2-28-91

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: EPA Reg. No./File Symbol 3125-319
Bayleton Technical

FROM: Lucy D. Markarian by 11/14/90 E 2/28/91
Precautionary Review Section
Registration Support Branch
Registration Division (H75-05C)

TO: Susan Lewis / James Stone (PM 21)
Fungicide - Herbicide
Registration Division (H75-05C)

APPLICANT: Mobay Corporation
P.O. Box 4913
Hawthorn Road
Kansas City, MO 64120-0013

FORMULATION FROM LABEL:

Active Ingredient(s):	% by wt.
Triadimefon; 1-(4-Chlorophenoxy)-3,3 dimethyl-1-(1H-1,2,4-Triazol-1-yl)-2 butanone	90%
Inert Ingredient(s):	10%
Total	100.0%

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BACKGROUND: Mobay Corporation has submitted three new studies under EPa symbol 3125-319 (acute inhalation, primary eye + primary dermal) to complete requirements for registration and labeling their product Bayleton Technical. Additionally a series of old tests run at Bayer AG in Germany in 1974 are submitted for review under accession number 240149902 That include oral studies in five species, Anacute Dermal study in rats, Acute Inhalation studies in four species and eye and dermal irritation test.

Bayleton was tested for oral toxicity under Accession number 48623 (catagory II) for Dermal Toxicity under 60233 (category III) for sensitization under MRID 415540-01 (Sensitizer)

RECOMMENDATION:

The Three studies performed at the Toxicology Department of The Mobay Company can acceptable support for the product. The inhalation study is guideline data in Toxicity catagory III

The acute Eye irritation is considered core minimum data because

1. Penlight is not adequate light source for the observation of ocular lesions

2. Fluorescein dye was not used to confirm the observed irritation.

3. 18 week old animals in that study Their weights may have been to heavy and consequently were not be used in the Test.

4. The rabbits were not observed at 48hr.

The Dermal irritation Tests is considered core minimum data because 19 week old animals may have been too

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RECOMMENDATION:

heavy oil used for test g. Prondy weight information would have eliminated any doubt.

All the studies in Accession number 24C1499-02 are considered supplementary data for the following reasons:

1. Emulsifyer and solvents were not well defined.

The test material was emulsified in 1:10 mixture of acetone + oil of unspecific identity. It is not stated why acetone was necessary for emulsification as it adds a variable to the test system. This mixture was used in oral, dermal, and intraperitoneal studies as well as dermal irritation. The inhalation study was conducted by dissolving the test material in a 1:1 mixture of Ethanol + Lutrol with no indication of the strength of either component

2. There were no vehicle controls. This was necessary since the emulsifying agents (acetone + oil) or solvents (ethanol + Lutrol) can have toxic effects of their own. Control groups were needed

3. The weight of the animals was either not mentioned were not specific or at times as in the case of oral, dermal and inhalation rabbits. The animals were overweight. The weight changes during the test can not reconciled. Possible weight loss as a toxic symptom is not addressed

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RECOMMENDATION:

4. Symptoms of toxicity are not addressed specifically "General health impairment" is used as description of Toxicity which does not clarify the mode of manifestation Necropsy information is missing in the majority of cases which if present would have clarified toxicity to some extent. The exception to this was the oral Toxicity study in rats.

5. a) The inhalation study did not present any particle size or size distribution.

b) The chamber atmosphere conditions were conducted according to Ebert: Test material was absorbed from the atmosphere in cotton wool, then eluted in benzene and analyzed by gas chromatography. It is not clear for how long the cotton wool was exposed or how often this was done.

c) It is not specified if all the species were exposed at the same time. The exposure of all species at the same time is not acceptable

d) The chamber concentrations in general were low. It is not stated if these concentrations are the highest attainable or other concentrations were not tried

There were no vehicle controls. Ethanol and butanol have toxicity of their own which was not addressed

5. There were no quality assurance statements, because the studies were performed in 1974

RECOMMENDATION:

The Mobay corporation says that the eye irritation study is in Toxicity Category III. There is no indication that it is. The guidelines find grade I irritation in the conjunctiva unremarkable. Therefore it is rather practically not irritating and placed in Toxicity category IV

Label

The signal word is "Warning" as correctly stated in the proposed label

In the precautionary statement - Causes eye irritation maybe deleted

In the statement of practical treatment

If in eyes - flush with plenty of water should be office

The remainder of the label is acceptable as it stands.

