distilled water
 - b. Distilled water buffered at pH 5.
 - c. Distilled water buffered at pH 7.
 - d. Distilled water buffered at pH 9.
 - e. Unbuffered sea water.
4. Solutions in which treated products are immersed should be monitored for up to 30 days.
5. Test protocols can be submitted for review by EFGWB.
6. EFGWB will entertain questions concerning the proper conduction of the above suggested study.