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UNION CARBIDE CORPORATION

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June 4, 1992

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8EHQ-0692-4942 Init

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Office of Toxic Substances  
U.S. Environmental Protection Agency  
401 M Street, SW  
Washington, DC 20460



88920003588

Attn: Section 8(e) Coordinator (CAP Agreement)

Re: CAP Agreement Identification No. 8ECAP-0110

Dear Sir or Madam:

Union Carbide Corporation ("Union Carbide") herewith submits the following report pursuant to the terms of the TSCA §8(e) Compliance Audit Program and Union Carbide's CAP Agreement dated August 14, 1991 (8ECAP-0110). This report describes acute toxicity studies with aminoethylethanolamine (CASRN 111-41-1).

"Aminoethylethanolamine: Primary Skin Irritancy Studies in the Rabbit", Bushy Run Research Center, Project Report 53-63, May 21, 1990.

A complete summary of this report is attached.

Previous TSCA Section 8(e) or "FYI" Submission(s) related to this substance are:

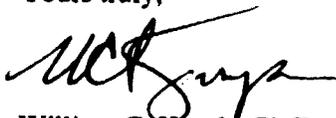
(None)

Previous PMN submissions related to this substance are: (None)

This information is submitted in light of EPA's current guidance. Union Carbide does not necessarily agree that this information reasonably supports the conclusion that the subject chemical presents a substantial risk of injury to health or the environment.

In the attached report the term "CONFIDENTIAL" may appear. This precautionary statement was for internal use at the time of issuance of the report. Confidentiality is hereby waived for purposes of the needs of the Agency in assessing health and safety information. The Agency is advised, however, that the publication rights to the contained information are the property of Union Carbide.

Yours truly,



William C. Kuryla, Ph.D.  
Associate Director  
Product Safety  
(203/794-5230)

WCK/cr

Attachment (3 copies of cover letter, summary, and report)

## SUMMARY

Project Report 53-63

### Aminoethylethanolamine

#### Primary Skin Irritancy Studies in the Rabbit

Sponsor: Industrial Chemicals Division  
Union Carbide Chemicals and Plastics Company Inc.

\* \* \* \* \*

#### SUMMARY

In previous skin irritancy tests at BRRC, aminoethylethanolamine produced necrosis from 4 hours of occluded contact with 0.5 ml. Therefore, further testing, using 2 shorter periods of occluded contact (one hour; 3 minutes), was conducted.

##### Skin Irritation, Rabbit (occluded)

One-hour contact: Minor to moderate erythema on 6 of 6 rabbits, minor to moderate edema on 4, superficial necrosis on 2, full-thickness necrosis on one, ecchymoses on 2, scabs on 4, desquamation on 5 and alopecia on 4 from 0.5 ml; desquamation, alopecia and/or scabs persisted at 14 days.

Three-minute contact: Minor erythema on 2 of 6 rabbits, transient edema on one, ecchymoses on one from 0.5 ml; no irritation present from 2 to 7 days.



## BUSHY RUN RESEARCH CENTER

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**UCC&P BUSINESS CONFIDENTIAL:** Not to be released outside UCC&P without the written consent of the UCC&P-sponsoring Division NS&EA Manager.

Project Report 53-63  
BRRC Number 90-22-11203  
5 Pages  
May 21, 1990

### Aminoethylethanolamine

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Sponsor: Industrial Chemicals Division  
Union Carbide Chemicals and Plastics Company Inc.

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Three-minute contact: Minor erythema on 2 of 6 rabbits, transient edema on one, ecchymoses on one from 0.5 ml; no irritation present from 2 to 7 days.

#### INTERPRETATION

A one-hour application of aminoethylethanolamine to covered rabbit skin resulted in minor to severe irritation, including full-thickness necrosis on one of 6 rabbits. A 3-minute application of 0.5 ml produced minor irritation on 2 of 6 animals tested with no necrosis or ulceration present. Therefore, aminoethylethanolamine was "corrosive" to the skin when tested for one hour but not in the 3-minute test.

SAMPLE

Quantity: Approximately 50 ml  
Date Received: January 16, 1990  
Identification: T/T ENT 4650 PC-13497  
Description: transparent, colorless,  
slightly viscous liquid  
CAS No.: 111-41-1

Submitted By: T. N. Pettigrew  
Division: Industrial Chemicals  
Bahnville, LA  
UCC Charge No.: none  
BRRC Sample No.: 53-25

Any of the remaining sample will be retained for at least 2 years following issuance of this report.