DATA REVIEW FOR ACUTE INHALATION TOXICITY TESTING (§81-3)

Product Manager: (21) Reviewer: L. Markarian
MPID No.: 416160-03 Report Date: 11/14/90
Testing Laboratory: Cyn. Tox. Dept. Mobay Corporation Report No. 90-042-CL
Author(s): D. L. Warren
Species: Rat, Sprague Dawley (Sas:CD(SD)Be 7-9 weeks old
Sex : 30♂ + 12♀ Weight: ♂ 223-297, ♀ 193-238
Source: Sasco, Inc. Houston Texas
Test Material: Bayleton technical batch 9-00-6001 (Triadimefon)
Quality Assurance (40 CFR §160.12): included

Summary:

1. LC_{50} (mg/kg): Males = _____; Females = _____; Combined = _____
2. The estimated LC_{50} is Greater Than 3.270 mg/L
3. Mean Concentration: 1.750 & 3.270 mg/L
4. Tox. Category : III . Classification: Core Guideline

Procedure (Deviations From §81-2): Nose only exposure was in a 27L cylindrical dynamic flow chamber with Two levels of six ports. Airflow was monitored with a rotameter and recorded every ½hr. Temperature & humidity were monitored Through Signal probes in the transmitters & recorded on a computer (CIM-PAC software). The aerosol was generated by micronizing The Test material in a micro mill and sifting the fine powder Through a 60 mesh stainless steel sieve and finally passing it into a dust generator at 397 PSI. The output of the dust feed generator was mixed with dry filtered air at 18 Lpm. The total flow Through the chamber was approximately 23LPM. Cramber concentrations were determined

Results:

Reported Mortality

Exposure Concentration (mg/L)	(NUMBER KILLED/NUMBER TESTED) Males	Females	Combined
0	0/6	0/6	0/12
1.750 (1750 mg/M³)	0/6	0/6	0/12
3.270 (3270 mg/M³)	0/6	0/6	0/12

gravimetrically from the breathing zone using Millipore filters filtered at the sampling rate of 2.0 Lpm at 0.5, 1.0, 1.5, 2.5 & 3 & 4 hours into the exposure. Particle size distribution was determined with a TSI aerodynamic particle Sizer (Model 3310) and diluter (Model 3302) interfaced to an IBM PS/2-50, using samples from the breathing Zone Two or Three Times during each exposure. The mass median aerodynamic diameter and the geometric standard deviation were calculated from the values of cumulative percent mass.

Three groups of animals were used in groups of 12. One group was used as a control, One group was exposed to 1750 mg/M3 and the Third group was exposed to 3270 mg/M3. The concentrations ranges were 1600 - 2270 & 2920 - 3220 mg/M3, respectively

Gravimetric concentration mg/m3	Sampling Time (hours exposure)	MMAD (um)	Geometric standard deviation
1750	0.8	3.3	1.7
	2.7	2.6	1.7
		mean 2.9	1.7
3270	0.8	2.9	1.7
	2.7	2.6	1.7
	3.8	2.9	1.7
		mean 2.8	1.7

A number of preliminary chamber calibration atmospheres were generated before the test, generating the atmosphere as it would be generated for the test and particle size information was gathered. These tests the MMAD ranged from 3.01 to 1.72 and 3.37 - 1.74 um. Estimates were made using formula (included) to extrapolate values and it was concluded that for both atmospheres 5% were less than 1 um and 24 + 13% respectively were in 2 um range. These represented the best efforts.

Observations were before + after the exposure and Twice daily on week days once daily on weekends. Body weights were recorded at initiation and on days 3, 7 + 14. Necropsy was performed on all animals.

Results

There were no deaths. Clinical signs included hypoactivity, lacrimation, nasal discharge, urinosity, appearance, urine stains, and diarrhea. At 3270 mg/M3 level significant reduction in the rate of weight gain was observed in the males. All other animals gained weight satisfactorily.

At necropsy no gross pathology was observed in any of the animals.

