IRB/TSS PRECAUTIONARY LABEL REVIEW

IN 9-16-87 OUT 10-28-87

ACTION CODE: 760

REVIEWER: Dona Williams

PRODUCT MGR. NO. 16

U.S. REGULATORY AFFAIRS
MAY 5 1988

Record Number(s)
202128

FILE OR REG NO.

PETITION OR EUP NO. 241-EUP-RRO

PRODUCT NAME AC 301, 467 Insecticide/Nematicide

COMPANY NAME & ADDRESS American Cyanamid Co., Ag Res Div.
P.O. BOX 400

SUBMISSION PURPOSE Experimental Use Permit. Review of acute toxicity data.

CHEMICAL & FORMULATION Powder [20% Terbufos ai., 80% inert ingredients].

PRODUCT USES Application to field corn, sugar beets and grain sorghum.

COMMENTS AND RECOMMENDATIONS:

1. Submitted acute studies are acceptable. Based upon review the product was assigned the following categories.

	CORE CLASS	TOX CAT	MRID#
Acute Oral LD50	MINIMUM	I	403223-04
Acute Dermal LD50	MINIMUM	I	403223-05
Eye Irritation	GUIDELINE	IV	403223-06
Skin Irritation	GUIDELINE	IV	403223-07
Dermal Sensitization	GUIDELINE	Non-Sensitizer	403223-08

2. Precautionary language is acceptable.

FILE OR REG NO. 241-EUP-RRO

TEST ARTICLE: AC 92, 100 20P

TEST FACILITY & Toxicology Dept., American Cyanamid Co., Ag. Res. Div.

ADDRESS P.O. Box 400

Princeton, NJ 08540

STUDY SUMMARIES:

A. ACUTE ORAL LD_{50} EPA ACC/MRID NO. 403223-04
STUDY NO. A87-60 ; STUDY INITIATED 4-29-87
Conforms with Health Assessment Guidelines (81-1) Y/N Yes
Deviations from guidelines None.
Level(s) Tested Groups of 5M & 5F SD rats: 30, 40, 60 mg/kg undiluted. Oral gavage. 14-day observation preiod.
Significant Toxic Signs Salivation, tremors, and chromodacryorrhea.
Significant Necropsy Findings Unremarkable.

LD_{50}= (Males) 38 mg/kg (confidence limits not calculated)
(Females) 32 mg/kg (confidence limits not calculated)
(Combined) 34 mg/kg (13-34) 95% C.L.
Core Classification MINIMUM (If Supplementary list deficiencies)
Product Toxicity Category for this route of exposure I
(See addendum for sex specific mortalities)

B. ACUTE DERMAL LD_{50} EPA ACC/MRID NO. 403223-05
STUDY NO. A87-59 ; STUDY INITIATED 4-15-87
Conforms with Health Assessment Guidelines (81-2) Y/N Yes
Deviations from guidelines None.
Level(s) Tested Groups of 5M & 5F NZ White rabbits: 80, 160, 320, 640 mg/kg undiluted Clipped intact skin. 24-hr occluded dermal exposure.
Significant Toxic Signs Tremors, diarrhea, salivation, decreased respiration and prostration.
Significant Necropsy Findings Congestion of liver, kidenys and lungs, pale liver and edema of application site.

LD_{50}= (Males) 180 mg/kg (93-348) 95% CL
(Females) 269 mg/kg (164-443) 95% CL
(Combined) Not provided
Core Classification MINIMUM (If Supplementary list deficiencies)
Product Toxicity Category for this route of exposure I
(See addendum for sex specitic mortalities)

LE OR REG NO. 241-EUP-RRO

3. PRIMARY EYE IRRITATION EPA ACC/MRID NO. 403223-06
STUDY NO. 87-30 ; STUDY INITIATED 4-06-87
Conforms with Health Assessment Guidelines (81-4) Y/N Yes
Deviations from guidelines None.
Level(s) Tested 6 NZ White rabbits: 100 mg undiluted. Instilled into left eye. Treated eyes were rinsed for one second. All treated eyes recieved rinse with tap water following 24-hr exposure period. 72-hrs observation period. Fluorescin staining.
Ocular Findings [list number of animals elicting response and period of duration]
corneal opacity: None exhibited
iristis: None exhibited
conjunctivae: grade (1) redness (6/6) clearing in all by 72-hrs.
Core Classification GUIDELINE (If Supplementary list deficiencies)
Product Toxicity Category for this route of exposure IV.

4. PRIMARY DERMAL IRRITATION EPA ACC/MRID NO. 403223-07
STUDY NO. A87-34 ; STUDY INITIATED 4-07-87
Conforms with Health Assessment Guidelines (81-5) Y/N Yes
Deviations from guidelines None
Level(s) Tested 6M NZ White rabbits: 0.5 gms undiluted. Clipped intact skin. 4-hour dermal occluded exposure. 72-hr observation period.
Dermal Findings [list number of animals elicting response and period of duration]
erythema Slight (6/6) at 4-hrs. Clear by 24-hours.
edema None elicted.
PDIS 0.00
Core Classification GUIDELINE (If Supplementary list deficiencies)
Product Toxicity Category for this route of exposure IV.

