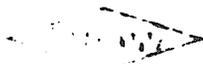


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PRELIMINARY TOXICOLOGY INFORMATION FOR DI-N-PROPYL AMINE WITH COVER LETTER DATED 041086		
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DI-N-PROPYL AMINE (142-84-7)		

868600036



THE DOW CHEMICAL COMPANY

MIDLAND, MICHIGAN 48674

April 10, 1986  
APR 10 1986

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ATC

868600011 thru 42

Document Control Officer  
U.S. Environmental Protection Agency  
TSCA-8D1  
P.O. Box 2060  
Rockville, MD 20852

MAY 3 1986

RE: OPTS-84020A

Dear Sir or Madam:

As required by 40 CFR 716 as amended, effective March 7, 1986, we herewith submit copies of reports which meet the requirements of the referenced rule as Health and Safety Studies.

The reports have been separated into two categories for your convenience. Enclosed are one set each of public file copies and those that contain confidential business information (CBI). The CBI copies are enclosed in the inner envelope along with the Dow confidential information claim.

Each report is marked with an identifying number at the top of the first page of the report, e.g., D1923. Use of this identification number in future correspondence regarding this submission will facilitate handling of questions.

Many of the submitted reports contain information which is not relevant to Health or Safety Studies of listed chemicals, e.g., references to unlisted chemicals, marketing or process data, account numbers, internal document identification codes or distribution lists. Such information has been deleted from all copies submitted.

The index required by 40 CFR 716.4(b) is enclosed. It lists the Dow identification number and title of each report submitted in TSCA order order.

Very truly yours,

R. L. Hagerman  
Research Associate  
Regulatory and Legislative Issues  
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lkr

enclosures

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DOW CHEMICAL U.S.A.

COMPANY SANITIZED

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Rec'd 6-9-86

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K20391

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PREPARED 1974A9 17921

DEPARTMENT OF INDUSTRIAL MEDICINE AND TOXICOLOGY  
PRELIMINARY TOXICOLOGY INFORMATION

This is a preliminary toxicological investigation designed to define industrial handling hazards for Dow implant use only.

D 001032

INTRODUCTION

Material: Di-n-propyl Amine

Date: 4-6-73

Description: The material is a clear liquid submitted by  
*internal source deleted*

Present Use: Unknown

Proposed Use: *proprietary use information deleted*

METHODS

Toxicological Procedure: Skin and eye irritation studies were conducted on New Zealand albino rabbits. Both eyes are observed for conjunctival, corneal and internal responses. One eye is washed within 30 seconds of contact while the other eye is unwashed so that the responses can be compared. Indications of pain from eye contact are also observed. Skin reactions are recorded on open-intact, covered-abraded and covered-intact areas.

Four Sprague-Dawley rats weighing from 298-326 grams were placed in a 56.6 liter gas environment chamber and exposed for 15 minutes to a saturated atmosphere of the volatile components of di-n-propyl amine. The saturated atmosphere was generated by passing air at 1 liter/minute through the bubbler containing the compound, giving an average concentration of 110 mg/l. The exposure was run at room temperature.

The animals were observed periodically during and for 14 days following exposure. Weights were recorded before and periodically after exposure. All animals were necropsied 14 days post exposure.

AN OPERATING UNIT OF THE DOW CHEMICAL COMPANY



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Preliminary Toxicology Information - continued

Material: Di-n-propyl Amine

Date: 4-6-73

The acute oral toxicity of the test material was assessed by administering five dose levels, 0.125, 0.25, 0.50, 1.00, and 2.00 gm/kg body weight by single dose gavage to each of four female Sprague-Dawley rats. The animals were fasted overnight prior to dosing, and after dosing they were allowed to eat and drink ad libitum. The rats were weighed the day following dosing and at weekly intervals for two weeks thereafter.

RESULTS

Eye Irritation: The material produced indications of slight pain when instilled into the eyes of the rabbit. However, the conjunctiva were very severely inflamed and swollen within five minutes. This effect began to subside after 48 hours.

There was marked necrosis over both cornea within five minutes of administration. The necrosis had cleared at the termination of the test (14 days), but vascularization of the right eye had occurred. This is an indication of severe effect.

Severe iritis was observed in both eyes after 24 hours. This response had cleared at the termination of the test.

Skin Irritation: Full thickness burns were produced on all skin areas tested.

Vapor Inhalation: After 10-12 minutes of exposure all animals demonstrated labored breathing to the point of gasping, loss of equilibrium, and forced movements. After 15 minutes of exposure some of the animals became prostrate and the exposure was terminated. All animals survived and the autopsy results were negative for any gross pathology.

Acute Oral Toxicity: The data for the single dose oral LD<sub>50</sub> determination for female rats are summarized as follows:

<u>Dose - gm/kg</u>	<u>% Mortality</u>
2.0	100
1.0	100
0.5	50
0.25	0
0.125	0

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Preliminary Toxicology Information - continued

Material: Di-n-propyl Amine

Date: 4-6-73

The single dose oral LD<sub>50</sub> for female rats is calculated\* as 0.50 gm/kg body weight, 95% confidence interval 0.335-0.746 gm/kg body weight.

RECOMMENDATIONS

Special and particular precautions should be taken to prevent eye and skin contact with this material. Design of equipment and operational procedures should be such that the likelihood of eye contact does not exist.

If eyes or skin are contaminated they should be flushed immediately with copious amounts of flowing tap water for at least 15 minutes. Medical attention should then be obtained without delay.

Serious internal injury may result from ingestion of small amounts of the material; however, little likelihood of injury would result from the amount one might encounter incidental to industrial handling.

This material has an anesthetic affect even after short exposure. All exposures should be avoided. If it becomes necessary to work in the atmosphere laden with this material, fresh air packs should be worn.

Terry G. Pullin  
Terry G. Pullin  
Toxicology Group

Harry N. Edwards  
Harry N. Edwards  
Toxicology Group

R. L. Schwebel, D.V.M.  
R. L. Schwebel, D.V.M.  
Consulting Toxicologist

slf

\* LD<sub>50</sub> calculated according to the method of C. S. Weil, Biometrics, 8, 249-263, (1952)

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