



RHÔNE-POULENC INC.

CN 7500, CRANBURY, NJ 08512-7500
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(A)

October 23, 1992

**CERTIFIED MAIL
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Attn: Section 8(e) Coordinator (CAP Agreement)
Office of Toxic Substances
Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

RE: Report Submitted Pursuant to the TSCA Section 8(e) Compliance Audit Program

CAP ID NO.: 8ECAP - 0004

RP CAP REPORT NO.: RPS - 0378

Dear Sir/Madam:

On behalf of Rhône-Poulenc Inc. (RPI, CN5266, Princeton, NJ 08543-5266) and its subsidiaries, the attached report is being submitted to the Environmental Protection Agency (EPA) pursuant to the Toxic Substances Control Act (TSCA) Section 8(e) Compliance Audit Program (CAP Agreement) executed by RPI and EPA (8ECAP - 0004).

The enclosed report provides information on the following chemical substances:

Product Name: Dryorth LD
Chemical Identity: Unknown
CAS Registry No: Unknown

Product Name: Drymet DD
Chemical Identity: Sodium metasilicate, anhydrous
CAS Registry No.: 6834-92-0
CAS Registry Name: Silicic acid, disodium salt
pH: 12.4 of 1% solution

Product Name: More
Chemical Identity: Unknown
CAS Registry No.: Unknown

Product Name: Econodet
Chemical Identity: Unknown
CAS Registry No.: Unknown

3/15/95

Product Name: Chlorinated Cleaner
Chemical Identity: Unknown
CAS Registry No.: Unknown

The title of the enclosed report is:

Toxicology Lab Report T-1633

The following is a summary of the adverse effects observed in this report.

The skin irritation studies classified Dryorth LD, Drymet DD, Econodet, and chlorinated cleaner as corrosive. More was classified as a severe skin irritant. In the eye irritation studies, Dryorth LD, Drymet DD, and Econodet were classified as severe, irreversible eye irritants. More was classified as a severe eye irritant with signs of remission observed. Chlorinated cleaner was a moderate eye irritant with evidence of reversibility.

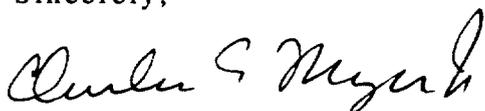
We have diligently searched our files and are not able to determine the chemical identity of each of these products. RPI does not claim any portion of the information in this submission to be TSCA confidential business information (TSCA CBI).

RPI has not previously submitted any TSCA Section 8(e) notices or premanufacture notification on the subject chemical substances.

In total, RPI is submitting three copies of the enclosed report and this cover letter: an original and two copies.

Further questions regarding this submission may be directed to Dr. Glenn S. Simon, Director of Toxicology at (919)549-2222 (Rhône-Poulenc, P.O. Box 12014, 2 T.W. Alexander Drive, Research Triangle Park, NC 27709).

Sincerely,



Charles E. Moyer, Jr., Ph.D.
Director, Product Safety
(609)860-3589

CEMjr/mm
Enclosures

BEGIN REPORT

T-1633

REVIEWED FOR THE SECTION 8(e) COMPLIANCE
AUDIT PROGRAM, ON 3-02-92 BY
JEZ / ROF : CAD ID NO. BCB-^{ROF}~~JL~~
1006

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TOXICOLOGY REQUEST FORM

T-No. T-1633 1-3

Project No. 70-0110

Compound 5 Industrials

Date 11-30-70

Identification (lot, batch, etc.) _____

Use (insect., herbicide, etc.) _____

STRUCTURE

1. chlorinated cleaner
2. DRYORTH - LD
3. DRYMET - DD
4. MORE
5. ECONOGET

Purity (%) _____

by (IR, m.p., etc) _____

Known Impurities _____

Complete for formulations:

Per cent technical _____
 solvent _____
 per cent _____

Check and Complete:

- Acute oral toxicity - species rat ♂
- Acute dermal toxicity - rabbits
- Primary skin irritation (Industrials) - rabbits - DRAIZE
- Acute eye irritation - rabbits
- Other (specify) _____

Report Distribution K. Kimura (S.F. Pacific Basin Div)

Remarks _____

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TOXICOLOGY LAB REPORT -- T-1633

TOXICOLOGICAL EVALUATION OF INDUSTRIAL MATERIALS

1/4/71

I. OBJECTIVE

To evaluate the acute oral toxicity, and the skin and eye irritation properties of the concentrated and maximum use concentration solutions of the following four industrial products: DRYORTH LD, DRYMET DD, MORE and ECONODET.

II. MATERIALS

A sixteen ounce sample of each product was received from the Industrial Chemical Division on October 12, 1970.

DRYORTH LD, DRYMET DD, and ECONODET are crystalline materials; MORE is a liquid. To maintain a consistency in testing, the four concentrated materials were evaluated for their oral toxicity as 25% solutions in water. The maximum use concentrations in water were as follows:

DRYORTH LD	1.2%
DRYMET DD	1.2%
MORE	3.0%
ECONODET	1.2%

III. SUMMARY

(see next page)

III. SUMMARY

SKIN IRRITATION PROPERTIES, RABBITS

Material Tested	Acute Male Rat Oral LD50, mg/kg 25% Sol. Use	NEAT		USE		Eye Irritant Classification Rabbits		
		Draize Rating	Clas- sifi- cation	Draize Rating	Clas- sifi- cation			
							Neat	Use
DRYORTH LD	233 (a)	> 4,640	8.0	Corrosive	2.58	Moderate irritant	Severe/ non-remis- sible	Irritant/ remissible
DRYMET DD	369 (b)	> 4,640	8.0	Corrosive	2.08	Moderate irritant	Severe/ non-remis- sible	Non- irritant
MORE	> 4,640	> 4,640	6.0	Severe irritant	0.67	Mild irritant	Severe/ remissible	Non- irritant
ECONODET	794 (c)	> 4,640	7.5	Corrosive	0.50	Mild irritant	Severe/ non-remis- sible	Non- irritant

(a) 95% confidence limits - (160-339) mg/kg
 (b) 95% confidence limits - (271-501) mg/kg
 (c) 95% confidence limits - (584-1080) mg/kg

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CONFIDENTIALIV. PROCEDURESA. Acute Rat Oral

Male, Sprague Dawley, albino rats in the 240-255 gram weight range were used for test purposes. The test materials were administered as a 25% solution in water and at the maximum use concentration in single doses by means of a stomach tube. Five animals were used for each dose level. Test animals were fasted for 24 hours prior to treatment. The animals were observed for 14 days after treatment for mortalities and signs of toxicity. All mortalities and the 14-day survivors of the highest test levels were autopsied for gross pathological observation.

B. Skin Irritation Index, Draize Dermal

The four concentrated materials and their maximum use concentrations were evaluated for their skin irritation properties.

The Draize Dermal procedure was followed as outlined in the Federal Register (F.R. 191.11). The test procedure is designed to determine whether a chemical is a primary skin irritant, i.e., capable of initiating an extreme tissue reaction or skin inflammation to an insult or injury. The inflammatory process may vary from as barely perceptible hyperemia, to edema formations and vesiculation, and finally to an intense suppurative process. Irritation itself is not directly measured, but the result or consequence of irritation, that is, the injury reaction following irritation.

The Draize Dermal Test is further discussed in Appendix A.

C. Acute Eye Irritation

The procedure employed is in accordance with the test for eye irritants outlined in the Code of Federal Regulations (21 CFR 191.12) for evaluating hazardous substances. Three New Zealand rabbits in the 1.6-2.1 kg weight range were used as the test animals. Ten mg or 0.1 ml of the test material was placed in one eye of each animal by gently pulling the lower lid away from the eyeball to form a cup into which the test material was dropped. The lids were gently held together for one second and the animal released. The other eye, remaining untreated, served as the control. The eyes were observed at 24, 48 and 72 hours following treatment and scored for irritation properties.

Eye irritation was determined according to the method outlined in the "Illustrated Guide for Grading Eye Irritation by Hazardous Substances." A total score of 110 is possible. A non-irritant must have a score of 10 or less. If, at the end of 72 hours ocular damage appears to be remissible (reversible), the animal is observed for an additional 4-7 days before final scoring is possible.

V. RESULTSA. Acute Rat Orals1. Mortalities

<u>Material Tested</u>	<u>Dosage Level, mg/kg</u>						<u>Maximum Use Concentration</u>
	<u>25% Solution</u>						
	<u>100</u>	<u>215</u>	<u>464</u>	<u>1000</u>	<u>2150</u>	<u>4640</u>	
DRYORTH LD	0/5	2/5	5/5	5/5	5/5	5/5	0/5
DRYMET DD	0/5	0/5	4/5	5/5	5/5	5/5	0/5
MORE	-	-	-	-	0/5	1/5	0/5
ECONODET	-	0/5	0/5	4/5	5/5	5/5	0/5

2. Signs of Toxicity

No signs of toxicity were observed in animals treated with the maximum use concentrations. The signs of toxicity described refer to test animals treated with 25% solutions of the four industrials.

DRYORTH LD -- No signs of toxicity were observed at the 100 mg/kg dose level. Animals treated at the 215 mg/kg dose level became depressed 72 hours after treatment. Two animals died 75 hours after treatment. Survivors recovered 9 days after treatment. Higher dosage levels produced bloody oral and nasal discharges, lacrimation and severe depression.

DRYMET DD -- No signs of toxicity were observed at the 100 mg/kg dose level. No mortalities were observed in animals treated at the 215 mg/kg dose level. Higher dosage levels produced severe depression, lacrimation and bloody oral and nasal discharges.

MORE -- Animals treated at the 2,150 mg/kg dose level became slightly depressed 24 hours after treatment, but recovered after an additional 24 hours. The mortality at the 4,640 mg/kg dose level occurred 16 hours after treatment.