5. DERMAL SENSITIZATION 1 EPA ACC/MRID NO. 403223-08
STUDY NO. DRC 4904 ; STUDY INITIATED 4-13-87
Test Method Used Modified Buehler
Deviations from accepted test method None.
Concentration Tested 10M Harlan Sprague Dawley guinea pigs: 100% undiluted. Nine 6-hr occluded induction applcations. Challenge (100% concen) 2 wks post-final induction at a virgin site. 24 and 48-hr readings.
Postive Control 0.1% DNCB in 50% ethanol.
Induction Findings/ Mean Score No dermal irritation.
Challenge Findings/ Mean Score No dermal irritation.
Product Classification Non-Sensitizer
Core Classification GUIDELINE

ADDENDUM

ORAL LD50:

CONCENTRATION (mg/kg)	PERCENT MORTALITY Males	Females
30	60	10
40	20	100
60	80	100

ACUTE DERMAL LD50:

CONCENTRATION (mg/kg)	PERCENT MORTALITY Males	Females
80	10	-
160	40	10
320	80	60
640	-	100

1- Dermal Sensitization study conducted by:

Dawson Research Corporation
P.O. Box 30666
Orlando, FL 32862

[redacted]: EC 301,467
[redacted]./FILE SYMBOL: 241-
APPLICANT'S NAME AND ADDRESS: American Cyanamid Company
Princeton, New Jersey

DATA MATRIX FOOTNOTES

(1) Data not submitted, because end-use product is not produced by an integrated formulation system. (See CFR 158.120, 62-1, Note 4.)

(2) Not required for this End-use product (see CFR 158.120 Note 9).

(3) Data not submitted, because end-use product does not contain an oxidizing or reducing agent. (See CFR 158.120, 63-14, Note 10.)

(4) Data not submitted, because end-use product does not contain combustible liquids. (See CFR 158.120,63-15, Note 11.)

(5) Product does not contain explosive ingredients (Sec. CFR 158.120, 63-16, Note 12).

(6) Data not submitted, because end-use product is not a liquid. (See CFR 158.120, 13-18, Note 13.)

(7) Data not submitted, because end-use product is not an emulsifiable liquid and will not be diluted in petroleum solvents. (See CFR 158.120, 63-19, Note 14.)

(8) Data not submitted, because end-use product will not be used around electrical equipment. (See CFR 158.120, 63-21, Note 15.)

(9) Data not submitted, because end-use product is formulated as a water dispersable granule with a particle size (>700 and <2000) which is greater than 15 micron and not considered to be inhalable.
(See CFR 158.135, Guidelines for 81-3 as contained in the "Pesticide Assessment Guidelines, Subdivision F, Hazard Evaluation: Human and Domestic Animals (Nov. 82).")

acute inhalation study

Reg. #_____

CHEMISTRY CHECKLIST CONT'D

9. Data Matrix Requirements

[ ] a) Statement of Composition - a complete description of the manufacturing/formulation process. Describe equipment used, mixing time, temperature etc.

[ ] b) Discussion of Formation of [Unintentional] Ingredients - a brief description of impurities formed during the manufacturing/formulation process, in packaging, or during storage. If you do not expect any impurities during these stages, please so state.

[ ] c) Certification of Limits - upper and lower limits of each active and individually added inert component. The lower limit for the actives, including solvents declared as active, must not fall below label claim.

[ ] d) Analytical Methods - provide the methods used to analyze for the active ingredients.

[ ] e) Color - in common terms.

[ ] f) Physical State - e.g. solid, liquid, pressurized liquid, etc.

[ ] g) Odor - in common terms.

[ ] h) Density - e.g. lbs/gallon for liquids or lbs/cu. ft. for solids.

[X] i) pH - provide pH of product or pH of a specified water dilution.

[ ] j) Oxidizing or Reducing - note these characteristics if any.

[ ] k) Flammability - flash point/flame extension.

[ ] l) Explodability - note these characteristics if any.

[X] m) Storage Stability - the formulated product must be analyzed for its active ingredient at time zero and during a year of storage. The storage should be in warehouse conditions and in similar marketable containers you will be using in the trade.
Note: For the Storage Stability study you cannot reference the concentrate you are using to formulate your product.

1 yr - at R.T.

[ ] n) Viscosity - can be expressed in centipoise or centistokes.

[ ] o) Miscibility - note these characteristics if product is an emulsifiable liquid and mixed with oil.

[ ] p) Corrosion Characteristics - this information can be noted during the storage stability study.

[ ] q) Dielectric Breakdown Voltage - for products used near electrical equipment.

3 months storage stability data are available

We need 1 yr R.T data

10/31/87

Begin