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Bayer MaterialScience

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Bayer MaterialScience LLC
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone:
FAX:

CONTAINS TSCA CONFIDENTIAL BUSINESS INFORMATION

August 16, 2010

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) Submission

Dear Sir:

Bayer MaterialScience LLC (the *"Company")* is submitting Acute Inhalation Toxicity in Rats.

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.

The Company is not claiming the chemical identity as confidential business information (CBI).

Please contact me if you have any questions.

8EHQ-0810-18082A
DCN:88100000407s

Sincerely,

88100000407/S

8EHQ-10-18082

Attachment

CONTAINS NO CBI

Company Sanitized

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COMPOUND: Toluene Diisocyanate (CAS No. 26471-62-5)

STUDY TITLE: Acute Inhalation Toxicity in Rats

The purpose of this study was to evaluate the acute inhalation toxicity of the test substance. The study was performed in accordance with OECD Guideline 403 and US EPA OPPTS 870.1300. Five groups of rats (5/sex) were exposed for 4 hours to aerosolized test substance at concentrations of 0, 42.5, 78.3, 105.4, or 175.5 mg/m^3. Concentrations of the two isomers constituting the test substance were measured analytically. Animals were observed for 28 days post exposure. Endpoints included body weights, clinical signs, reflexes, rectal temperature, necropsy, and histopathology

Mortality occurred in a concentration-related manner at the highest three concentrations (20%, 50%, and 90%, respectively). The LC50 was ~107 mg/m^3 (98 mg/m^3 in males and 122 mg/m^3 in females). Body weight decreased was reported. Relevant treatment-related clinical signs included bradypnea, dyspnea, labored breathing patterns, breathing sounds, ungroomed, piloerection, reduced motility, limp, high-legged gait, cyanosis, emaciation, red discharge around nares and eyes, stridor, abdominal position, and hypothermia. Assessment of reflexes after exposure showed reduced tonus, reduced grip strength, and abnormal righting reflex. Acute inflammation and severe necrosis was seen histologically in the respiratory tract. Early mortality appeared to be related to acute pulmonary edema; delayed mortality near day 10 seemed related to inflammation and obstruction in the respiratory tract.