ECONODET -- No signs of toxicity were observed among animals treated at the 215 and 464 mg/kg dose levels. Higher dosage levels produced severe depression and bloody oral and nasal discharges.

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3. Autopsy Observations

Animals treated with the maximum use concentrations of all materials at the 4,640 mg/kg dose level appeared grossly normal when necropsied 14 days after treatment.

Mortalities among test animals treated with 25% solutions of DRYORTH LD, DRYMET DD AND ECONODET displayed gastro-intestinal hemorrhage when necropsied. In addition, mortalities treated with DRYMET DD exhibited perforated stomachs.

The mortality treated with a 25% solution of MORE at the 4,640 mg/kg dose level displayed a hemorrhaged and fluid filled stomach, erythemic lungs and intestinal hemorrhage.

B. Skin Irritation Index, Draize Dermal

(see charts beginning on next page)

Expos. Time Hrs.	ERYTHEMA	7M	8M	9N	25F	26F	27F	Means
		Score	Score	Score	Score	Score	Score	
24	Intact	4	4	4	4	4	4	4.00
72	Intact	4	4	4	4	4	4	4.00
24	Abraded	4	4	4	4	4	4	4.00
72	Abraded	4	4	4	4	4	4	4.00
CONFIDENTIAL SUBTOTAL								16.00
	EDEMA							
24	Intact	4	4	4	4	4	4	4.00
72	Intact	4	4	4	4	4	4	4.00
24	Abraded	4	4	4	4	4	4	4.00
72	Abraded	4	4	4	4	4	4	4.00
SUBTOTAL								16.00
TOTAL SCORE								32.00
(TOTAL /4) PRIM. IRIT. INDEX								8.00
CORROSIVE								

DRYORTH, MAX. USE CONC.

RABBIT NO.

Expos. Time Hrs.	ERYTHEMA	4M	5M	6M	22F	23F	24F	Means
		Score	Score	Score	Score	Score	Score	
24	Intact	0	0	1	1	0	0	0.33
72	Intact	0	0	0	0	0	0	0.00
24	Abraded	4	4	4	4	4	4	4.00
72	Abraded	4	3	2	3	2	3	2.83
SUBTOTAL								7.16
	EDEMA							
24	Intact	0	1	0	0	0	0	0.17
72	Intact	0	0	0	0	0	0	0.00
24	Abraded	2	2	2	2	2	2	2.00
72	Abraded	0	2	1	2	1	0	1.00
SUBTOTAL								3.17
TOTAL SCORE								10.33
(TOTAL /4) PRIM. IRIT. INDEX								2.58
MODERATE IRRITANT								

RABBIT NO.

Expos. Time Hrs.	ERYTHEMA	10M	11M	12M	28F	29F	30F	Means
		Score	Score	Score	Score	Score	Score	
24	Intact	4	4	4	4	4	4	4.00
72	Intact	4	4	4	4	4	4	4.00
24	Abraded	4	4	4	4	4	4	4.00
72	Abraded	4	4	4	4	4	4	4.00
CONFIDENTIAL								
SUBTOTAL								16.00
	EDEMA							
24	Intact	4	4	4	4	4	4	4.00
72	Intact	4	4	4	4	4	4	4.00
24	Abraded	4	4	4	4	4	4	4.00
72	Abraded	4	4	4	4	4	4	4.00
SUBTOTAL								16.00
TOTAL SCORE								32.00
(TOTAL /4) PRIM. IRIT. INDEX								8.00
CORROSIVE								

DRYMET DD, MAX. USE CONC.

RABBIT NO.

Expos. Time Hrs.	ERYTHEMA	7M	8M	9M	25F	26F	27F	Means
		Score	Score	Score	Score	Score	Score	
24	Intact	0	0	2	0	0	0	0.17
72	Intact	0	0	0	0	0	0	0.00
24	Abraded	4	3	4	4	3	4	3.66
72	Abraded	3	2	2	2	1	3	2.17
SUBTOTAL								6.00
	EDEMA							
24	Intact	0	0	0	0	0	0	0.00
72	Intact	0	0	0	0	0	0	0.00
24	Abraded	2	2	2	2	2	2	2.00
72	Abraded	1	0	0	1	0	0	0.33
SUBTOTAL								2.33
TOTAL SCORE								8.33
(TOTAL /4) PRIM. IRIT. INDEX								2.08
MODERATE IRRITANT								

MORE, NEAT		RABBIT NO.						
Expos. Time Hrs.	ERYTHEMA	13M Score	14M Score	15M Score	31F Score	32F Score	33F Score	Means
24	Intact	4	4	4	4	4	4	4.00
72	Intact	4	4	4	4	4	4	4.00
24	Abraded	4	4	4	4	4	4	4.00
72	Abraded	4	4	4	4	4	4	4.00
CONFIDENTIAL								SUBTOTAL 16.00
	EDEMA							
24	Intact	2	2	2	2	2	2	2.00
72	Intact	2	2	2	2	2	2	2.00
24	Abraded	2	2	2	2	2	2	2.00
72	Abraded	2	2	2	2	2	2	2.00
SUBTOTAL								8.00
TOTAL SCORE								24.00
(TOTAL /4) PRIM. IRIT. INDEX								6.00
SEVERE IRRITANT								

MORE, MAX. USE CONC.		RABBIT NO.						
Expos. Time Hrs.	ERYTHEMA	10M Score	11M Score	12M Score	28F Score	29F Score	30F Score	Means
24	Intact	0	0	0	0	0	0	0.00
72	Intact	0	0	0	0	0	0	0.00
24	Abraded	2	2	2	2	1	2	1.83
72	Abraded	0	0	0	0	0	0	0.00
SUBTOTAL								1.83
	EDEMA							
24	Intact	0	0	0	0	0	0	0.00
72	Intact	0	0	0	0	0	0	0.00
24	Abraded	1	1	1	1	0	1	0.83
72	Abraded	0	0	0	0	0	0	0.00
SUBTOTAL								0.83
TOTAL SCORE								2.66
(TOTAL /4) PRIM. IRIT. INDEX								0.67
MILD IRRITANT								

ECONODET, NEAT

RABBIT NO.

-9-

Expos. Time Hrs.	ERYTHEMA	16M	17M	18M	34F	35F	36F	Means
		Score	Score	Score	Score	Score	Score	
24	Intact	4	4	4	4	4	4	4.00
72	Intact	4	4	4	4	4	4	4.00
24	Abraded	4	4	4	4	4	4	4.00
72	Abraded	4	4	4	4	4	4	4.00
CONFIDENTIAL SUBTOTAL								16.00
	EDEMA							
24	Intact	2	2	2	2	2	2	2.00
72	Intact	4	4	4	4	4	4	4.00
24	Abraded	4	4	4	4	4	4	4.00
72	Abraded	4	4	4	4	4	4	4.00
SUBTOTAL								14.00
TOTAL SCORE								30.00
(TOTAL /4) PRIM. IRIT. INDEX								7.50
CORROSIVE								

ECONODET, MAX. USE CONC.

RABBIT NO.

Expos. Time Hrs.	ERYTHEMA	13M	14M	15M	31F	32F	33F	Means
		Score	Score	Score	Score	Score	Score	
24	Intact	0	0	0	0	0	0	0.00
72	Intact	0	0	0	0	0	0	0.00
24	Abraded	2	1	2	1	1	2	1.50
72	Abraded	0	0	0	0	0	0	0.00
SUBTOTAL								1.50
	EDEMA							
24	Intact	0	0	0	0	0	0	0.00
72	Intact	0	0	0	0	0	0	0.00
24	Abraded	1	0	1	0	0	1	0.50
72	Abraded	0	0	0	0	0	0	0.00
SUBTOTAL								0.50
TOTAL SCORE								2.00
(TOTAL /4) PRIM. IRIT. INDEX								0.50
MILD IRRITANT								

C. Acute Ocular Irritancy, Rabbits1. Neat Materials

DRYORTH LD caused complete destruction to the eyes of test animals. DRYORTH LD is a severe eye irritant corrosive to ocular structures.

DRYMET DD caused obscurity of eye detail due to swelling and corneal opacity for 72 hours after treatment. DRYMET DD is classified as a severe eye irritant causing non-remissible damage to the eyes of test animals.

MORE caused obscurity of eye detail due to swelling for 72 hours after treatment at which time slight corneal opacity was observed. Twenty-four hours later damage had begun to disappear and was in complete remission 5 days after treatment. MORE is a severe eye irritant.

ECONODET caused partial destruction to the eyes of test animals. ECONODET is a severe eye irritant corrosive to ocular structures.

2. Maximum Use Concentrations

DRYORTH LD caused moderate swelling and discharge to the eyes of test animals for 36 hours after treatment. DRYORTH LD is a primary eye irritant causing damage of a remissible nature.

DRYMET DD, MORE and ECONODET are non-irritants when tested at their maximum use concentrations. No adverse ocular effects were observed.

Work done by: A. Hall
C. H. Bullock
J. F. Saylor

Submitted by John F. Saylor
John F. Saylor

Approved by F. X. Kamienski
F. X. Kamienski

JFS:FXK:ea

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DESCRIPTION OF THE DRAIZE DERMAL SKIN IRRITATION TEST

A primary irritant may be defined as a substance producing an injury on first contact. The resultant injury will depend on:

- (1) Nature of irritant
- (2) Concentration of irritant
- (3) Total elapsed time of exposure

Primary irritation of the skin is measured by a patch-test technique on the abraded and intact skin of the albino rabbit clipped free of hair. A minimum of six subjects is used per preparation tested. The method consists in introducing under a one-inch patch 0.5 ml. (in case of liquids) or 0.5 gm. (in case of solids and semisolids) of the test substance. It is also desirable in the case of solids to attempt solubilizing in an appropriate solvent (see above) and to apply the solution as for liquids. The animals are immobilized in an animal holder with patches secured in place by adhesive tape. The entire trunk of the animal is then wrapped with rubberized cloth for the entire 24-hour period of exposure. This latter procedure aids in maintaining the test patches in position, and, in addition, retards the evaporation of volatile substances. After the 24 hours of exposure the patches are removed, and the resulting reactions are evaluated on the basis of scores in Table 1.

