4/24/75
CASWELL FILE

1. 586

DATE: APR 24 1975

SUBJECT: Ortho Fly Killer D

FROM: Toxicology Branch

TO: Product Manager

Registration No: 239-1466

Product Name: Ortho Fly Killer D.

Registrant: Chevron Chem. Co.

Action Requested: Registration

Recommendation: No adverse comment

Related Petitions: 330, 7F0532, 8F0975, 1F1078, 1E1100, 1F1111

Established Tolerances: 40 CFR 180.215 (Dibrom)

10 parts per million in or on forage grasses and legumes, as defined in §180.34 (f).

3 parts per million in or on celery, collards, grapefruit, kale, lemons, oranges, spinach, Swiss chard, tangerines, turnip tops.

1 part per million in or on broccoli, brussels sprouts, cabbage, cauliflower, lettuce, strawberries.

0.5 part per million in or on beans (dry and succulent), cottonseed, cucumbers, eggplants, grapes, hops, melons, mushrooms, peaches, peas (succulent), peppers, pumkins, rice, safflower seed, sugar beets (roots and tops), summer squash, tomatoes, walnuts, and winter squash.

0.5 part per million in or on all raw agricultural commodities (except those otherwise listed in this section from use of the area pest (mosquito and fly) control.

0.05 part per million (negligible residue) in eggs; meat, fat, and meat by-products of cattle, goats, hogs, horses, poultry, and sheep; and milk.

Formulation:

percent of each by weight	Active Ingredients
36.0	*Naled
49.0	Aromatic Petroleum Derivative Solvent
	Inert Ingredients
[redacted]	

*1,2-dibromo-2,2-dichloroethyl dimethyl phosphate
Contains 4 lbs. technical Naled per gal. equivalent to 3.6 lbs. Naled

Use: Insecticide for use in dairy barns, pig pens, poultry houses, feed lots, cattle pens, garbage dumps, outside meat packing establishments pens, docks, ramps, disposal areas, cider mills, stables, animal hospitals, dog kennels, open air theaters, restaurants, drive-ins, inside and outside houses, apartments, hotels, and motels. Also for direct application at specified dilutions, to poultry and dogs.

Application Method: As a spray or bait on sugar.

Background Information

Acute Toxicity

Rat Oral LD_{50}-Tech-	420 mg/kg
Rat Oral LD_{50}-Dibrom LVC-10-	1422 mg/kg
Rabbit Dermal LD_{50}-Tech-	1100 mg/kg
Rabbit Dermal LD_{50}-Dibrom 14	1005 mg/kg
Rabbit Dermal LD_{50}-Dibrom LVC-10-	394 mg/kg
Rabbit Inhalation LC_{50}-Dibrom LVC-10-	15 to 20 mg/L
Rabbit Inhalation LC_{16}-Dibrom 14-	0.17 mg/L
Rabbit Inhalation LC_{16}-10% Dibrom 14	3.3 mg/L
Rabbit Dermal Irritation-Dibrom LVC-10-	produced maximum irritation
Rabbit Eye Irritation-Dibrom LVC-10-	produced slight to severe irritation, corneal opacity in 1/6 rabbits at day 7.

INERT INGREDIENT INFORMATION IS NOT INCLUDED

Rabbit eye Irritation-Dibrom 14 Conc.-	Severe irritation and complete corneal opacity.
Rabbit Dermal Irritation-Dibrom 14 Conc.-	produced a primary index score of 5.8

Subacute Toxicity

Dog ChE NEL	10 ppm
Rat ChE NEL	20 ppm
5 Week Rat Inhalation-Tech	NEL <50 ppm
5 Week Guinea Pig Inhalation-Tech	NEL <50 ppm

Chronic Toxicity

2 Year Rat Feeding	NEL 100 ppm
2 Year Dog Feeding	NEL 300 ppm
3 Generation Rat Reproduction	NEL 25 ppm (highest fed)

Special Toxicity

Human Patch-Tech-	primary skin irritant

The following toxicity data were submitted with the registration.

Acute Rat Oral LD_{50}- (36% formulation)-Chevron 12/9/74

The test material was identified as Ortho Fly Killer D (PN 3021) Five rats of each sex were tested per level in a dosage range of from 250 to 844 mg/kg. Five males were also tested at 1266 mg/kg. The test material was given in distilled water.

Results The combined LD_{50}=542 mg/kg. The LD50 for males was 644 mg/kg (357-1162) and 382 mg/kg (139-1046) for females.

Acute Rabbit Dermal LD_{50}-(36% formulation)-Chevron-12/9/74

The test material was identified as Ortho Fly Killer D (PN 3021).

The undiluted test material was applied to six rabbits at the levels of 200, 300, 450 or 670 mg/kg. Length of exposure to the test material was 24 hours. Length of the study was 14 days.

Results-All deaths occurred within 65 minutes after treatment. Miosis, salivation, ataxia and collapse were observed in the animals receiving 200 to 670 mg/kg. The animals regained normal appearance in four days The test sites were necrotic at autopsy. LD50=331 mg/kg.

Acute Rabbit Dermal Irritation-(36% formulation)-Chevron-12/9/74

The test material was identified as Ortho Fly Killer D (PN 3021) (SX642).

Exactly 0.5 ml of the test material was applied to the intact and abraded test sites on six rabbits. Length of exposure was 24 hrs. The irritation was scored at 24, 48 and 72 hours and at 7 days using a modification of the Draize method.

Results- Moderate to severe erythema and edema were observed at 24 hours. At 72 hours the test area was blanced or escharotic. The primary irritation score was 5.3.

The signal word "Danger" is required

Rabbit Eye Irritation-(36% formulation) Chevron-12/9/74

The test material was identified as Ortho Fly Killer (PN 3021) (SX 642)

One-tenth milliliter of the test material was placed in the conjunctival sac of each of six rabbits. The eyes graded at 1, 2, 3, 7, 10 and 14 days using a modification of Draize.

Results-Corneal damage and conjunctival irritation were present during the entire observation period.

The signal word "Danger" is required.

Acute Rat Inhalation- (38% formulation)-Chevron-12/9/74

The test material was identified as Ortho Fly Killer D (PN 3021) (SX 642)

Two exposure methods were used, vapor and aersol. Five rats of each sex were exposed for one hour to either exposure method. A level of 63 mg/L was calculated for the vapor phase and 3.9 mg/L for the aersol phase. The level used in the aersol phase was calculated as being twice the recommended usage rate. The observation period was 14 days.

Results-Three deaths occurred in the vapor exposed rats within four days with hemorrhagic lungs. Labored respiration, gasping, ataxia and frothy bloody nasal discharge were exhibited by these animals. Survivors appeared normal at 14 days. No gross pathological changes were reported for the survivors.

The aerosol exposure produced no adverse effects.

Comments-These toxicity data clearly reveal that the formulation under review requires the signal word "Danger" and adequate dermal and eye precautionary statements to protect the public.

Robert D. Coberly, Biologist
Toxocology Branch
Registration Division

cc: Branch Reading File
RCoberly:ir: 4/21/75
Initial O.E. Paynter
OEP 4/24/75