DATA REVIEW FOR ACUTE EYE IRRITATION TESTING (§81-4)

Product Manager: (21)
MRID No.: 416160-03
Testing Laboratory: Corp. Tox. Dept. Mobay Corp
Author(s): L.P. Sheets
Species: Rabbit, New Zealand white
Sex: 3 ♂ & 3 ♀ (13 weeks old) Weight: unspecified
Source: Small Stock Industries, Pea Ridge Arkansas
Dosage: 0.1 ml (66 mg)
Test Material: Bayleton Technical, batch 9-00-600, (Triadimefon)
Quality Assurance (40 CFR §160.12): included

Reviewer: Lucy D. Markarian
Report Date: 11/14/90
Report No. 89-333-ES

Summary:

Tox. Category: IV Classification: core minimum

Procedure (Deviation From §81-4): 0.1 ml of granulated material was instilled in the conjunctival sacs of left eyes. Evaluations were at 1, 24, 48 & 72 hrs and on day 7 according to Draize using penlight.

Results:

Observations (number "positive"/number tested)

	Hour	Days						
	1	1	2	3	4	7	14	21
Cornea Opacity	0/6	0/6	0/6	0/6	—	0/6		
Iris	0/6	0/6	0/6	0/6	—	0/6		
Conjunctivae Redness	6/6	5/6	5/6	3/6	—	0/6		
Chemosis	5/6	4/6	0/6	0/6	—	0/6		
Discharge	4/6	3/6	0/6	0/6	—	0/6		

Comments: Penlight is not adequate to observe lesions in the eye especially when the absence or the presence of opacity is not confirmed by fluorescein dye. 18 week animal is unlikely to large and too old to be used for any testing in the acute fields. Providing the weights of these animals would have eliminated any doubt about the proper utilization of the animals.

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DATA REVIEW FOR SKIN IRRITATION TESTING (§81-5)

Product Manager: (21)
MRID No.: 416160-04
Testing Laboratory: Comp. Tox. Dept. Mobay Corp.
Author(s): L. P. Sheets
Species: Rabbit, New Zealand white (Small Stock Industries, Pea Ridge, Arkansas)
Age: 19 weeks old
Sex: 3♂ & 3♀
Weight: not specified
Dosage: 0.5g
Test Material: Bayleton, Technical, batch 9-00-6001 (Triadimefon)
Quality Assurance (40 CFR §160.12): included

Reviewer: Lucy D. Markarian
Report Date: 11/14/90
Report No. 90-325-IR

Summary:

The Primary Irritation Index = 0.29

Toxicity Category: IV

Classification: Core minimum

Procedure (Deviations From §81-5): The test material was moistened with Tapwater and applied to the shaved skin of rabbits, They it was covered with gauze patch secured with tape. The patches were covered with a piece of plastic and secured with adhesive bandage. At 4hrs the patches were removed & sites wiped with moist paper towels. Evaluation was at 1, 24, 48 & 72 hours after removal of the patches according to Draize.

Results:

Barely perceptible erythema was observed in 3/6 rabbits at 24 hrs. Erythema subsided by 72 hrs.

Special Comments:

19 week old rabbit is ten old. To serve as a Test model. Prior weights would have assured the correct useage of these animals. weight is indicative of age.

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DATA REVIEW FOR ACUTE ORAL TOXICITY TESTING (§81-1)

Product Manager: (21) Reviewer: L. Markarian
MPID No.: 240,499-02 Report Date: 11/14/90
Testing Facility: Institut für Toxikologie, Bayer AG Report No. 4416
Author(s): Dr J. Thyssen + Dr G Kimmerle
Species: Rat, Wistar f alb.no
Age: not specified Observation Days (Post Exposure): (14); other ( )
Weight: 160 - 180g
Source: Winkelmann (Kirchborchen)
Test Material: MEB 6447 (Formula shown same as Bayleton (Triadimefon))
Quality Assurance (40 CFR §160.12): none

Conclusion:

1. LD_{50} (mg/kg): Males = 568 (507-668) mg/kg ; Females = 363 (322-409) mg/kg ; Combined = estimated 465.5
2. The estimated LD_{50} is
3. Tox. Category: [redacted]. Classification: Supplementary

Procedure (Deviations From §81-1): Test material emulsified in 1:10 mixture of acetone and oil (unspecified). Rats intubated at an unspecified concentration at 30 animals per level (150 ± 10 g) Observed for 14 days. No specific information about body weights. Necropsy was performed at death and at termination. Method of confidence limit calculations not specified.

