

SUBJECT: Registration No. 677-EXP (Dacthal 600)

DATE: March 29, 1974

FROM:

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TO: Mr. Lee TerBush
Acting Chief
Coordination Branch
Registration Division (HM-567)

003301

Registrant: Diamond Shamrock Corporation

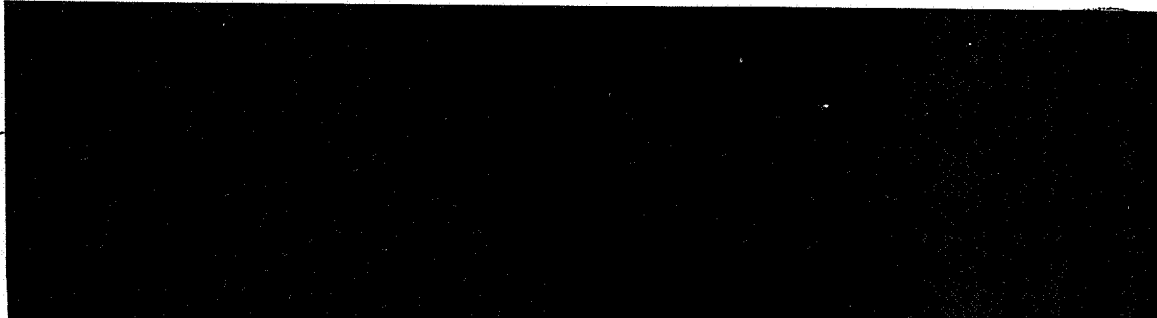
Product Name: Dacthal 600

Formulation:

Active Ingredient:

54.70% dimethyl ester of tetrachloroterephthalic acid

Inert Ingredients:



Inert ingredients ←

Inerts Clearance: All inerts have been cleared under § 180.1001(c) or 121.1099.

Use: pre-emergence herbicide for use in vegetables, strawberries and agronomic crops.

Application Rate: Three to seven quarts of Dacthal 600 per acre.

Application Method: Spray

Related Petitions: 411, 7F0780, 8F0640, 3F1388, 3F1417

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Tolerances established:

§ 180.185 Dimethyl 2,3,5,6-tetrachloroterephthalate; tolerances for residues.

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Tolerances for total residues of the herbicide dimethyl 2,3,5,6-tetrachloroterephthalate and its metabolites monomethyl 2,3,5,6-tetrachloroterephthalate and 2,3,5,6-tetrachloroterephthalic acid (calculated as dimethyl 2,3,5,6-tetrachloroterephthalate) are established as follows:

5 parts per million in or on mustard greens and turnip greens.

2 parts per million in or on collards, field beans (dry), kale, lettuce, mung beans (dry), peppers, pimentos, potatoes, snap beans (succulent), southern peas (black-eyed peas), soybeans, strawberries, sweetpotatoes, turnips, and yams.

1 part per million in or on broccoli, brussels sprouts, cabbage, cantaloups, cauliflower, cucumbers, eggplants, garlic, honeydew melons, onions, summer squash, tomatoes, watermelons, and winter squash.

0.4 part per million (negligible residue) in or on corn forage or fodder (including sweet corn, field corn, and popcorn.)

0.2 part per million (negligible residue) in or on cottonseed.

0.05 part per million (negligible residue) in or on corn grain (including field corn and popcorn) and sweet corn (kernels plus cob with hush removed).

Toxicological Review

A) Background Data

Toxicity data submitted on Dacthal in petitions for tolerance purposes have been evaluated as follows:

| | | |
|---------------------------------|----------|--|
| ✓ Acute Oral LD ₅₀ | male rat | greater than 3160 mg/kg |
| ✓ Acute Dermal LD ₅₀ | rabbit | greater than 10,000 mg/kg |
| 28 Day Feeding | rat | NEL greater than 0.824% of diet |
| 28 Day Feeding | rat | NEL greater than 1.0% of diet |
| 28 Day Feeding | dog | NEL less than 800 mg/kg/day (only level tested) |
| 2 Year Feeding | rat | NEL 10,000 ppm |
| 2 Year Feeding | dog | NEL 10,000 ppm |
| 1 Generation Reproduction | rabbit | NEL 10,000 ppm |

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2 Generation

| | | |
|--------------|------|---|
| Reproduction | Pat | satisfactory |
| Metabolism | Dogs | no residue accumulation after two year feeding at 10,000 ppm |

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B) New data

Acute Rat Oral LD₅₀ - Industrial Bio-Test - 7/26/73

The test material was identified as Dacthal 6F. This test material was administered undiluted to two young Charles River strain female rats per level of 3,038, 4,556, 6,834 and 10,250 mg/kg. The rats were fasted for sixteen hours prior to treatment. Length of study was fourteen days.

Results - No deaths occurred. LD₅₀ is greater than 10,250 mg/kg. All the animals were hypoactive and exhibited ruffed fur within one hour post treatment. No gross pathologic alterations were reported. The asymptomatic level is less than 3,038 mg/kg.

Rabbit Eye Irritation - Industrial Bio-Test - 7/26/73

The test material was identified as Dacthal 6F. Exactly 0.1 ml of the diluted (use conc.) and undiluted test material was instilled into the right eye of each of six rabbits. The treated eyes were not washed. Observations were conducted at one, 24 and 72 hours and 7 days.

Results - Minimal irritation noted at one hour. No irritation was reported during the remainder of the seven day study.

Primary Rabbit Dermal Irritation - Industrial Bio-Test - 7/26/73

The test material was identified as Dacthal 6F. Exactly 0.5 ml of undiluted test material was applied to two test sites per rabbit. Half the test sites were abraded and also covered during the 24 hour exposure period. Observations were made at 24 and 72 hours. The test procedure was modeled after that of Draize et al.

Results - Very slight irritation was observed during the 72 hour observation period.

Acute Rat Inhalation - Industrial Bio-Test - 7/26/73

The test material was identified as Dacthal 6F, Batch #7980-80-1. Five young Sprague-Dawley rats of each sex were exposed to a nominal aerosol concentrate of 19.4 mg/L for four hours. Length of study was 14 days.

Results - $IC_{50} > 10.4 \text{ mg/L}$. No deaths occurred. Minimal degrees of salivation and ptosis were observed for four to six hours post treatment.



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Conclusion:

The toxicity data submitted in support of this experimental permit will support issuance of the permit.

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cc: Division File
Branch Reading File

RDCoberly:sss:3/29/74