Readings are made also after 72 hours, and the final score represents an average of the 24- and 72-hour readings. An equal number of exposures are made on areas of skin which have been previously abraded. The abrasions are minor incisions through the stratum corneum, but not sufficiently deep to disturb the derma (that is, not sufficiently deep to produce bleeding).

The total erythema and edema scores are added in both the 24- and 72-hour readings, and the average of the scores for intact and abraded skin are combined; this combined average is referred to as the primary irritation index. It is useful for placing compounds in general groups with reference to irritant properties.

Compounds producing combined averages (primary irritation indexes) of 2 or less are only mildly irritating; whereas those with indexes from 2 to 5 are moderate irritants, and those with scores above 5 are considered severe or primary irritants.

TABLE 1

EVALUATION OF SKIN REACTIONS

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(1)	Erythema and Eschar Formation	
	No erythema -----	0
	Very slight erythema (barely perceptible)-----	1
	Well defined erythema -----	2
	Moderate to severe erythema -----	3
	Severe erythema (beet redness) to slight eschar formation (injuries in depth)-----	4
	Total possible erythema score -----	<u>4</u>
(2)	Edema Formation	
	No edema -----	0
	Very slight edema (barely perceptible) -----	1
	Slight edema (edges of area well defined by definite raising) -----	2
	Moderate edema (raised approximately 1 mm) -----	3
	Severe edema (raised more than 1 mm and extending beyond area of exposure) -----	4
	Total possible edema score -----	<u>4</u>

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TOXICOLOGY LABORATORY REPORT -- T-1633-1

11/30/73

CHLORINATED CLEANER

I. OBJECTIVE

To evaluate the acute oral toxicity and the skin and eye irritation properties of this material in concentrated form and when diluted to a use concentration of 0.8% in water.

MATERIALS

CHLORINATED CLEANER, a powder, was received from the Industrial Chemical Division on 11/30/70.

III. SUMMARY

	<u>Concentrated</u>	<u>Use Dilution(0.8%)</u>
A. Acute oral LD ₅₀ , male rats, mg/kg:	> 4640	> 4640
B. Skin irritation index and classification (24-hour exposure):	4.6 corrosive	0.25 nonirritant
C. Eye irritation Classification:	irritant	nonirritant

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IV. PROCEDURE

A. Acute Rat Oral

Male, Sprague Dawley, albino rats in the 240-255 gram weight range were used for test purposes. The test materials were administered as a 25% solution in water and at the maximum use concentration in single doses by means of a stomach tube. Five animals were used for each dose level. Test animals were fasted for 24 hours prior to treatment. The animals were observed for 14 days after treatment for mortalities and signs of toxicity. All mortalities and the 14-day survivors of the highest test levels were autopsied for gross pathological observation.

B. Skin Irritation Index, Draize Dermal

The four concentrated materials and their maximum use concentrations were evaluated for their skin irritation properties.

The Draize Dermal procedure was followed as outlined in the Federal Register (F.R. 191.11). The test procedure is designed to determine whether a chemical is a primary skin irritant, i.e., capable of initiating an extreme tissue reaction or skin inflammation to an insult or injury. The inflammatory process may vary from as barely perceptible hyperemia, to edema formations and vesiculation, and finally to an intense suppurative process. Irritation itself is not directly measured, but the result or consequence of irritation, that is, the injury reaction following irritation.

The Draize Dermal Test is further discussed in Appendix A.

C. Acute Eye Irritation

The procedure employed is in accordance with the test for eye irritants outlined in the Code of Federal Regulations (21 CFR 191.12) for evaluating hazardous substances. Three New Zealand rabbits in the 1.6-2.1 kg weight range were used as the test animals. Ten mg. or 0.1 ml of the test material was placed in one eye of each animal by gently pulling the lower lid away from the eyeball to form a cup into which the test material was dropped. The lids were gently held together for one second and the animal released. The other eye, remaining untreated, served as the control. The eyes were observed at 24, 48 and 72 hours following treatment and scored for irritation properties.

Eye irritation was determined according to the method outlined in the "Illustrated Guide for Grading Eye Irritation by Hazardous Substances." A total score of 110 is possible. A non-irritant must have a score of 10 or less. If, at the end of 72 hours ocular damage appears to be remissible (reversible), the animal is observed for an additional 4-7 days before final scoring is possible.

V. RESULTS

A. Acute Rat Oral

- | | | | |
|----|---|-------------------------|------|
| 1. | <u>Mortality</u> | <u>Dose Level mg/kg</u> | |
| | concentrated (25% in H ₂ O) | 0/5 | 4640 |
| | use dilution (0.8% in H ₂ O) | 0/5 | 4640 |
2. Signs of Toxicity -- No signs of toxicity were observed.
3. Gross Pathology -- All survivors appeared grossly normal when autopsied 14 days after treatment.

B. Primary Skin Irritation (Draize) Dermal

See charts on next two pages.

C. Acute Eye Irritation

Tested as Received: One of the animals in the test exhibited a moderate corneal opacity which affected the entire corneal surface, but this reaction proved to be completely remissible within 3 days. Also observed was a slight to moderate erythema and discharge.

Tested at Use Dilution (0.8% in H₂O): There was no significant irritation noted on any test site.

Submitted by *S. E. Morgan*
S. E. Morgan

Approved by *R. L. Joiner*
R. L. Joiner

SKIN IRRITATION INDEX (DOT PROCEDURE)

COMPOUND CHLORINATED CLEANER AS RECEIVED

11/30/73

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Rabbit No	Skin	Erythema-eschar Observation		Edema Observation		Sum Total	Score
		24 hr.	72 hr.	24 hr.	72 hr.		
1	Intact	0	0	0	0	12	3
	Abraded	4	4	2	2		
2	Intact	0	0	0	0	12	3
	Abraded	4	4	2	2		
3	Intact	0	0	2	0	14	3.6
	Abraded	4	4	2	2		
4	Intact	4	4	2	2	24	6
	Abraded	4	4	2	2		
5	Intact	4	4	2	2	24	6
	Abraded	4	4	2	2		
6	Intact	4	4	2	2	24	6
	Abraded	4	4	2	2		

Primary Irritant Score ----- 4.6

*Score = sum of individual values for each rabbit divided by six.

Observations: The compound marked erythema and mild edema at most test sites and there was no remission within 72 hours. The compound was applied as received.

Skin Irritant Score and Irritant Classification 4.6 - corrosive

Test site	Evaluation of skin reaction	Ratio regarding six rabbits Observation time	
		24 hours	72 hours
Intact	Corrosive	3/6	3/6
Abraded	Corrosive	6/6	6/6

SKIN IRRITATION INDEX (DOT PROCEDURE)

C. POUND CHLORINATED CLEANER AT USE DILUTION

11/30/73

CONFIDENTIAL

Rabbit No	Skin	Erythema-eschar Observation		Edema Observation		Sum Total	Score
		24 hr.	72 hr.	24 hr.	72 hr.		
1	Intact	0	0		0	1	0.2
	Abraded	1	0		0		
2	Intact	0	0		0	1	0.2
	Abraded	1	0		0		
3	Intact	0	0		0	1	0.2
	Abraded	1	0		0		
4	Intact	0	0		0	1	0.2
	Abraded	1	0		0		
5	Intact	0	0		0	1	0.2
	Abraded	1	0		0		
6	Intact	0	0		0	1	0.2
	Abraded	1	0		0		

Primary Irritant Score ----- 0.25

*Score = sum of individual values for each rabbit divided by six.

Observations: The only skin irritation which was observed was a slight erythema which occurred at the abraded sites and remitted within 72 hours. The use concentration was 0.8% in H₂O.

Skin Irritant Score and Irritant Classification 0.25 - nonirritant

Test site	Evaluation of skin reaction	Ratio regarding six rabbits Observation time	
		24 hours	72 hours
Intact	Corrosive	0/6	0/6
Abraded	Corrosive	0/6	0/6

DESCRIPTION OF THE DRAIZE DERMAL SKIN IRRITATION TEST

A primary irritant may be defined as a substance producing an injury on first contact. The resultant injury will depend on:

- (1) Nature of irritant
- (2) Concentration of irritant
- (3) Total elapsed time of exposure

Primary irritation of the skin is measured by a patch-test technique on the abraded and intact skin of the albino rabbit clipped free of hair. A minimum of six subjects is used per preparation tested. The method consists in introducing under a one-inch patch 0.5 ml. (in case of liquids) or 0.5 gm. (in case of solids and semisolids) of the test substance. It is also desirable in the case of solids to attempt solubilizing in an appropriate solvent (see above) and to apply the solution as for liquids. The animals are immobilized in an animal holder with patches secured in place by adhesive tape. The entire trunk of the animal is then wrapped with rubberized cloth for the entire 24-hour period of exposure. This latter procedure aids in maintaining the test patches in position, and, in addition, retards the evaporation of volatile substances. After the 24 hours of exposure the patches are removed, and the resulting reactions are evaluated on the basis of scores in Table 1.

Readings are made also after 72 hours, and the final score represents an average of the 24- and 72-hour readings. An equal number of exposures are made on areas of skin which have been previously abraded. The abrasions are minor incisions through the stratum corneum, but not sufficiently deep to disturb the derma (that is, not sufficiently deep to produce bleeding).

The total erythema and edema scores are added in both the 24- and 72-hour readings, and the average of the scores for intact and abraded skin are combined; this combined average is referred to as the primary irritation index. It is useful for placing compounds in general groups with reference to irritant properties.