Results:

Reported Mortality

DOSAGE (mg/kg)	(NUMBER KILLED/NUMBER TESTED) Males	Females	Combined
10		0/15	0/15
25	0/15	0/15	0/30
50	0/15	0/15	0/30
100	0/15	0/15	0/30
250	0/15	1/15	1/30
350	0/15	0/15	0/30
400	2/15	—	2/15
500	6/15	14/15	20/30
750	12/15	15/15	27/30
1000	11/15	13/15	24/30
2500	9/15	14/15	23/30

Symptomology & Gross Necropsy Findings:

Males at 25mg/kg + Females at 10mg/kg remained asymptomatic. At the higher levels observations included "severe impairment of general health" initial mild to severe excitation and ensuing drowsiness, laboured respiration and diarrhea. Necropsy of the animals that died abnormalities of the liver (as pallor, friability and fatty lobular pattern) ulcer like foci on the glandular mucosae of the stomachs, redness of intestinal mucosae and bloody mucoid matter in the intestines, was observed. The necropsy of the survivors also revealed abnormalities of the liver (edema, lobulous pattern at levels 500mg/kg + above and occasional ulcer like foci on the glandular mucosae of the stomachs

DATA REVIEW FOR ACUTE ORAL TOXICITY TESTING (§81-1)

Product Manager: (ai) Reviewer: L. Markarian
MPID No.: 2401499-02 Report Date: 11/14/90
Testing Facility: Institut fur Toxikologie, Bayer AG Report No. 4416
Author(s): Dr. J Thyssen + Dr G. Kimmerle
Species: Mice NMRI
Age: unspecified Observation Days (Post
Weight: 18-22g Exposure): (14); other ( )
Source: Winkelmann, Kirch Borchen
Test Material: MEB 6447 (Formula shown same as Bayleton (Triadimefon))
Quality Assurance (40 CFR §160.12): none

Conclusion:

1. LD50 (mg/kg): Males = 939 (817-1198) mg/kg ; Females = 1071 (947-1233) mg/kg ; Combined =
2. The estimated LD50 is
3. Tox. Category: 3. Classification: supplementary

Procedure (Deviations From §81-1): Test material emulsified in 1:10 mixture of acetone and oil (unspecified). Mice intubated at an unspecified concentration at 30 animals per level (15♂15♀) and observed for 14 days. No information about body weights. Necropsy not reported.

Results:

Reported Mortality

DOSAGE (mg/kg)	(NUMBER KILLED/NUMBER TESTED) Males	Females	Combined
25	0/15	0/15	0/30
50	0/15	0/15	0/30
100	0/15	0/15	0/30
250	0/15	0/15	0/30
500	2/15	0/15	2/30
750	5/15	1/15	6/30
1 000	7/15	7/15	14/30
1 500	11/15	13/15	24/30
2 000	14/15	—	14/15
2 500	15/15	15/15	30/30

Symptomology & Gross Necropsy Findings:

Mice initially showed excitation followed by drowsiness and labored respiration and "general impairment of health" The animals at 25 mg/kg level showed no signs of toxicity

DATA REVIEW FOR ACUTE ORAL TOXICITY TESTING (§81-1)

Product Manager: (21)
PID No.: 240449-00
Testing Facility: Institut fur Toxikologie, Bayer
Author(s): Dr. J. Thyssen & Dr. G. Kimmerle
Species: Rabbit, New Zealand White Female
Age: unspecified
Weight: 3-4 kg
Source: Winkelmann, Kirchborchen
Test Material: MEB 5947 (Formulation unspecified, Bayleton (Triadimefon))
Quality Assurance (40 CFR §160.12): none

Reviewer: L. Markarian
Report Date: 11/14/90
Report No. 4416
Observation Days (Post Exposure): (14); other ( )

Conclusion:

1. LD50 (mg/kg): Males = _____; Females = approximately 500 mg/kg; Combined = _____
2. The estimated LD50 is _____
3. Tox. Category: ____. Classification: Supplementary

Procedure (Deviations From §81-1): Test material emulsified in the mixture of acetone-oil (unspecified). Rabbits inhalated at an unspecified concentration with 3 female rabbits per level. No weight or Necropsy information available

Results:

Reported Mortality

DOSAGE (mg /kg)	(NUMBER KILLED/NUMBER TESTED) Males	Females	Combined
100	-	0/3	
250	-	0/3	
500	-	2/3	
750	--	3/3	

Symptomology & Gross Necropsy Findings:

Deaths occurred between days 1 & 3. Recorded signs of toxicity included "General health impairment", excitation and respiratory distress.

