Registration Human Safety Review PM: 12 TOX Reviewer: Edwin Budd

EPA #	Date	Product Name	Use Classification	Toxici Catego
26673-E	5/25/76	Killmaster II	Rescinded (6/[illegible]), —	

RECOMMENDATION: Formulated product contains 2.0% chlorpyrifos. It has been and currently is the policy of the Toxicology Branch to not approve the registration of pesticide formulations containing more than 1.0% chlorpyrifos for use in household and/or other domestic situations. In the near future, Toxicology Branch intends to examine this issue in depth and to re-evaluate this policy. In the interim, however, approval of 2.0% chlorpyrifos products for the uses described above will be denied for reasons (See Back of Page)

	TECH	TECH	FORMULATION	USE DILUTION	DATA ACCEP ABLI
Acute Oral (Rat) (SD) (180-171 Gm) LD50			2,480 mg/kg (±134.5)	—	Yes

Toxic signs: 5 min - hypoactivity, salivation, weakness. 1-3 days - lacrimation, tremors, labored breathing, prostration.

Comments: Toxicity Category III. Dosed at 600 mg/kg (0/4); 1,350 (0/4); 2,025 (0/4); 3038 (4/4) and 4,556 (4/4). Deaths at 1-3 days. 14 day hold. Necropsy on rats that died - discolored livers, kidneys, spleens & GI hemorrhages. No path in survivors.

Acute Dermal (Rabbit) (2.3-2.8 kg) LD50			>2,000 mg/kg	—	Yes

Toxic signs: 2-10 min - hyperactivity and rapid respiration and vocalization; 2-24 hrs. - lacrimation. Test material severly irritating to skin - mod. to severe erythema and edema at 24 hrs, progressing to second degree burns with eschar sis at 7 days and desquamation at 14 days. Necropsy - mottled livers in 2, no other gross pathology.

Comments: Toxicity Category III. Dosed at 500 (0/4); 1,000 (2/8) and 3,000 (2/4). Deaths at 6-9 days. 14 day hold

Acute Inhalation ( ) LC_{50}					

Toxic signs:

Comments: No data submitted.

EEB OOP 6/11/76

Primary Eye Irritation (Rabbit) (6)			9.1/110.0		Yes

Comments: Toxicity Category II - due to 3/6 having corneal opacity at 24 hours and 2/6 having corneal opacity at 48 hours. No wash. Opacity was reversible in 7 days.

Primary Skin Irritation (Rabbit) (6)			3.4/8.0		Yes

Comments: Toxicity Category III

Other Studies:

Additional Primary Skin Irritation on same 6 rabbits as above. Yes

1 inch squares of flannel cloth impregnated with Killmaster II, then air dried and applied to intact and abraded sites for 24 hour exposure. 0.0/8.0

of possible hazard to human health and safety.

This applicant may, if he chooses, resubmit his application for registration of Killmaster II (containing 2.0 % chlorpyrifos) at a later time.

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EPA #	Date	Product Name	Use Classification	Toxici Catego
2669-E	5/6/76	Killmaster II	—	—

RECOMMENDATION:

See attached comments and conclusions.

See following ~~letter~~ review 6/1/76

		TECH	TECH	FORMULATION	USE DILUTION	DATA ACCEPTABLE
Acute Oral (Rat)	LD_{50}					

Toxic signs:

Comments:

Acute Dermal (Rabbit)	LD_{50}					

Toxic signs:

Comments:

Acute Inhalation ( )	LC_{50}					

Toxic signs:

Comments:

Primary Eye Irritation (Rabbit)					//////////	

Comments:

Primary Skin Irritation (Rabbit)					//////////	

Comments:

Other Studies:

COMMENTS

The applicant seeks new registration for an insecticide product containing 2.0% chlorpyrifos (Killmaster II). Using the method of support 2b, he referenced an essentially similar registered product which contained 1.0% chlorpyrifos (Killmaster, EPA #26693-1). Experimental toxicity data using the 1.0% chlorpyrifos formulation as the test material is not acceptable as support for the 2.0% product. The only additional toxicity data submitted to support the 2.0% product were testimonial letters from the applicant (dated September 30, 1975) in which he indicated substantial usage of the 2.0% product resulted in no complaints from customers or others and from his medical doctor (dated January 8, 1973) in which his doctor attests to the good health of the applicant and his son after substantial exposure to the 2.0% product. Such testimonials are not acceptable.

Experimental toxicity data must be submitted using the 2.0% chlorpyrifos formulation as the test material. In addition, experimental toxicity data on the technical grade material

[redacted]

Information which may reveal the manufacturing process is not included

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[redacted]

CONCLUSIONS

1) Experimental toxicity data using the 1.0% chlorpyrifos product (Killmaster) as the test material and which was used to support registration of the 1.0% product is not acceptable as support for the 2.0% chlorpyrifos product (Killmaster II) for which a new registration is being sought.

2) The testimonial letters supporting the 2.0% product are not acceptable.

3) The applicant must submit experimental toxicity data using the 2.0% chlorpyrifos formulation as the test material.

4) In addition, without a valid letter from the Dow Chemical Co. specifically authorizing use of their toxicity data on the technical grade material (Dursban 6), the applicant must also submit appropriate toxicity data on the technical grade product.

5) All submitted toxicity data must conform to and be in accordance with the Regulations published in the Federal Register July 3, 1975 Section 162.8 (b) (4) (i) for toxicity data requirements.

Edwin R. Budd
Toxicology Branch

Concur 5/7/76

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