Compounds producing combined averages (primary irritation indexes) of 2 or less are only mildly irritating; whereas those with indexes from 2 to 5 are moderate irritants, and those with scores above 5 are considered severe or primary irritants.

TABLE 1

EVALUATION OF SKIN REACTIONS

CONFIDENTIAL

(1)	Erythema and Eschar Formation	
	No erythema -----	0
	Very slight erythema (barely perceptible)-----	1
	Well defined erythema -----	2
	Moderate to severe erythema -----	3
	Severe erythema (beet redness) to slight eschar formation (injuries in depth)-----	4
	Total possible erythema score -----	<u>4</u>
(2)	Edema Formation	
	No edema -----	0
	Very slight edema (barely perceptible) -----	1
	Slight edema (edges of area well defined by definite raising) -----	2
	Moderate edema (raised approximately 1 mm) -----	3
	Severe edema (raised more than 1 mm and extending beyond area of exposure) -----	4
	Total possible edema score -----	<u>4</u>

1633-1

Stauffer Chemical Company
Western Research Center
Toxicology Section

ACUTE ORAL SHEET ♂

CONFIDENTIAL

Date 12-3-70

Material Chlorinated Cleaner Batch # _____

Dose ~~5,000~~ ^{4,640} mg / kg

Concentration 250 mg / ml - 25% (H₂O)

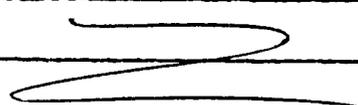
Factor ~~2.5~~ 18.5

<u>Rat No.</u>	<u>Body Weight (g)</u>	<u>Total Dose (ml)</u>	<u>Ti</u>
1	<u>270</u>	<u>5.0</u>	<u>2⁰</u>
2	<u>265</u>	<u>4.9</u>	
3	<u>250</u>	<u>4.6</u>	
4	<u>240</u>	<u>4.4</u>	
5	<u>257</u>	<u>4.8</u>	<u>2⁴</u>

Observations:

12-4 - 70% 0/5 0 - NORMAL -

12-22 - SAC



ACUTE ORAL SHEET ♂

T-1633-2 ♂

Date 12-18-70

CONFIDENTIAL

Material DRYORTH LD

Batch # _____

Dose 215 mg/kg

Concentration 250 mg/ml

25% (H₂O)

Factor 0.86

<u>Rat No.</u>	<u>Body Weight (g)</u>	<u>Total Dose (ml)</u>	<u>Tic</u>
1	<u>180 (AVE)</u>	<u>0.16</u>	<u>115</u>
2			
3			
4			
5			<u>115</u>

Observations:

12-21 - 0/5 - DEPRESSED

12-21 - 3³⁰/5 - DEAD - SPASMS + ^{INSTANT} RIGOR MORTIS
G-I HEMO / ETC

12-29 - 2/5 " - SAC + N

T-1633-2

ACUTE ORAL SHEET

2

Date 12-7-70

CONFIDENTIAL

Material Dupont RD

Batch # _____

Dose 2150 mg/kg

Concentration 250 mg/ml

25% (H₂O)

Factor 8.6

<u>Rat No.</u>	<u>Body Weight (g)</u>	<u>Total Dose (ml)</u>	<u>Ti</u>
1	<u>180</u>	<u>1.5</u>	<u>2</u>
2	<u>205</u>	<u>1.8</u>	
3	<u>260</u>	<u>2.2</u>	
4	<u>265</u>	<u>2.3</u>	
5	<u>220</u>	<u>1.9</u>	<u>2</u>

Observations:

12-8 8⁰⁰ 5/5 dead.

Use Dilution T-1633-2

ACUTE ORAL SHEET

CONFIDENTIAL

Date 12-8-70

Material Amphetamine LD

Batch # _____

Dose 4640 mg/kg

Concentration 1000 mg/ml

1.2 % (

Factor 4.64

<u>Rat No.</u>	<u>Body Weight (g)</u>	<u>Total Dose (ml)</u>	<u>Ti</u>
1	220	1.0	1
2	195	0.95	
3	190	0.92	
4	240	1.2	
5	215	1.0	1

Observations:

12-22- 8/5 SAC + N



T-1633-2

Stauffer Chemical Company
Western Research Center
Toxicology Section

ACUTE ORAL SHEET ♂

CONFIDENTIAL

Date 12-3-70

Material Duylorth LD

Batch # _____

Dose ⁴⁶⁴⁰~~5000~~ mg/kg

Concentration 250 mg/ml - 25% (H₂O)

Factor ~~70~~ 18.5

<u>Rat No.</u>	<u>Body Weight (g)</u>	<u>Total Dose (ml)</u>	<u>Tic</u>
1	<u>220</u>	<u>4.1</u>	<u>25</u>
2	<u>250</u>	<u>4.6</u>	<u>2</u>
3	<u>220</u>	<u>4.1</u>	
4	<u>225</u>	<u>4.2</u>	
5	<u>230</u>	<u>4.3</u>	<u>25</u>

Observations:

12-4-80% - 5/5 DEAD - Blood ORAL & NASAL DISCHARGE
LACRIMATION - CHEMOSIS

369 mg/kg
(271-501) 1633-3

ACUTE ORAL SHEET

CONFIDENTIAL

Date 12-14-70

Material Drymett DD

Batch # _____

Dose 215 mg/kg

Concentration 250 mg/ml

25% (H₂O)

Factor 0.86

<u>Rat No.</u>	<u>Body Weight (g)</u>	<u>Total Dose (ml)</u>
1	<u>130</u>	<u>0.11</u>
2	<u>180</u>	<u>0.15</u>
3	<u>160</u>	<u>0.14</u>
4	<u>185</u>	<u>0.13</u>
5	<u>143</u>	<u>0.12</u>

Ti
15
1

20
1

Observations:

12-15 - 0/5 DEAD

12-29 - 0/5 "

SAC

SMALL

UNREPT

HEMO - GT

EV

PERFORATIONS

T-1633-3

ACUTE ORAL SHEET

9

CONFIDENTIAL

Date 12-9-70

Material Drymet DD

Batch # _____

Dose 464 mg/1 Kg

Concentration 250 mg/ml - 25% (H₂O)

Factor 1.8

Rat No.	Body Weight (g)	Total Dose (ml)	Ti
1	220	0.40	25%
2	255	0.46	
3	225	0.41	
4	265	0.48	
5	235	0.42	3%

Observations:

12-10 8⁰⁰/A 0/5 dead. All appear normal.
 12-10 9³⁰/A 1/5 dead - slight depression.
 12-11 8⁰⁰/A 2/5 dead - " "
 12-16 - 3/5 " "
 12-21 - 4/5 " "
 12-22 - 4/5 " SAC

GI MEMO

[Handwritten signature]

1633-3

ACUTE ORAL SHEET

CONFIDENTIAL

Date 12-14-70

Material Drymett DD

Batch # _____

Dose 1000 mg/kg

Concentration 250 mg/ml

25% (H₂O)

Factor 4

Rat No.	Body Weight (g)	Total Dose (ml)	Ti
1	<u>185</u>	<u>0.74</u>	<u>2^o</u>
2	<u>170</u>	<u>0.68</u>	
3	<u>155</u>	<u>0.62</u>	
4	<u>165</u>	<u>0.66</u>	
5	<u>150</u>	<u>0.60</u>	<u>2^o</u>

Observations:

12-15-70 3/5 Found dead

12³⁰ 5/5

T-1633-3

ACUTE ORAL SHEET 2

Date 12-7-70

CONFIDENTIAL

Material Drymet DD Batch # _____

Dose 250 mg/kg

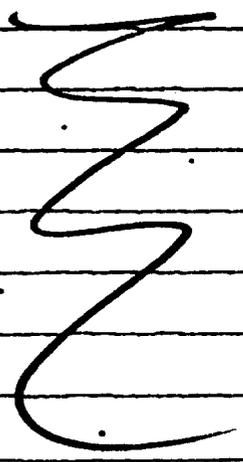
Concentration 250 mg/ml - 25% (H₂O)

Factor 816

<u>Rat No.</u>	<u>Body Weight (g)</u>	<u>Total Dose (ml)</u>	<u>Ti</u>
1	<u>230</u>	<u>2.0</u>	<u>2²⁵/₇</u>
2	<u>200</u>	<u>1.7</u>	
3	<u>200</u>	<u>1.7</u>	
4	<u>210</u>	<u>1.8</u>	
5	<u>200</u>	<u>1.7</u>	<u>2¹³/₇</u>

Observations:

10-8 8⁰⁰/_A 4/5 dead. Very depressed
1³⁰/_P 5/5 dead



T-1633-3

ACUTE ORAL SHEET



Date 12-3-70

Material Orymet DD CONFIDENTIAL

Batch # _____

Dose ~~5,000~~ ⁴⁶⁴⁰ mg/kg

Concentration 250 mg/ml - 25% (H₂O)

Factor ~~20~~ 18.5

<u>Rat No.</u>	<u>Body Weight (g)</u>	<u>Total Dose (ml)</u>	<u>Ti</u>
1	280	5.2	39
2	235	4.3	
3	230	4.3	
4	240	4.4	
5	305	5.6	39

Observations:

12-4-80% - 5/5 DEAD - LACRIMATION - BLOODY ORAL
WASAL DISCHARGE - CHEMOSIS

→ 4,640 mg/kg 1633-4

ACUTE ORAL SHEET

Date 12-14-70

CONFIDENTIAL

Material Morone

Batch # _____

Dose 2150 mg/kg

Concentration 250 mg/ml - 25% (H₂O)

Factor 8.6

<u>Rat No.</u>	<u>Body Weight (g)</u>	<u>Total Dose (ml)</u>	<u>Ti</u>
1	170	1.5	24
2	180	1.5	4
3	140	1.2	
4	140	1.2	
5	160	1.4	29

Observations:

12-15 - 0/5 - Normal / Depressed / 4 Normal
 9³⁰/₂ 1/5 ? - (NSD)
 0/5

12-29 - 0/5 DEAD + N S.A.S

T-1633-4

ACUTE ORAL SHEET



Date 12-3-70

CONFIDENTIAL

Material MORE

Batch # _____

Dose ~~57000~~ ⁴⁶⁴⁰ mg/kg

Concentration 250 mg/ml - 25% (H₂O)

Factor ~~18.5~~ 18.5

<u>Rat No.</u>	<u>Body Weight (g)</u>	<u>Total Dose (ml)</u>	<u>Time</u>
1	<u>280</u>	<u>5.2</u>	<u>10:15</u>
2	<u>195</u>	<u>3.6</u>	<u>10:15</u>
3	<u>255</u>	<u>4.7</u>	
4	<u>295</u>	<u>5.5</u>	
5	<u>190</u>	<u>3.5</u>	<u>3:15</u>

Observations:

12-4-80A - 1/5 DEAD - (WITHIN 1 HOUR)

NECROPSY = STOMACH HEMOD FLUID FILLED

LUNGS ERYTHEMIC - GT - T.F.