DATA REVIEW FOR ACUTE ORAL TOXICITY TESTING (§81-1)

Product Manager: (21) Reviewer: L. Markarian
MPID No.: 29614 99-03 Report Date: 11/14/90
Testing Facility: Institut fur Toxikologie, Bayer AG Report No. 4916
Author(s): Dr. Thyssen + Dr G. Kimmerle
Species: Dog, Beagle
Age: not specified Observation Days (Post
Weight: 10 - 15 kg Exposure): (14) / other ( )
Source: Velaz, Prague
Test Material: MEB 6447 (Formulation shown same as Bayleton (Triadimefon))
Quality Assurance (40 CFR §160.12): none

Conclusion:

1. LD_{50} (mg/kg): Males = _____; Females = _____; Combined = _____
2. The estimated LD_{50} is not possible with levels used
3. Tox. Category: ____. Classification: Supplementary

Procedure (Deviations From §81-1): Two dogs per dose level were intubated with an emulsion of the test material in a 1:10 mixture of acetone + oil (unspecified) and observed for 14 days. No weight or necropsy information provided.

Results:

Reported Mortality

DOSAGE (mg/kg)	(NUMBER KILLED/NUMBER TESTED) Males	Females	Combined
100		0/2	
250		0/2	
500		0/2	

Symptomology & Gross Necropsy Findings:

No adverse reactions were observed

DATA REVIEW FOR ACUTE ORAL TOXICITY TESTING (§81-1)

Product Manager: (21) Reviewer: L. Markarian
MPID No.: 240499-02 Report Date: 4/14/80
Testing Facility: Institut für Toxikologie, Bayer AG Report No. 4416
Author(s): Dr. J. Thyssen + Dr. G. Kimmerle
Species: white leghorn hens, & female quails
Age: Hens 12-14 months. Quail unspecified Observation Days (Post
Weight: not specified Exposure): (14); other ( )
Source: hens - Gierlich, Bochum, Quails - Graf Von Degenfeld - Schomburg, Lemgo, Ardeu
Test Material: MEB 6447 (Formula shown Sameas Bayleton (Triadimefon)
Quality Assurance (40 CFR §160.12): none

Conclusion:

1. LD50 (mg/kg): Hens = Estimated 5000 mg/kg ; Quails = Estimated 1750-2500 mg/kg ; Combined =
2. The estimated LD50 is
3. Tox. Category: ____. Classification: Supplementary

Procedure (Deviations From §81-1): white leghorn hens + female Quail were intubated with an emulsion of the test material in 1:10 mixture of acetone + oil (unspecified) and observed for 14 days! No weight or necropsy information provided

Results:

Reported Mortality

DOSAGE (mg /kg)	(NUMBER KILLED/NUMBER TESTED) Hens	Quails	
750	—	0/5	
1000	0/6	1/5	
1750	—	1/5	
2500	0/6	4/5	
3750	0/2		
5000	2/5		

Symptomology & Gross Necropsy Findings:

Only report of Toxic manifestation is "general impairment of health for both species.

DATA REVIEW FOR ACUTE DERMAL TOXICITY TESTING (§81-2)

Product Manager: (21) Reviewer: L. Markarian
MPID No.: 240499-02 Report Date: 11/14/90
Testing Laboratory: Institut fur Toxikologie Bayer AG Report No. 4416
Author(s): Dr T. Thyssen + Dr G Kimmerle
Species: Rat wistar II albino (Winkelmann Kirchborchen)
Sex: Male Wt.: 160 - 180 g
Test Material: MEB 6447 (Formula shown same as Bayleton (Triadimefon))
Quality Assurance (40 CFR §160.12): none

Summary:

1. LD_{50} (mg/kg): Males = _____; Females = _____; Combined = _____;
2. The estimated LD_{50} is _____
3. Tox. Category: _____. Classification: Supplementary

Procedure (Deviations From §81-2): Test material was applied to the shaved backs of unspecified number of rats as an emulsion in 1:10 mixture of acetone and oil (unspecified). Collars were put around the necks of the rats & test material was left on the skin for 7 days. Then the skin was washed with soap + water and the animals were observed for 7 more days. No information about weights or necropsy given

Results:

Reported Mortality

DOSAGE (mg /kg)	(NUMBER KILLED/NUMBER TESTED) Males	Females	Combined
1000	unspecified number 0/?		

