128826
(A) 006315
Shaughnessy No.: (B) 028501

Date out of EAB: 12 SEP 1984

To: Castillo/Laird
Product Manager #32
Registration Division (TS-767)

From: Samuel M. Creeger, Chief
Environmental Chemistry Review Section 1
Exposure Assessment Branch
Hazard Evaluation Division (TS-769c)

Attached, please find the EAB review of:

Reg./File No.: 38906 - RL

Chemical: (A) 1-bromo-3-chloro-5,5 dimethyl hydantoin (60%); (B) 1,3-dichloro-5,5-dimethylhydantoin (27%); (C) 1,3-dichloro-5-ethyl-5-methylhydantoin (10.6%)

Type Product: Microbiocide

Product Name: DantoBrom P

Company Name: Glyco

Submission Purpose: use in swimming pools

ZBB Code: other

Action Code: 115

Date In: 8/3/84

EAB No.: 4496

Date Completed: 9/12/84

TAIS (Level II) Days

Deferrals To: 61 1.5

_____ Ecological Effects Branch

_____ Residue Chemistry Branch

_____ Toxicology Branch

1.0 INTRODUCTION

Chemical Name and Type of Pesticide: swimming pool disinfectant

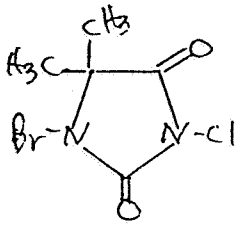
A. 1-bromo-3-chloro-5,5-dimethylhydantoin, 60% ai.

B. 1,3-dichloro-5,5-dimethylhydantoin, 27.4% ai.

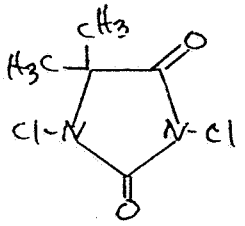
C. 1,3-dichloro-5-ethyl-5-methylhydantoin, 10.6% ai.

Trade Name: DantoBrom P

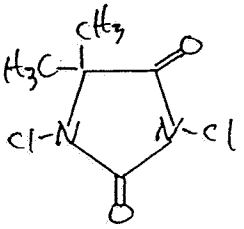
Chemical Structure:



A.



B.



C.

Glyco, Inc. is applying for the registration of DantoBrom P as a disinfectant in swimming pools. Each of the active ingredients in this submission (above) are in products that Glyco or other companies made application to register with the EPA. Two pages that are the introduction to Glyco's Product Registration Application were copied intact and are attached. The label (attached) prohibits use in marine and/or estuarine oil fields. Direct discharge into lakes, streams, or ponds must be in accordance with NPDES permit.

2.0 DIRECTIONS FOR USE

See attached label.

3.0 DISCUSSION OF DATA

The three active ingredients in the product (DantoBrom P) of this review were also in the biocide DantoBrom RW, the registration application of which was previously reviewed (13 April 1984).

The studies reviewed were hydrolysis and aqueous photolysis. The hydrolysis requirement is part of our guidelines. The aqueous photolysis data was requested because of the indirect discharge aquatic impact of the biocide. Both studies were judged inadequate. The conclusions of the studies and the recommendations of the review were copied intact and are attached.

4.0 RECOMMENDATION

4.1 The data requirements for a product used in swimming pools depend upon whether there is Direct Discharge, Indirect Discharge, or No Discharge.

4.2 Direct discharge means "the release, treatment, or application of a pesticide product directly to water at sites within or directly connected to bodies of water to which wild animals, birds, fish, and similar organisms have free access." The requirements for this type of discharge are:

Hydrolysis
Photodegradation-water
Aerobic aquatic metabolism
Anaerobic aquatic metabolism
Leaching (Adsorption/desorption)
Water field dissipation
Fish accumulation
Aquatic nontarget accumulation

4.3 Indirect Discharge means "release, treatment, or application of a pesticide product to water at sites not directly connected to bodies of water to which wild animals, birds, fish, and similar organisms have free access."

The data requirements for this type of discharge is a hydrolysis study only.

4.4 No Discharge - A hydrolysis study is still required.

4.5 If direct discharge of DantoBrom P residues occurs (in accordance with NPDES permit) then the data required are those in Section 4.2.

Herbert L. Manning

Herbert L. Manning, Ph.D.
Microbiologist
EAB/HED