12-22 = JAL + N -

2

Use Dilution

1633-4

ACUTE ORAL SHEET

Date 12-8-70

CONFIDENTIAL

Material Merc Batch # _____

Dose 460 mg/Kg

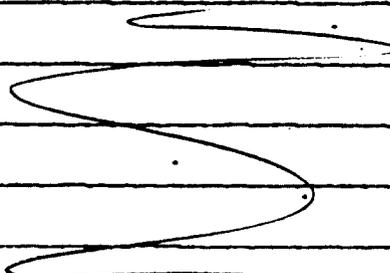
Concentration 100 mg/Kg 3.0% (H₂O)

Factor 4.64

<u>Rat No.</u>	<u>Body Weight (g)</u>	<u>Total Dose (ml)</u>	<u>Time</u>
1	<u>215</u>	<u>1.0</u>	<u>12</u>
2	<u>220</u>	<u>1.0</u>	
3	<u>215</u>	<u>1.0</u>	
4	<u>240</u>	<u>1.2</u>	
5	<u>220</u>	<u>1.0</u>	<u>1</u>

Observations:

12-22-0/S SAC + a



T-1633-5

Use Dilution

ACUTE ORAL SHEET

Date 12-8-70

Material Conodet **CONFIDENTIAL** Batch # _____

Dose 4640 mg/kg

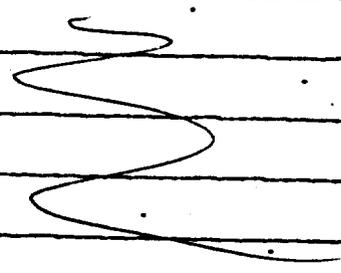
Concentration 1000 mg/ml 1.2 % (H₂O)

Factor 4.64

<u>Rat No.</u>	<u>Body Weight (g)</u>	<u>Total Dose (ml)</u>	<u>Ti</u>
1	160	0.74	<u>13</u>
2	210	0.98	
3	205	0.95	
4	225	1.1	
5	190	0.93	<u>13</u>

Observations:

12-22 - 0/5 SAC + N



794 mg/kg
(584-1080) T-1633-5

ACUTE ORAL SHEET

Date 12-9-70

CONFIDENTIAL

Material Excorodet

Batch # _____

Dose 464 mg/kg

Concentration 250 mg/ml - 25% (H₂O)

Factor 1.8

<u>Rat No.</u>	<u>Body Weight (g)</u>	<u>Total Dose (ml)</u>	<u>Ti</u>
1	270	0.49	30
2	235	0.42	30
3	260	0.47	
4	236	0.41	
5	220	0.40	34

Observations:

12-10 8:00 AM @ 15 dead. All appear normal

12-22 - 0/5 " SAC + a

12-29 - 0/5 "

1633-5

ACUTE ORAL SHEET

Date 12-14-70

Material Eronodet

CONFIDENTIAL

Batch # _____

Dose 1000 mg/kg

Concentration 250 mg/ml

25% (H₂O)

Factor 4

<u>Rat No.</u>	<u>Body Weight (g)</u>	<u>Total Dose (ml)</u>	<u>Ti</u>
1	<u>175</u>	<u>0.70</u>	<u>25</u>
2	<u>195</u>	<u>0.78</u>	<u>1</u>
3	<u>185</u>	<u>0.74</u>	
4	<u>200</u>	<u>0.80</u>	
5	<u>192</u>	<u>0.77</u>	<u>20</u>

Observations:

12-15-0/5 DEAD

100% 1/5 " - ACUTE DEPRESSION

12-16-3/5 " -

12-21-4/5 " -

12-29 4/5 " - SAC + - SL NEC GT

T-1633-5

Stauffer Chemical Company
Western Research Center
Toxicology Section

ACUTE ORAL SHEET

Date 12-7-70

Material Ecconet CONFIDENTIAL Batch # _____

Dose 2150 mg/kg

Concentration 250 mg/ml - 25% (H₂O)

Factor 816

<u>Rat No.</u>	<u>Body Weight (g)</u>	<u>Total Dose (ml)</u>	<u>Ti</u>
1	<u>235</u>	<u>2.0</u>	<u>20</u>
2	<u>240</u>	<u>2.1</u>	
3	<u>220</u>	<u>1.9</u>	
4	<u>230</u>	<u>2.0</u>	
5	<u>250</u>	<u>2.1</u>	<u>21</u>

Observations:

12-8 8⁰⁰ 9/5 dead. All very depressed.

1³⁰ P - 1/5 dead - " " "

12-9 - 8⁰⁰ - 5/5 dead

T-1633-5

Stauffer Chemical Company
Western Research Center
Toxicology Section

ACUTE ORAL SHEET *ST*

Date 12-3-70

Material Econodet

CONFIDENTIAL

Batch # _____

Dose 4,640 mg/kg

Concentration 250 mg/ml

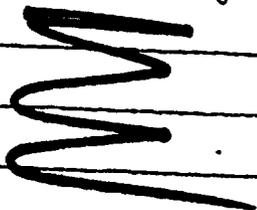
25% (H₂O)

Factor 18.5

<u>Rat No.</u>	<u>Body Weight (g)</u>	<u>Total Dose (ml)</u>	<u>Tic</u>
1	<u>260</u>	<u>4.8</u>	<u>37</u>
2	<u>215</u>	<u>4.0</u>	
3	<u>230</u>	<u>4.3</u>	
4	<u>215</u>	<u>4.0</u>	
5	<u>230</u>	<u>4.3</u>	<u>37</u>

Observations:

12-4-8⁰⁰A - 4/5 DEAD - bloody NASAL & ORAL - CHEMOSIS
12-7-8⁰⁰A - 5/5 Dead - at least 24 hours



CONFIDENTIAL

DERMAL TOXICITY

Rabbit

Operator J.S. Ad. & Starting Date 12-1-70 T No. 1633-1

Compound Chlorinated Cleaner

Concentration As rec'd Dosage 0.5 gm

Solvent None PH _____

Experimental Design 0.5 gm applied to intact & abraded skin for 24 hrs exposure with rubber cover.

Rab. No.	Body No.	Time Dosed	Expos. Time Hrs.	ERYTHEMA	RABBIT NO.						
					48	58	68	229	239	249	
401	2500	2:50 P	24	Intact	0	0	0	4	4	4	2
502	2200	2:53 P	72	Intact	0	0	0	4	4	4	2
601	2300	2:53 P	24	Abraded	4	4	4	4	4	4	4
229	2100	3:00 P	72	Abraded	4	4	4	4	4	4	4
239	2300	3:07 P			SUBTOTAL						16
549	1900	3:04 P		EDEMA							
	Term		24	Intact	0	0	2	2	2	2	1
	Wt. Kg.		72	Intact	0	0	0	2	2	2	1
			24	Abraded	2	2	2	2	2	2	2
			72	Abraded	2	2	2	2	2	2	2
					SUBTOTAL						6
					TOTAL SCORE						18
					(TOTAL /4) PRIM. IRRIT. INDEX						4.6

(I)

CONFIDENTIAL

DERMAL TOXICITY Rabbit

Operator J.S. G.A. Co Starting Date 12-1-70 T No. 1633-2

Compound Dynath 10

Concentration As rec'd Dosage 0.5 gm

Solvent None PH _____

Experimental Design 0.5 gm applied to intact & abraded skin for 24 hrs exposure with rubber cover

Rab. No.	Body Wt. Kg.	Time Dosed	Expos. Time Hrs.	ERYTHEMA	RABBIT NO.						Mea
					78	88	98	258	268	278	
78	2300	3 ¹⁵	24	Intact	4	4	4	4	4	4	4
88	2400	3 ¹⁵	72	Intact	4	4	4	4	4	4	4
98	2300	3 ¹⁵	24	Abraded	4	4	4	4	4	4	4
258	2400	3 ¹⁵	72	Abraded	4	4	4	4	4	4	4
268	1900	3 ¹⁵									
278	2600	3 ¹⁵									
				EDEMA							
	Tern		24	Intact	4	4	4	4	4	4	4
	Wt. Kg.		72	Intact	4	4	4	4	4	4	4
			24	Abraded	4	4	4	4	4	4	4
			72	Abraded	4	4	4	4	4	4	4
SUBTOTAL											16
SUBTOTAL											16
TOTAL SCORE											32
(TOTAL /4) PRIM. IRIT. INDEX											8

CORROSIVE.

