

Bayer MaterialScience

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September 19, 2011

Bayer MaterialScience LLC  
100 Bayer Road  
Pittsburgh, PA 15205-9741

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**By Certified Mail**

TSCA Confidential Business Information Center (7407M)  
EPA East – Room 6428 Attn: Section 8(e)  
U. S. Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W.  
Washington, DC 20460

Subject: TSCA § 8(e)  
Test Substance: Hexane, 1,6-diisocyanato-, homopolymer

Dear Sir or Madam:

Bayer MaterialScience LLC (the "*Company*") is submitting Acute Inhalation Toxicity in Rats, in accordance with OECD Guideline 403, of the Test Substance, which the Company imports, processes, and distributes in the United States.

The Company is submitting these data in accordance with our understanding of EPA's interpretation of the requirements of TSCA § 8(e) as expressed in agency guidance. However, the Company has not determined whether these data actually disclose a substantial risk of injury to health or the environment associated with the chemical substance or mixture.

This submission contains TSCA confidential business information ("*CBI*"). Accordingly, the Company is providing both original and redacted versions of this submission to EPA, along with the attached justification of the Company's CBI claims. In keeping with recent guidance from EPA, the Company is not claiming the chemical identity as CBI.



**Company Sanitized**

Please contact me if you have any questions.

Sincerely,

Attachment

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**TEST SUBSTANCE:** *28182-81-2 Hexane, 1,6-diisocyanato-, homopolymer*

**STUDY:** **Acute inhalation toxicity in rats in accordance with OECD Guideline 403**

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A study was performed to assess the acute inhalation toxicity of the Test Substance.

The study was conducted in accordance with the OECD Guideline 403.

Separate groups of rats (5/sex) were exposed for 4 hours to measured aerosol concentrations of 0, 234.9, 283.9, and 314.4 mg/m<sup>3</sup> of the test substance. MMADs were ~1.8 µm and GSDs were ~1.6; the aerosols were respirable to rats. Animals were observed for 2 weeks post exposure. Endpoints included body weights, clinical signs, a battery of reflex measurements, rectal temperature, and gross necropsy.

The observed clinical signs included labored breathing, bradypnea, irregular breathing, atony, reduced motility, high-legged gait, tremor, uncoordinated gait, cyanosis, nasal discharge, decreased body weight, stridor, decreased reflexes, and hypothermia. Regarding reflexes, righting reflex was impaired in 4 males and 2 females on day 1 after exposure to 234.9 mg/m<sup>3</sup>; reflexes were not assessed thereafter. Other signs suggestive of potential neurotoxicity such as tremors and gait abnormalities were transient findings (recovery by day 4 post exposure). Based on the information in this study, it cannot be determined whether these signs are indicative of a specific neurotoxic potential of the test substance. The LC50 was 264 mg/m<sup>3</sup> in males and >314 mg/m<sup>3</sup> in females.