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E. I. du Pont de Nemours and Company
Haskell Laboratory for Toxicology and Industrial Medicine
Elkton Road, Newark, Delaware 19711

HASKELL LABORATORY REPORT NO. 306-81 MR NO. [redacted]

Material Tested	Haskell No.	Other Codes/Synonyms
[redacted]	14,008	[redacted]

Study Initiated/Completed
4/27/81 - 5/15/81

Material Submitted by
[redacted]
Polymer Products Department
ESL 269/306

INHALATION MEDIAN LETHAL CONCENTRATION (LC50)

Procedure: Male albino Crl:CD® rats were housed in pairs in 8" x 8" x 14" stainless steel wire mesh cages. Purina Certified Rodent Chow® #5002 and water were available ad libitum. Rats were weighed and observed for general suitability for 1 week prior to testing.

Groups of 10 rats, weighing between 241 and 298 grams, were placed in wire mesh restrainers and exposed, head-only, for single 4-hour periods to atmospheres containing [redacted] All rats were weighed and observed daily (except weekends) for 14 days post exposure.

Generation: Dust atmospheres of [redacted] were generated by passing air through a single-stage, glass, cyclone generator which contained the test material. An electric motor and steel rod with plastic paddles agitated dust in the generator. Additional houseline air introduced at the top of the generation apparatus carried airborne dust into the exposure chamber.

Analytical: Samples of chamber atmosphere were collected at 30-minute intervals. Calibrated volumes of atmosphere were drawn through preweighed Gelman glass fiber filters (Type AE 25 mm). The atmospheric concentration of test material was determined from weight gain of the filters. Particle size

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(mass median diameter) was determined with a Sierra Cascade Impactor during one exposure.

Results and Discussion: No deaths occurred as a result of exposure to [redacted] as high as 15 mg/L, the highest concentration which could be generated under these test conditions.

Concentration mg/L			Mass Median Diameter (u)	Fractional Mortality (# Deaths/# Exposed)
Mean	S.D.	Range		
9.6	6.7	3.0 - 23	-	0/10
5	3.1	9.0 - 19	1	0/10

On the basis of the single particle size analysis, it was calculated that approximately 18% of the reported concentrations were particles of respirable size. The mass median diameter of that fraction was approximately 1 micron. Consequently, the concentration of inhalable particulates in these atmospheres may be more appropriately expressed as 1.7 and 2.7 mg/L. Thus, since no mortality occurred, the LC50 of [redacted] expressed in terms of respirable particles is greater than 2.7 mg/L.

Observations: Observations could not be made during exposures due to the denseness of the dust atmospheres. Rats at both test levels showed a severe weight loss 24 hours post-exposure followed by weight gain. Observations in the first 72 hours included yellow-stained perineal area, dried red ocular discharge, and brown-stained nose and mouth. Several rats had brown-stained fur throughout the observation period. One rat exposed to 15 mg/L had a cloudy eye beginning on the 10th day post exposure.

Summary: Groups of 10 male Crl:CD® rats were exposed to dust atmospheres of [redacted] for single, 4-hour periods. An LC50 could not be determined since no deaths resulted from exposure to concentrations of 9.6 or 15 mg/L, the latter being the highest concentration which could be generated under these experimental conditions. Since approximately 18% of the concentrations reported were particles of respirable size, the LC50 of this material expressed in terms of respirable particles is greater than 2.7 mg/L.

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* Purity: [redacted]

Composition: [redacted]

Contaminants: [redacted]

Synonym: [redacted]

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RT:jrg:WP:3.5
Date Issued: July 29, 1981
[redacted]
Report No. 306-81

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