Compound very corrosive. ate through epidermis & quit

5 (12-2) Sacrificed
27 (12-2) " "

Use Dilution

CONFIDENTIAL

DERMAL TOXICITY Rabbit

Operator DS, GA, CB. Starting Date 12-15-70 T No. 1633-2

Compound Ornithyl LD

Concentration ~~2.2%~~ 1.2% Dosage 0.5cc

Solvent H₂O PH _____

Experimental Design 0.5cc applied to intact & abraded skin for 24 hrs exposure with rubber covers.

RABBIT NO.

Rab. No.	Body Wt. Kg.	Time Dosed	Expos. Time Hrs.	ERYTHEMA	4	5	6	22	23	24	Mean
					Score	Score	Score	Score	Score	Score	
4	2140	2 ³⁰ / ₀	24	Intact	0	0	1	1	0	0	0.3
5	2160	2 ³⁴ / ₀	72	Intact	0	0	0	0	0	0	0.0
6	1950	2 ³⁸ / ₀	24	Abraded	4	4	4	4	4	4	4.0
23	1900	2 ³² / ₀	72	Abraded	4	3	2	3	2	3	2.0
23	2100	2 ³⁵ / ₀			SUBTOTAL						7.1
		2 ⁴² / ₀		EDEMA							
	Term		24	Intact	0	1	0	0	0	0	0.1
	Wt. Kg.		72	Intact	0	0	0	0	0	0	0.0
			24	Abraded	2	2	2	2	2	2	2.0
			72	Abraded	0	2	1	2	1	0	1.0
					SUBTOTAL						3.1
					TOTAL SCORE						10.3
					(TOTAL /4) PRIM. IRIT. INDEX						2.58
					-1140 to MOD.						

CONFIDENTIAL

DERMAL TOXICITY Rabbit

Operator J. M. C. Starting Date 12-1-70 T No. 1633-3

Compound Drumet D.D.

Concentration As rec'd Dosage 0.5 gm

Solvent None PH _____

Experimental Design 0.5 gm applied to intact + abraded skin for 24 hrs exposure with rubber cover

Rab. No.	Body Wt. Kg.	Time Dosed	Expos. Time Hrs.	Erythema	RABBIT NO.						Hrs
					108	118	128	279	299	309	
10 ♀	1900	3 ³⁵	24	Intact	4	4	4	4	4	4	4
11 ♀	2200	3 ³⁹	72	Intact	4	4	4	4	4	4	4
12 ♀	2200	3 ⁴³	24	Abraded	4	4	4	4	4	4	4
28 ♀	2000	3 ⁴⁵	72	Abraded	4	4	4	4	4	4	4
29 ♀	2250	3 ⁴²									
30 ♀	2400	3 ⁵¹									
	Term		24	EDEMA Intact	4	4	4	4	4	4	4
	Wt. Kg.		72	Intact	4	4	4	4	4	4	4
			24	Abraded	4	4	4	4	4	4	4
			72	Abraded	4	4	4	4	4	4	4
SUBTOTAL											16
SUBTOTAL											16
TOTAL SCORE											32
(TOTAL /4) PRIM. IRIT. INDEX											8
CORROSIVE											

Use Dilution

CONFIDENTIAL

DERMAL TOXICITY

Rabbit

Operator DS, AM, CB Starting Date 12-15-70 T No. 1633-3

Compound Drymet DD

Concentration 1.2% Dosage 0.5cc

Solvent H₂O PH

Experimental Design 0.5cc applied to intact + abraded skin for 24 hrs exposed with rubber cover.

Rab. No.	Body Wt. Kg.	Time Dosed	Expos. Time Hrs.	ERYTHEMA	RABBIT NO.						Max
					7	8	7	25	25	27	
7 [#]	1920	2 ⁵⁷ / ₁₀	24	Intact	0	0	2	0	0	0	0.1
8 [#]	2000	2 ⁵⁰ / ₁₀	72	Intact	0	0	0	0	0	0	0.0
9 [#]	2000	2 ⁵³ / ₁₀	24	Abraded	4	3	4	4	3	4	3.6
25 [#]	1900	2 ⁵⁸ / ₁₀	72	Abraded	3	2	2	2	1	3	2.1
26 [#]	2140	3 ⁰⁰ / ₁₀			SUBTOTAL						6.0
27 [#]	2420	3 ⁰² / ₁₀		EDEMA							
	Term		24	Intact	0	0	0	0	0	0	0.0
	Wt. Kg.		72	Intact	0	0	0	0	0	0	0.0
			24	Abraded	2	2	2	2	2	2	2
			72	Abraded	1	0	0	1	0	0	0.1
					SUBTOTAL						2.3
					TOTAL SCORE						8.3
					(TOTAL /4) PRIM. IRIT. INDEX						2.0
					MILD/MOD						

Use Dilution

CONFIDENTIAL

DERMAL TOXICITY Rabbit

Operator J.S. P.H., C.B. Starting Date 12-15-70 T No. 1633-4

Compound more

Concentration 3.0% Dosage 0.5cc

Solvent H₂O PH _____

Experimental Design 0.5cc applied to intact & abraded skin for 24 hrs exposure with rubber cover.

Rab. No.	Body Wt. Kg.	Time Dosed	Expos. Time Hrs.	ERYTHEMA	RABBIT NO.						Mean
					10	11	12	28	27	30	
10 ^a	1980	3 ¹⁸ / _P	24	Intact	0	0	0	0	0	0	0.0
11 ^a	1690	3 ¹¹ / ₂	72	Intact	0	0	0	0	0	0	0.0
15 ^a	1950	3 ¹³ / _F	24	Abraded	2	2	2	2	1	2	1.8
28 ^a	2000	3 ¹⁸ / _P	72	Abraded	0	0	0	0	0	0	0.0
29 ^a	2100	3 ²¹ / ₂			SUBTOTAL						1.8
30 ^a	1760	3 ²⁴ / _P	24	EDEMA							
				Intact	0	0	0	0	0	0	0.0
	Term		72	Intact	0	0	0	0	0	0	0.0
	Wt. Kg.		24	Abraded	1	1	1	1	0	1	0.8
			72	Abraded	0	0	0	0	0	0	0.0
					SUBTOTAL						0.8
					TOTAL SCORE						2.6
					(TOTAL /4) PRIM. IRIT. INDEX						0.6
					<u>negligible result.</u>						

DERMAL TOXICITY Rabbit

Operator J. A. B. Starting Date 12-1-70 T No. 16335

Compound E. corrodent

Concentration As rec'd Dosage 0.5 gm.

Solvent None PH _____

Experimental Design 0.5 gm applied to intact & abraded

skin for 24 hrs exposure with rubber cover.

Rab. No.	Body Wt. Kg.	Time Dosed	Expos. Time Hrs.	ERYTHEMA	RABBIT NO.						Mean
					16♂	17♂	18♂	34♀	35♀	36♀	
16♂	2000	4 ¹⁰	24	Intact	4	4	4	4	4	4	4
17♂	2500	4 ¹²	72	Intact	4	4	4	4	4	4	4
18♂	2300	4 ¹² _P	24	Abraded	4	4	4	4	4	4	4
34♀	2000	4 ²⁰ _P	72	Abraded	4	4	4	4	4	4	4
35♀	2300	4 ²² _P									
36♀	2000	4 ²⁵									
				EDEMA							
	Term		24	Intact	2	2	2	2	2	2	2
	Wt. Kg.		72	Intact	4	4	4	4	4	4	4
			24	Abraded	4	4	4	4	4	4	4
			72	Abraded	4	4	4	4	4	4	4
SUBTOTAL											16
SUBTOTAL											14
TOTAL SCORE											30
(TOTAL /4) PRIM. IRIT. INDEX											7.5
CORROSIVE											

1:50 Dilution

CONFIDENTIAL

DERMAL TOXICITY Rabbit

Operator DS, GA, CB Starting Date 12-15-70 T No. 1633-5

Compound Enonadet

Concentration 1.2% Dosage 0.5cc

Solvent H₂O PH

Experimental Design 0.5cc applied to intact & abraded skin
for 24 hrs exposure with rubber cover

Rab. No.	Body Wt. Kg.	Time Dosage	Expos. Time Hrs.	ERYTHEMA	RABBIT NO.						Mean
					13	14	15	31	32	33	
13 th	2050	3 ²⁶ / ₁₀	24	Intact	0	0	0	0	0	0	0.0
14 th	1920	3 ³⁰ / ₁₀	72	Intact	0	0	0	0	0	0	0.0
15 th	2330	3 ³³ / ₁₀	24	Abraded	2	1	2	1	1	2	1.5
31 st	2100	3 ³⁶ / ₁₀	72	Abraded	0	0	0	0	0	0	0.0
32 nd	1900	3 ⁴⁰ / ₁₀									
33 rd	2200	3 ⁴² / ₁₀									
	Term		24	Intact	0	0	0	0	0	0	0.0
	Wt. Kg.		72	Intact	0	0	0	0	0	0	0.0
			24	Abraded	1	0	1	0	0	1	0.0
			72	Abraded	0	0	0	0	0	0	0.0
SUBTOTAL											1.5
SUBTOTAL											0.5
TOTAL SCORE											2.0
(TOTAL /4) PRIM. IRIT. INDEX											0.5
<u>Not significant mild</u>											

EYE TOXICITY Rabbit

CONFIDENTIAL
T No. T-1633-1

Operator J.S. Ad. Ck. Starting Date 12-1-70

Rabbit No. _____

Compound Chlorinated Cleasur

Concentration As rec'd

Dosage 10 mg

Solvent None

PH _____

Experimental Design 10mg instilled in left eye

Date	Body Wt. Kg	Time Dosed	Time Obs. Hr.	Cornea			Iris		Conjunctivae				Tot. Score
				Opac	Area	Score	Irit	Score	Ery	Ed	Dis	Sc	
12/1		2 ⁵⁰ P											
12/2			2 ⁵⁰ P	0	0	0	0	0	1	0	1	4	4
12/3			3 ³⁰ P	0	0	0	0	0	1	0	1	4	4
12/4			8 ³⁰ P	0	0	0	0	0	1	0	1	4	4
12/1		2 ⁵⁰ P											
12/2			2 ⁵⁰ P	0	0	0	0	0	1	0	1	4	4
12/3			3 ³⁰ P	0	0	0	0	0	1	0	1	4	4
12/4			8 ³⁰ P	0	0	0	0	0	1	0	1	4	4
12/1		2 ⁵⁰ P											
12/2			2 ⁵⁰ P	2	4	40	1	5	2	0	2	8	53
12/3			3 ³⁰ P	Obscured									20
12/4			8 ³⁰ P	0	0	0	0	0	1	0	2	6	6

