UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 003297

DATE: February 10, 1978

SUBJECT: 90% Dimethyl T
Caswell#382

EPA Registration Number#677-GGI
Shaughnessy#078701

FROM: William Greear W. Greear 2/14/78
Toxicology Branch

TO: Dick Mountfort
Product Manager #23

Recommendation

The acute oral LD_{50}, inhalation LC_{50}, and dermal LD_{50} studies are adequate. The eye irritation study is inadequate (see review). The following additional studies should be submitted prior to registration:

1) Primary Skin Irritation
2) Primary Eye Irritation

*No RPAR criteria have been exceeded.

Review

1. Acute Inhalation Toxicity Study of DTX-77-0049 in the Rat - (Bio/dynamics Inc., Report#77-1983, 8/5/77, submitted by Diamond Shamrock on 9/13/77, Acc#231596)

5 male and 5 female Sprague-Dawley rats, weighing 210-257g, were exposed in a 32.2L glass exposure chamber to a dust atmosphere of the test material for a period of 4 hrs. The atmosphere was produced by operating two Wright Dust-Feed mechanisms for 2.0 hours. Particle size determinations were performed at 2 and 4 hrs into the exposure. The nominal concentration was 20.7 mg/L. Remote sampling produced a concentration range of 0.31-0.55 mg/L. Direct sampling at 3 and 4 hrs resulted in values of 1.1 and 1.4 mg/L which is probably the closest approximation of the actual concentration. The animals were observed at 15-min. intervals for the 1st hour, hourly for the remainder of the exposure, hourly for 3 hrs after termination of the exposure, and daily thereafter for 14 days. Body weights were recorded on Day 0, 1, 2, 4, 7 and 14. Necropsies were performed.

Results

LC_{50} >20 mg/L (nominal); >1.1 mg/L (analytical) for t=4hrs
Particle Size: majority was >10 μ due to clumping.
Toxic Signs: dry rales
Necropsy: lung discoloration
TOX Category: III or IV (predicted)

Classification: Core-Minimum Data
(1) although only 1 dose level was tested, the results are adequate since it is apparent that the maximum concentration was generated (the test material adherred to the chamber walls)

2. Acute Eye Application - (Hazleton Laboratories, Report Date 5/13/58, submitted by Diamond Alkali Co in PP#411)

3.0 mg of (presumeably) 100% technical was placed into the conjunctival sac of the left eye of each of 3 rabbits. The treated eye was held closed for ≈ 30 sec., afterwhich an immediate reading was made. Observations for gross signs of eye irritation were continued at 1, 4 and 24 hours, and daily thereafter for an additional 6 days.

Results

Immediately following application there was a mild degree of irritation whichwas characterized by erythema and vascularization of the sclera and nictitating membrane, accompanied by lacrimation. Irritation persisted through the 4 hr interval. The eyes appeared grossly normal after 24 hours.

TOX Category: III
Classification: Supplementary Data
(1) an inadequate amount of the test material was instilled into the eye.

The following studies were submitted in PP#411 and reviewed by G.E. Whitmore on 11/17/64. The results of the studies and their classification are listed below.

1. Acute Oral Administration - (Hazleton Laboratories, Report Date 5/13/58, submitted by Diamond Alkali in PP#411)

LD_{50} > 3160 mg/kg (no mortalities occurred)
TOXIC Signs: depression
Necropsy: unremarkable
TOX Category: III
Classification: Core-Minimum Data
(1) although the observation period was only 7 days, the results adequately reflect the acute oral toxicity when one considers the results of other toxicity studies.

2. Acute Dermal Application - (Hazleton Laboratories, Report Date 5/13/58, submitted by Diamond Alkali in PP#411)

LD_{50} >10000 mg/kg (no mortalities occurred)
Toxic Signs: mild to moderate erythema, slight edema; the irritation observed decreased in intensity but was still present at 7 days.

003297

Necropsy: unremarkable
TOX Category: III
Classification: Core-Minimum Data
(1) although the observation period was only 7 days, the results adequately reflect the acute dermal toxicity when one considers the results of other toxicity studies.

Typists: TH

NET CONTENTS

POUNDS

003297

EPA Reg. No. 677-

LOGO

DIAMOND SHAMROCK

90% DIMETHYL T

Active Ingredient:	
Dimethyl tetrachloroterephthalate	90.0%
Inert Ingredients:	10.0%
TOTAL	100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE SIDE PANEL FOR ADDITIONAL CAUTIONS

DIAMOND SHAMROCK CORPORATION · AGRICULTURAL CHEMICALS DIVISION

CLEVELAND, OHIO 44114

Left Panel

CAUTION

Harmful if swallowed.
Avoid contact with skin, eyes and clothing. In case of contact, flush eyes with plenty of water for at least 15 minutes.
Wash thoroughly after handling or using.
DO NOT contaminate water, food, feed, seed, fertilizers or other pesticides by storage or disposal.
DO NOT reuse empty container. Dispose of in an incinerator or landfill approved for pesticide containers, or bury in a safe place.
Stay away from smoke or fumes.
Consult Federal, state or local disposal authorities for approved alternative procedures such as limited open burning.

Right Panel

NOT FOR RESALE

FOR MANUFACTURING USE ONLY

NOTICE OF WARRANTY

Diamond Shamrock Corporation MAKES NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PURPOSE, OR OTHERWISE, EXPRESS OR IMPLIED concerning this product or its use, which extend beyond the statements on this label.

4/77