PROCEDURES

A description of the test procedure is included in the attached standard test procedures section (Appendix 1). One set of 6 rabbits was subjected to one-hour contact period and a second set of 6 animals was tested for 3 minutes. The sample was dosed as received for the primary skin irritancy tests.

RESULTS

Results of the one-hour skin irritation test are given in Table 1 and the 3-minute contact results appear in Table 2.

A one-hour application of 0.5 ml of aminoethylethanolamine to occluded rabbit skin resulted in minor to moderate erythema on 6 of 6 rabbits tested. Minor to moderate edema was evident on 4 animals. Within one hour after the end of the contact period, ecchymoses developed on 2 animals. Superficial necrosis was apparent on one animal at one hour and on another at one day. A one day, one rabbit had full-thickness necrosis. There was no erythema or edema present on any animal at 7 days. One animal was found dead at this time. Prior to death, this animal displayed no signs of toxicity and had no skin irritation. Therefore, its death was not considered to be related to the treatment but was believed to be the result of an intestinal disorder frequently observed in this species. Four of 5 surviving animals had scabs at 7 days. Desquamation was apparent on all rabbits from 10 to 14 days. By 14 days, 4 animals developed alopecia. At this time, only desquamation, alopecia and/or scabs were present.

Following a 3-minute contact period with 0.5 ml of sample on covered skin 4 rabbits exhibited no irritation. Minor erythema was observed on 2 rabbits. One of the 2 affected animals had edema (transient) and ecchymoses within one hour. Edema subsided at one day. No erythema or other reaction was present at 2 days. The dose sites remained unaffected through 7 days.



Table 1

Primary Skin Irritation - Rabbit: One-Hour Contact

Material: Aminoethylethanolamine

Sample No.: 53-25 Conditions: 0.5 ml dosed

Date: 02-13-90	02-13-90	02-13-90	02-13-90
Rabbit No.: 90-3920	90-3925	90-3926	90-3955
Sex: Male	Male	Male	Female
Erythema & Eschar Formation			Female
			Female

Time (After Initiation of Contact):	Score		Score		Score		Mean Score
	Score	Effect	Score	Effect	Score	Effect	
2 hours	1		2		0		
1 day	2		2		1		1.0
2 days	2		2		1		1.7
3 days	2		2		1		1.5
7 days	0		0		0		1.3
10 days	0		0		0		0.0
14 days	0		0		0		0.0
Edema Formation							0.0

Time:	Score		Score		Score		Mean Score
	Score	Effect	Score	Effect	Score	Effect	
2 hours	0		2		1		
1 day	1		2		0		0.7
2 days	1		1		0		0.7
3 days	1		1		0		0.5
7 days	0		0		0		0.5
10 days	0		0		0		0.0
14 days	0		0		0		0.0
Other Irritation or Effects							0.0

Time:	Effect		Effect		Effect		Effect
	Effect	Effect	Effect	Effect	Effect	Effect	
2 hours	None		N		EC		EC
1 day	N+		N		None		N
2 days	N+		N		None		N
3 days	N+		N		None		N
7 days	N+, S		N, S		None		N
10 days	D, S		D, S		S		N, S
14 days	D, AL		D, S, AL		S		D, S
Specific Effects/Remarks:	Rabbit 3957 found dead at 7 days (death not considered to be related to the treatment).						

D=desquamation; AL=alopecia; N=superficial necrosis; N+=full-thickness necrosis; EC=ecchymosis; S=scab formation

Material: Aminoethylethanolamine

Sample No.: 53-25 Conditions: 0.5 ml dosed

Date:	02-06-90	02-20-90	02-20-90	02-20-90
Rabbit No.:	90-3021	90-3048	90-3923	90-3934
Sex:	Male	Female	Male	Female

Erythema & Eschar Formation

Time (After Initiation of Contact):	Score	Score	Score	Score	Mean Score
1 hour	1	0	0	0	0.3
1 day	1	0	0	0	0.2
2 days	0	0	0	0	0.0
3 days	0	0	0	0	0.0
7 days	0	0	0	0	0.0

Edema Formation

Time:	Score	Score	Score	Score	Mean Score
1 hour	1	0	0	0	0.2
1 day	0	0	0	0	0.0
2 days	0	0	0	0	0.0
3 days	0	0	0	0	0.0
7 days	0	0	0	0	0.0

Other Irritation or Effects

Time:	Effect	Effect	Effect	Effect
1 hour	EC	None	None	None
1 day	EC	None	None	None
2 days	None	None	None	None
3 days	None	None	None	None
7 days	None	None	None	None

Specific Effects/Remarks: EC-ecchymosis

WPC/11f/1866Z

04-16-90

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