~~REMISSABLE~~

Use Dilution

CONFIDENTIAL

EYE TOXICITY Rabbit

T No. 1633-2

Operator JS, PA, CB

Starting Date 12-15-70

Rabbit No. _____

Compound Dipyrryl LD

Concentration 1.2%

Dosage 0.1cc

Solvent H₂O

PH _____

Experimental Design 0.1ml instilled in left eye

Date	Body Wt. Kg	Time Dosed	Time Obs. Hr.	Cornea			Iris		Conjunctivae			Tot. Score	
				Opac	Area	Score	Irit	Score	Ery	Ed	Dis		Sc
12/15	-	2 ³⁰ P	-	PROXIMATION UPON ADMIN - IRRITATING									
12/16			1 ⁰⁰ P	0	0	0	0	0	2	1	3	12	12
12/17			8 ³⁰ A	0	0	0	0	0	3	1	3	14	14
12/18			-	0	0	0	0	0	2	1	0	6	6
<hr/>													
12/15	-	2 ³⁰ P	-										
12/16			1 ⁰⁰ P	0	0	0	0	0	0	0	0	0	0
12/17			8 ³⁰ A	0	0	0	0	0	0	0	0	0	0
12/18												0	
<hr/>													
12/15	-	2 ³⁰ P	-										
12/16			1 ⁰⁰ P	0	0	0	0	0	2	1	3	12	12
12/17			8 ³⁰ A	0	0	0	0	0	3	1	3	14	14
12/18									2	1	0	6	6
				primary / reversible									

EYE TOXICITY Rabbit

T No. 1633-2

Operator J.S. P.A. G.

Starting Date 12-1-70

Rabbit No. _____

Compound Deoxy LD

Concentration As rec'd

Dosage 10mg

Solvent None

PH _____

Experimental Design 10mg instilled in left eye

E STRUCTURE DESTROYED

Date	Body Wt. Kg	Time Dosed	Time Obs. Hr.	Cornea			Iris		Conjunctivae				Tot. Score	
				Opac.	Area	Score	Irit.	Score	Ery.	Ed.	Dis.	Sc.		
12/1		3 ¹⁵ P												
12/2			3 ¹⁵ P	Obscured			-----		-----				20	
12/3			3 ³⁰ P	Obscured (corrosive)			-----		-----				20	
12/4			8 ³⁰ A	"	"	"	-----		-----				20	
				CORROSIVE									110	
				C										
12/1		3 ¹⁵ P												
12/2			3 ¹⁵ P	Obscured			-----		-----				20	
				CORROSIVE									110	
12/1		3 ¹⁵ P												
12/2			3 ¹⁵ P	Obscured			-----		-----				20	
12/3			3 ³⁰ P	Obscured (corrosive)			-----		-----				20	
12/4			8 ³⁰ A	"	"	"	-----		-----				20	
				CORROSIVE									110	

Use Dilution

CONFIDENTIAL

EYE TOXICITY Rabbit

T No. 1633-3

Operator JS, PA, CB

Starting Date 12-15-70

Rabbit No. _____

Compound Drymet DD

Concentration 1.2%

Dosage 0.1cc

Solvent H₂O

PH _____

Experimental Design 0.1 ml instilled in left eye

Date	Body Wt. Kg	Time Dosed	Time Obs. Hr.	Cornea			Iris		Conjunctivae				Tot. Score	
				Opac.	Area	Score	Irit.	Score	Ery.	Ed.	Dis.	Sc.		
12/15	-	2 ⁴⁰ / ₅												
12/16			1 ⁰⁰ / ₂	0										0
12/17			8 ³⁰ / ₁₁	0										0
12/18			-	0										0
12/15	-	2 ⁵⁰ / ₅												
12/16			1 ⁰⁰ / ₂	0										0
12/17			8 ³⁰ / ₁₁	0										0
12/18			-	0										0
12/15	-	2 ⁵⁰ / ₅												
12/16			1 ⁰⁰ / ₂	0										0
12/17			8 ³⁰ / ₁₁	0										0
12/18			-	0										0
				NON-IRRITATING										

EYE TOXICITY Rabbit

T No. 1633-4

Operator AS, GAA, CR

Starting Date 12-1-70

Rabbit No. _____

Compound None

Concentration As rec'd

Dosage 0.1cc

Solvent None

PH _____

Experimental Design 0.1cc instilled in left eye

Date	Body Wt. Kg	Time Dosed	Time Obs. Hr.	Cornea			Iris		Conjunctivae				Tot. Score
				Opac.	Area	Score	Irit.	Score	Ery.	Ed.	Dis.	Sc.	
12/1		4 ⁰⁰ P											
12/2			4 ⁰⁰ P	Obscured			-----						20
12/3			3 ⁰⁰ P	Obscured			-----						20
12/4			8 ³⁰ A	"	"		-----						20
12/1		4 ⁰⁰ P											
12/2			4 ⁰⁰ P	Obscured			-----						20
12/3			3 ⁰⁰ P	Obscured			-----						20
12/4			8 ³⁰ A	"	"		-----						20
12/1		4 ⁰⁰ P											
12/2			4 ⁰⁰ P	C	C	0	1	5	2	3	3	16	16
12/3			3 ⁰⁰ P	C	C	0	0	0	2	1	3	12	12
12/4			8 ³⁰ A	C	C	C	C	0	2	1	2	10	10

Use Dilution

CONFIDENTIAL

EYE TOXICITY Rabbit

T No. 1633-4

Operator J.S., A.A., C.B.

Starting Date 12-15-70

Rabbit No. _____

Compound None

Concentration 3.0%

Dosage 0.1 ml

Solvent H₂O

PH _____

Experimental Design 0.1cc installed in left eye

Date	Body Wt. Kg	Time Dosed	Time Obs. Hr.	Cornea			Iris		Conjunctivae				Tot. Score	
				Opac.	Area	Score	Irit.	Score	Ery.	Ed.	Dis.	Sc.		
12/15	-	3 ⁰⁸ P	-											
12/16			1 ³⁰ P	0										0
12/17			8 ³⁰ A	0										0
12/18			-	0										0
<hr/>														
12/15	-	3 ¹² P	-											
12/16			1 ³⁰ P	0										0
12/17			8 ³⁰ A	0										0
12/18			-	0										0
<hr/>														
12/15	-	3 ¹⁵ P	-											
12/16			1 ³⁰ P	0										0
12/17			8 ³⁰ A	0										0
12/18			-	0										0
				non-irritating										

EYE TOXICITY Rabbit

T No. 1633-5

Operator S. M. CB

Starting Date 12-1-70

Rabbit No. _____

Compound Enconodet

CONFIDENTIAL

Concentration As rec'd

Dosage 10 mg

Solvent None

PH _____

Experimental Design 10 mg installed in left eye

5
6

3
7

3
8

Date	Body Wt. Kg	Time Dosed	Time Obs. Hr.	Cornea			Iris		Conjunctivae				Tot. Score	
				Opac	Area	Score	Irit	Score	Ery	Ed	Dis	Sc		
12/1		4 ¹⁰ P												
12/2			4 ¹⁰ P	4	4	80	2	10	0	2	4	12	102	
12/3			3 ³⁰ P	4	4	80	2	10	0	2	4	12	102	
12/4			8 ³⁰ A	Obscured									20	
12/1		4 ¹⁰ P												
12/2			4 ¹⁰ P	4	4	80	2	10	0	2	4	12	102	
12/3			3 ³⁰ P	4	4	80	2	10	0	2	4	12	102	
12/4			8 ³⁰ A	4	4	80	2	10	0	2	4	12	102	
12/1		4 ¹⁰ P												
12/2			4 ¹⁰ P	4	4	80	2	10	0	2	4	12	102	
12/3			3 ³⁰ P	4	4	80	2	10	0	2	4	12	102	
12/4			8 ³⁰ A	Obscured									20	

1:50 Dilution

EYE TOXICITY Rabbit T No. 1633-5

Operator AS, MA, CB Starting Date 12-15-70 Rabbit No. _____

Compound Excimerol CONFIDENTIAL

Concentration 1.2% Dosage 0.1 ml

Solvent H₂O PH _____

Experimental Design 0.1cc instilled in left eye

Date	Body Wt. Kg	Time Dosed	Time Obs. Hr.	Cornea			Iris		Conjunctivae				Tot. Score
				Opac.	Area	Score	Irit.	Score	Ery.	Ed.	Dis.	Sc.	
12/15	-	3 ²⁸ P		instant - closure			-	FASICULATIONS					
12/16			1 ⁴⁵ P	0	-----								0
12/17			8 ³⁰ A	0	-----								0
12/18				0	-----								0
12/15	-	3 ³⁰ P		-----			-----		-----				
12/16			1 ⁴⁵ P	0	-----								0
12/17			8 ³⁰ A	0	-----								0
12/18				0	-----								0
12/15	-	3 ³⁵ P		-----			-----		-----				
12/16			1 ⁴⁵ P	0	-----								0
12/17			8 ³⁰ A	0	-----								0
12/18				0	-----								0
				non-irritating									

23

24

25

Triage of 8(e) Submissions

Date sent to triage: 2/5/96

NON-CAP

CAP

Submission number: 12504A

TSCA Inventory:

Y

N

D

Study type (circle appropriate):

Group 1 - Dick Clements (1 copy total)

ECO

AQUATO

Group 2 - Ernie Falke (1 copy total)

~~ATOX~~

SBTOX

SEN

w/NEUR

Group 3 - Elizabeth Margosches (1 copy each)

STOX

CTOX

EPI

RTOX

GTOX

STOX/ONCO

CTOX/ONCO

IMMUNO

CYTO

NEUR

Other (FATE, EXPO, MET, etc.): _____

Notes:

THIS IS THE ORIGINAL 8(e) SUBMISSION; PLEASE REFILE AFTER TRIAGE DATABASE ENTRY

For Contractor Use Only	
entire document: <u>0</u> 1 2 pages <u>1,2</u>	pages <u>1,2, tabs</u>
Notes: <u>2-sided.</u>	
Contractor reviewer: <u>LPS</u>	Date: <u>5/11/95</u>

CECATS/TRIAGE TRACKING DBASE ENTRY FORM

CECATS DATA:

Submission # BEHQ: 1092-12504 SEQ. A

TYPE: INT SUPP FLWP

SUBMITTER NAME: Rhone-Paulenc Inc.