Symptomology & Gross Necropsy Findings:

All animals survived, It is reported that the general health condition of the animals was mildly effected by the treatment for up to 4 days.

DATA REVIEW FOR ACUTE IP TOXICITY TESTING (§81-1)

Product Manager: (21) Reviewer: L. Markarian
MPID No.: 270499-00 Report Date: 11/14/90
Testing Facility: Institut für Toxikologie, Bayer AG Report No. 4416
Author(s): Dr J. Thyssen & DRG Kimmerle
Species: Rat, Wistar II albino
Age: not specified Observation Days (Post Exposure): (14); other (7day)
Weight: 160 - 180g
Source: Winkelmann, Kirchborchen
Test Material: MEB 6447 (Formula shown same as Bayleton (Triadimefon))
Quality Assurance (40 CFR §160.12): none

Conclusion:

1. LD_{50} (mg/kg): Males = 321 (283 - 370) mg/kg ; Females = 293 (271 - 3.-) mg/kg ; Combined = ____
2. The estimated LD_{50} is ____
3. Tox. Category: ____. Classification: supplementary

Procedure (Deviations From §81-1): Test material was injected interperitoneally as an emulsion in 1:10 mixture of acetone and oil (unspecified) at a constant volume of 1ml /100g of body weight. No body weight on Necropsy information given

Results:

Reported Mortality

DOSAGE (mg/kg)	(NUMBER KILLED/NUMBER TESTED) Males	Females	Combined
10	0/15	0/11	0/30
35	0/15	0/15	0/30
50	0/15	0/15	0/30
100	0/15	0/15	0/30
175	0/15	—	0/15
200	2/15	—	2/15
250	4/15	2/15	6/30
300	—	9/15	9/15
350	9/15	13/15	22/15
500	13/15	15/15	28/15
750	11/15	—	15/15

Symptomology & Gross Necropsy Findings:

Symptoms of Toxicity were initial excitation followed by drowsiness and "general ill health", cramps and blood in Saliva.

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DATA REVIEW FOR ACUTE INHALATION TOXICITY TESTING (§81-3)

Product Manager: (21)
NPID No.: 2401499-02
Testing Laboratory: Institut für Toxikologie, Bayer AG
Author(s): Dr J Thyssen + DEG Kimmerle
Species: Rat Wistar II albino 160-180g (Winkelmann. Kirchborchen) ♂♀
Mice NMRI, 18-22 g ♂ "
Golden Hamsters, 70-90g ♂ "
Rabbits, New Zealand white 3-4K "
Test Material: MEB 6447 (Formula shown sameas Bayleton (Triadimefon)
Quality Assurance: None Classification: Supplementary

Reviewer: L. Markarian
Report Date: 11/14/90
Report No. 4416

Static Spray				Dynamic Spray			
Species	mg/L	Dead M	Dead F	Species	mg/L	Dead M	Dead F
Rat	0.174	0	0	Rat	0.439 (1 hr)	0/20	
Mouse	(4 hr)	0	0				
Hamster		0	0				
Rabbit		0	0		0.480 (1 hr)		0/20
Rat	0.291	0	0		0.472 (4 hr)	0/20	
Mouse	(4 hr)	11/20 sex not specified					
Hamster		0	0		0.455 (4 hr)		0/20
Rabbit		0	0	Mice groups of 10	0.516 4 Hr	0 unspecified numb & sex	
				Hamsters groups of 10	0.516 4 Hr	0 numbers & sex not specified	

Two types of acute Inhalation Tests were performed. The results are summerized in the chart

Static Spray Inhalation: Test material was dissolved in 1:1 mixture of Ethanol + Lutrol (concentration not specified). This was sprayed into a 3 M³ chamber with a paint gun (Type Wolthen Pilot II F) fitted with a 5mm nozzle eight Times during a 4 hr exposure at Two levels. It is not clear if all the animals were exposed at the same Time.

