

5-15-78

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: May 15, 1978

SUBJECT: Prowl Herbicide EPA Registration#241-243 Caswell#454BB

FROM: William Dykstra, Ph.D  
Toxicology Branch

5/16/78 WJD

TO: Robert Taylor  
Product Manager#25

Action Type: To add use of Prowl on soybeans as follows: (1) Prowl + Lorox PE tank-mixes; (2) Prowl PPI + Lorox PE; (3) Prowl + Amiben PE tank-mixes; (4) Prowl PPI + Amiben PE.

Registrant: American Cyanamid Company  
Agricultural Division  
P.O. Box 400  
Princeton, N.J. 08540

Recommendations:

1. Toxicology Branch does not object to the application for amended use of Prowl applied as a preplant incorporated treatment followed by sequential preemergence application of Lorox or Amiben, and for use of Prowl + Lorox or Prowl + Amiben tank mixtures in treatment of soybeans.
  2. The toxicology studies submitted and reviewed are acceptable as core-minimum data and support the *amendment*.
  3. Include in the precautionary labeling on Prowl the statement: Follow the label directions and observe precautions on Lorox and Amiben labels.
- (a) Tolerances established  
40 CFR 180.361 -N-(1-ethylpropyl)-1,4-dimethyl-2,6-dinitrobenzamine and metabolites

Prowl            soybeans -----0.1 ppm  
                  soybeans, forage -----0.1 ppm  
                  soybeans, hay -----0.1 ppm

(b) 40 CFR 180.266. Amiben

Amiben            soybeans -----0.1 ppm  
                  soybean, forage -----0.1 ppm

(c) 40 CFR 180.184. Lorox (linuron)

Lorox            soybeans (dry and succulent) ----- 1.0 ppm  
                  soybean forage and hay -----1.0 ppm

Review

Acute Toxicity of Prowl Tank-Mix Combinations

1. Acute Dermal LD<sub>50</sub> (American Cyanamid Report A76-91, Aug. 31, 1976, page 202)

Test Material: Prowl Tank Mix Combination (use dilution):

Prowl 4-E 1.25 Ai/A  
Amiben 2 lb/gal, W.S. at 2.00 lb ai/A  
Water = 10 gpa sample no. 76-184

Five male rabbits (NZW strain) each received 5000 mg/kg BW of test material applied to shaved skin under an impervious cuff for 24 hours. Observation for 14 days.

Results: No deaths LD<sub>50</sub> > 5000 mg/kg (males)

Toxic Signs: yellow colored urine

Body weight: in survivors gain

Necropsy: not performed

Classification: Core-Minimum Data

- (a) only male rabbits were used
  - (b) Abraded Skin not evaluated
  - (c) Necropsy not performed
- TOX Category III: CAUTION

2. Eye Irritation test (Book 19, page 377 American Cyanamid)

Test Material: Same as in Dermal LD<sub>50</sub> (above in 1.)

0.1 ml of test material was instilled into the conjunctival sac of six albino rabbits (NZW strain) with the untreated eyes as control. Observation was at 24, 48, 72 hours.

Results: No irritation, no corneal opacity

Classification: Core-Minimum Data

- (a) Observation was not made at 7 days but no evidence of irritation was seen at any time.

TOX Category IV: CAUTION

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3. Acute Dermal LD<sub>50</sub> (American Cyanamid, Report A76-90, Aug. 30, 1976, page 201)

Test Material: Prowl Tank Mix Combination:

Prowl 4-E at 1.25 lb ai/A  
Lorox 50 w at 1.50 lb ai/A  
Water = 10 gpa sample 76-183

Five male rabbits (NZW strains) each received 5000 mg/kg BW of test material applied to shaved skin under an impervious cuff for 24 hours. Observation for 14 days.

Results: No deaths LD<sub>50</sub> > 5000 mg/kg (males)

Toxic Signs: yellow colored urine

Body weight: gain in survivors

Necropsy: not performed

Classification: Core-Minimum Data

- (a) only males were used
- (b) Abraded skin not evaluated
- (c) Necropsy not performed

TOX Category III: CAUTION

4. Eye Irritation Test (Book 19, page 376, American Cyanamid)

Test Material: Same as Dermal LD<sub>50</sub> (above in 3)

0.1 ml of test material was instilled into the conjunctival sac of six albino rabbits (NZW strain) with the untreated eyes as control. Observation was at 24, 48, 72 hours.

Results: No irritation, no corneal opacity

Classification: Core-Minimum Data

(a) Observations were not made at 7 days but no evidence of irritation was seen at any time

TOX CATEGORY II: CAUTION

5. Dermal LD<sub>50</sub> (American Cyanamid, Report A76-92, Aug. 31, 1976, p. 203)

Test Material: Prowl + Lorox - Sample No. 76-183

Five male rabbits (NZW strain) each received 5000 mg/kg BW of test material applied to shaved skin under an impervious cuff for 24 hours. Observation for 14 days.

Results: No deaths LD<sub>50</sub> > 5000 mg/kg (males)

Toxic Signs: yellow colored urine

Body Weight: gain in survivors

Necropsy: not performed

Classification: Core-Minimum Data

- (a) Only male rabbits were used
- (b) Abraded skin not evaluated
- (c) Necropsy not performed

TOX Category III: CAUTION

6. Eye Irritation Test (American Cyanamid)

Test Material: Same as dermal LD<sub>50</sub> (above in 5).

0.1 ml of test material was instilled into the conjunctival sac of six albino rabbits (NZW strain) with the untreated eyes serving as control. Observation was at 24, 48, 72 hours.

Results: No irritation, No corneal opacity

Classification: Core-Minimum Data

- (a) Observation was not made at 7 days but no evidence of irritation was seen at any time.

TOX Category IV: CAUTION

RD initial G.E. Whitmore:th:5/15/78

*E for GEN 5/16/78*