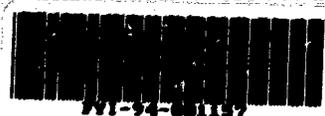
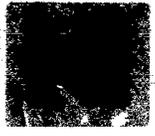


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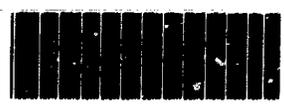


711-94-001157  
INIT 07/26/94

*ILSUC*



March 6, 1984



84940000229

Mr. Louis Borghi  
Staff Scientist  
Dynamac Corporation  
The Dynamac Building  
11140 Rockville Pike  
Rockville, MD 20852

*CONFIDENTIAL*

Dear Mr. Borghi:

The following is in response to your request for information on the chemical CAS No. 56046-62-9: N-[2-[ethyl(3-methyl-4-nitrosophenyl)amino]ethyl]methanesulfonamide (NEMSET).

In a letter to Mr. Lee Clem (2/17/84), you had requested full copies of the unpublished studies used to prepare the toxicity summary enclosed with G. Y. Brokaw's letter (7/13/82). The requested information is enclosed. We hope this information is useful in your evaluation of this chemical.

Questions concerning the NEMSET production process or use information should still be addressed to Mr. Lee Clem at (716)722-4740.

Sincerely,

*RL Raleigh*

Robert L. Raleigh, M.D., Director  
Health and Environment Laboratories  
(716) 722-2879

RLR/PEL:drc  
Enclosures

cc: Mr. L. H. Clem

94 JUL 26 PM 3:31  
RECEIVED  
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HEALTH, SAFETY, AND HUMAN FACTORS LABORATORY  
EASTMAN KODAK COMPANY  
KODAK PARK

ACC. NO. 905399  
LAB. NO. A64-008  
63-553

TOXICITY AND HEALTH HAZARD SUMMARY

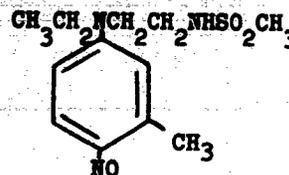
(Does not include physical hazards - flammability, etc.)

CHEMICAL: 4-Nitroso-N-ethyl-N-(beta-methanesulfonamidoethyl)-m-toluidine

SYNONYMS:

PHYSICAL FORM: Solid  
MP or BP in °C:

FORMULA:  $C_{12}H_{19}N_3O_3S$



TOXICITY:

When administered as a 10% solution in 0.5% aqueous guar gum the compound killed rats given oral doses of 400 mg/kg and intraperitoneal doses of 50 mg/kg. Mice were killed by 800 mg/kg orally and 10 mg/kg intraperitoneally. Symptoms included weakness, cyanosis, roughening of the coat, signs of abdominal irritation in intraperitoneal injections, prostration, tremors, and convulsions. The latter signs occurred in mice given intraperitoneal doses of 800 mg/kg and above. Deaths were delayed for as long as three days. The solid compound, in quantities varying from 0.25-1.0 g/kg, was moistened with water and held in occluded contact with the depilated skin of guinea pigs under a gauze pad and a rubber cuff for a period of 24 hours. This application resulted in slight skin irritation but there was no evidence of toxic effects caused by such topical application. In a drop-on type skin sensitization procedure this compound appeared to be a sensitizer of at least low activity.

HAZARDS:

This compound may cause skin sensitization in some individuals.

PRECAUTIONARY HANDLING:

Avoid contact with the skin, eyes and clothes. Do not breathe the dust.

REFERENCE:

1. Unpublished data, Laboratory of Industrial Medicine, Eastman Kodak Company, Rochester, New York.

HEALTH HAZARD: (Kodak Park Safety Std. 7.09)

R- 2  
S- 2

SUMMARIZED BY: Richard L. Sharp, Ph.D.

DATE: January 15, 1975 retyped 11/80

FOR USE ONLY WITHIN EASTMAN KODAK COMPANY

0004

TOXICITY REPORT - E.E.CO. - LABORATORY OF INDUSTRIAL MEDICINE

Compound: 4-Nitroso-N-ethyl-2-N-(5-methyl-hexahydroimidazo[4,5-b]pyridine-2-yl)-ethanamine dihydrochloride

Formula:

Solution	Animals No. and Species	Route	Dose Range mg/kg	Approx. LD <sub>50</sub> mg/kg	Symptoms	Time of Death	St.
Acute Toxicity 10% in 0.5% quart gun.	6 R	IV	400-1,000	400	Severe diarrhea, moderate to very weak, cyanosis, rough coat.	1 1/2 hrs - 1 day	1+
	6 R	IP	25-100	25-50	Moderate to very weak, cyanosis, sides covered in, rough coat, dark eyes.	1 1/2 hrs. - 4 1/2 hrs.	2+
	10 M	PO	200-3200	800	Moderate to very weak, prostration, tarry, brown urines.	10 min. - 5 hrs.	5+
	20 M	IP	10-3200	10	Moderate to very weak, severe squinting tremor & convulsions.	10 min. - 3 days	1+
					Notes: Notebook No.		
<u>Skin Absorption and Irritation</u>			mg/kg	mg/kg	Sl. to mod. edema, yellow staining, minute excres.		+32
Sodium-sulfate-N <sub>2</sub> O		3 GP	Cut	0.25 - 1.0	1.0	Yellow staining - desq. - 1 wk. Sparse hair, sl. desq., staining - 2 wks.	+22 +43

0.P. - Guinea Pig, M - Mouse,  
R - Rat, MD - Rabbit

Route: Moderately toxic orally, highly toxic IP.  
Slight skin irritant - no evidence of absorption.

expO - Orally, IP - Intraperitoneally,  
IM - Intramuscularly, IC - Intracranially

11-25-53

**TOXICITY REPORT - 2. I. (B) - LABORATORY OF INDUSTRIAL MEDICINE**

**2-Methyl-2-(2-sulfonamideethyl)-2-imidazolidinone** - **Dot**

**Formulas**

Solution	Animals* No. and Species	Type of Toxic	Initial Score		Final Score	Remarks
			24 Hrs	48 Hrs		
Skin Penetration -2M in A/D.O.P. Fat Solvent Control Therapy/dramatic Control	5 O.P.	Dry On	1.0	0.6	2.3	Tissue study
	5 O.P.	Dry On	1.0	1.0	0.9	
	5 O.P.	Dry On	2.2	2.2	3.0	

Notebook No. 3

Solution	Animals* No. and Species	Route	Dose Range mg/kg	Approx. LD50 mg/kg	Symptoms	Time of Death	%
Chronic Toxicity							

Notebook No. 3

Type of Exposure	Animals* No. and Species	Dose	Time	Mortality	Symptoms
Inhalation					

Notebook No. 3

O.P. - Guinea Pig, M - Mouse  
R - Rat, B - Rabbit  
Human! Apparently a combination of at least low activity.

090 - Orally, 17 - Intraperitoneally,  
18 - Intramuscularly, 10 - Intravenously

12/28/54

HP 42000



**CERTIFICATE OF AUTHENTICITY**

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