Each spray was of 30 second duration 120 L of air was extracted from the chamber over a period of 1 hr using a gasmeter for analytic determination of the chamber concentration. During each spray the concentration of the test material was higher than between sprays. A fan was used to disperse the test material evenly. It is not reported where the fan was or what type. There was no particle analysis Inhalation Chamber Atmosphere analysis was conducted according to Eben The test material was absorbed from the atmosphere in cotton wool then eluted with benzene and concentration determined by gas chromatography. The same method for determination of chamber concentration was used in Dynamic Spray Test.
All animals were exposed for 4 hrs and observed for 14 days
No deleterious effects were observed at 0.179 mg/L level
At the 0.291 mg/L level the reported observation is " General health of all animals was effected. Mice were worse off than the other species 11/20 died between 4 hrs + 10 days (sex not specified) They also showed eye & nasal mucosal irritation. This was not observed in the other species.

Dynamic Spray Inhalation

Test material was dissolved in 1:1 mixture of ethanol & water and aerosolized into a dynamic flow chamber (no details given) Aerosol was mixed with air. Rats, mice & hamsters showed no signs of Toxicity - Particle analysis was not made. Chamber concentrations were determined as described for Static Spray inhalation

It is concluded that static spray caused more damage Than dynamic spray

DATA REVIEW FOR SKIN IRRITATION TESTING (§81-5)

Product Manager: (21)
MRID No.: 240499-09
Testing Laboratory: Institut Fuer Toxikologie, Bayer AG
Author(s): Dr. J Thyssen + Dr. G. Kimmerle
Species: Rabbit, New Zealand White
Age: not specified
Sex: not specified
Weight: 3-4 K
Dosage: not specified
Test Material: MEB 6447 (Formula shown same as Bayleton (Triadimefon))
Quality Assurance (40 CFR §160.12): none

Reviewer: Lucy D. Markarian
Report Date: 11/14/90
Report No. 4816

Summary:

The Primary Irritation Index = 1.3

Toxicity Category:

Classification: supplementary

Procedure (Deviations From §81-5): 6 rabbits Treated - according to USDA (1969) standards. Application method not specified. At 72 hrs all showed 4 erythema, but no edema. It is reported that there was superficial corrosion. It is not known if the lesions were reversible. No further testings were made.

Additionally human skin tests were conducted
50 mg of test material was applied to the forearms of
3 volunteers covered with cotton wool + adhesive plaster.
At 24 hrs 5/3 showed slight erythema for "a brief time"
At 48 hrs all sites were normal

Special Comments:

DATA REVIEW FOR ACUTE EYE IRRITATION TESTING (§81-4)

Product Manager: (21)
MRID No.: 240199-02
Testing Laboratory: Institut für Toxikologie, Bayer AG
Author(s): Dr. J. Thyssen + Dr. G. Kimmerle
Species: Rabbit, New Zealand white
Sex: not specified Weight: 3-4 kg
Source: Winkelmann, Kirch Hörstel
Dosage: not specified
Test Material: MEB 6447 (Formula shown same as Bayleton (Triadimefon))
Quality Assurance (40 CFR §160.12): None

Reviewer: Lucy D. Markarian
Report Date: 11/14/90
Report No. 4416

Summary:

Tox. Category: _____ Classification: Supplementary

Procedure (Deviation From §81-4): Two Typesaf Tests performed One with 1hr exposure, and another with 24 hr exposure. It is only stated that the test was conducted as USHEW 1973 guidelines dictate it. No other details given

Results:

	Observations (number "positive"/number tested)							
	Hour	Days						
	1	1	2	3	4	7	14	21
1 HR EXPOSURE: Cornea Opacity	0/6	0/6	0/6					
Iris	0/6	0/6	0/6					
Conjunctivae Redness	6/6	1/6	0/6					
Chemosis	3/6	0/6	0/6					
Ulceration	0/6	0/6	0/6					
24 Hr EXPOSURE: Cornea Opacity	0/3	0/3						
Iris	0/3	0/3						
Conjunctivae Redness	1/3	0/3						
Chemosis	0/3	0/3						
Ulceration	0/3	0/3						

Discharge was not evaluated. It is not clear what is meant by 1 hr & 24 hr exposure