INFORMATION REQUESTED: FLWP DATE: _____

- 0501 NO INFO REQUESTED
- 0502 INFO REQUESTED (TECH)
- 0503 INFO REQUESTED (VOL. ACTIONS)
- 0504 INFO REQUESTED (REPORTING RATIONALE)

DISPOSITION:

- REFER TO CHEMICAL SCREENING
- CAP NOTICE

VOLUNTARY ACTIONS:

- 0401 (X) ACTION REPORTED
- 0402 STUDY'S PLANNED/IN PROGRESS
- 0403 NOTIFICATION IN WORKING STATUS
- 0404 LABELS/MSDS (CHANGE)
- 0405 PROCESS/PLANNING (CHANGE)
- 0406 APP. USE DISCONTINUED
- 0407 PRODUCTION DISCONTINUED
- 0408 CONFIDENTIAL

SUB. DATE: 10/23/92 OTS DATE: 10/28/92 CSRAD DATE: 03/15/95

CHEMICAL NAME:

Dryorth LD

Drymet DD

MORE

CASE

Unknown

6834-92-0

Unknown

Unknown

Chlorinated Cleaner → unknown

ECONODET
INFORMATION TYPE:

P.F.C.

INFORMATION TYPE:

P.F.C.

INFORMATION TYPE:

P.F.C.

0201	ONCO (HUMAN)	01 02 04
0202	ONCO (ANIMAL)	01 02 04
0203	CELL TRANS (IN VITRO)	01 02 04
0204	MUTA (IN VITRO)	01 02 04
0205	MUTA (IN VIVO)	01 02 04
0206	REPRO/TERATO (HUMAN)	01 02 04
0207	REPRO/TERATO (ANIMAL)	01 02 04
0208	NEURO (HUMAN)	01 02 04
0209	NEURO (ANIMAL)	01 02 04
0210	ACUTE TOX. (HUMAN)	01 02 04
0211	CHR. TOX. (HUMAN)	01 02 04
0212	ACUTE TOX. (ANIMAL)	01 02 04
0213	SUB ACUTE TOX (ANIMAL)	01 02 04
0214	SUB CHRONIC TOX (ANIMAL)	01 02 04
0215	CHRONIC TOX (ANIMAL)	01 02 04

0216	EPICLIN	01 02 04
0217	HUMAN EXPOS (PROD CONTAM)	01 02 04
0218	HUMAN EXPOS (ACCIDENTAL)	01 02 04
0219	HUMAN EXPOS (MONITORING)	01 02 04
0220	ECOTOXIC TOX	01 02 04
0221	ENV. OCCURRENCE/FATE	01 02 04
0222	EMER INCI OF ENV CONTAM	01 02 04
0223	RESPONSE REQUEST DELAY	01 02 04
0224	PROD/COMP/ID	01 02 04
0225	REPORTING RATIONALE	01 02 04
0226	CONFIDENTIAL	01 02 04
0227	ALLERG (HUMAN)	01 02 04
0228	ALLERG (ANIMAL)	01 02 04
0229	METAB/PHARMACO (ANIMAL)	01 02 04
0230	METAB/PHARMACO (HUMAN)	01 02 04

0241	IMMUNO (ANIMAL)	01 02 04
0242	IMMUNO (HUMAN)	01 02 04
0243	CHEMPHYS PROP	01 02 04
0244	CLASTO (IN VITRO)	01 02 04
0245	CLASTO (ANIMAL)	01 02 04
0246	CLASTO (HUMAN)	01 02 04
0247	DNA DAM/REPAIR	01 02 04
0248	PRODUCE/PROC	01 02 04
0251	MSDS	01 02 04
0259	OTHER	01 02 04

TRIAGE DATA: NON-CBI INVENTORY

YES

CAS SR

NO

IN PROGRESS

ONGOING REVIEW

YES (DROP/REFER)

NO (CONTINUE)

REFER

SPECIES

Rat
ROT

TOXICOLOGICAL CONCERN:

LOW

MED

HIGH

See attached sheet

USE:

Industrial cleaner

PRODUCTION:

00000000

#12504A

Dryorth LD

H

Ocular irritation is of high concern based on complete destruction to the eyes of rabbits exposed to concentrated material (25% solution).

H

Dermal irritation is of high concern based on corrosive effects in 6/6 rabbits exposed to concentrated material (25% solution).

M

Ocular irritation is of medium concern based on moderate swelling and discharge for 36 hours in rabbits exposed to maximum use concentration (1.2%).

M

Acute oral toxicity is of medium concern based on a calculated LD50 of 233 mg/kg in rats exposed to 25% solutions in water. Mortality and corresponding doses (mg/kg) were 0/5 (100), 2/5 (215), and 5/5 (464, 1000, 2150, 4640). Depression was observed at ≥ 215 mg/kg; gastrointestinal hemorrhage was observed in the decedents.

L

Acute oral toxicity is of low concern based on no mortality (0/5) in rats exposed to the maximum use concentration (1.2%) of 4640 mg/kg.

L

Dermal irritation is of low concern based on very slight erythema and edema in rabbits exposed to maximum use concentration (1.2%).

Drymet DD

H

Dermal irritation is of high concern based on corrosive effects in 6/6 rabbits exposed to concentrated material (25% solution).

M

Acute oral toxicity is of medium concern based on a calculated LD50 of 369 mg/kg in rats exposed to 25% solutions in water. Mortality and corresponding doses (mg/kg) were 0/5 (100, 215), 4/5 (464), and 5/5 (1000, 2150, 4640). Depression was observed at the higher doses;

gastro-intestinal hemorrhage and perforated stomachs (in decedents) were reported at autopsy.

M

Ocular irritation is of medium concern based on severe irritation (swelling and corneal opacity) for 72 hours in rabbits exposed to concentrated material (25% solution).

L

Dermal irritation is of low concern based on reversible, well-defined erythema in 1/6 rabbits exposed to maximum use concentration (1.2%).

L

Acute oral toxicity is of low concern based on no mortality (0/5) in rats exposed to the maximum use concentration (1.2%) of 4640 mg/kg.

L

Ocular irritation is of low concern based on no irritation in rabbits exposed to maximum use concentration (1.2%).

MORE

M

Dermal irritation is of medium concern based on severe erythema and slight edema in 6/6 rabbits exposed to concentrated material (25% solution).

M

Ocular irritation is of medium concern based on severe irritation (swelling for 72 hours, corneal opacity), which was reversed within 5 days, in rabbits exposed to concentrated material (25%).

L

Acute oral toxicity is of low concern based on the following mortality and corresponding doses (mg/kg) in rats: 0/5 (2150); and 1/5 (4640). Slight depression was observed at both doses; gastrointestinal hemorrhage (in decedents), and hemorrhagic stomach and erythemic lungs (4640) were reported at autopsy. At a maximum use concentration (3.0%) there were 0/5 deaths.

L

Dermal irritation is of low concern based on no irritation in 6/6 rabbits exposed to maximum use concentration (3.0%).

L

Ocular irritation is of low concern based on no irritation in rabbits exposed to maximum use concentration (3.0%).

Econodet

H

Dermal irritation is of high concern based on corrosive effects in 6/6 rabbits exposed to concentrated material (25% solution).

H

Ocular irritation is of high concern based on corrosive effects, including partial destruction to the eyes of rabbits exposed to concentrated material (25% solution).

L

Acute oral toxicity is of low concern based on a calculated LD50 of 794 mg/kg in rats exposed to 25% solutions in water. Mortality and corresponding doses (mg/kg) were 0/5 (215, 464), 4/5 (1000), and 5/5 (2150, 4640). Severe depression was observed at the higher doses. There were 0/5 deaths when exposed to 4640 mg/kg as a 1.2% solution.

L

Dermal irritation is of low concern based on no irritation in 6/6 rabbits exposed to maximum use concentration (1.2%).

L

Ocular irritation is of low concern based on no irritation in rabbits exposed to maximum use concentration (1.2%).

Chlorinated Cleaner

H

Dermal irritation is of high concern based on corrosive effects in 3/6 rabbits exposed to concentrated material (25% solution).

M

Ocular irritation is of medium concern based on moderate corneal opacity, slight to moderate erythema and discharge in rabbits exposed to concentrated material (25% solution).

L

Ocular irritation is of low concern based on no irritation in rabbits exposed to use dilution (0.8%).

L

Dermal irritation is of low concern based on no irritation in rabbits exposed to use dilution (0.8%).

L

Acute oral toxicity is of low concern based on no mortality (0/5) in rats exposed to 4640 mg/kg in concentrated (25%) and use dilution (0.8%) solutions. No signs of toxicity or pathology were reported.