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November 25, 1991

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8EHQ-1291-1047 FLWP

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TSCA Document Processing Center (TS-790)
Room L-100
Office of Pesticides and Toxic Substances
U.S. Environmental Protection Agency
Attn: TSCA Section 8(e) Coordinator
401 M Street S.W.
Washington, D.C. 20460

Re: Followup Submission to 8EHQ-0890-1047
TSCA Section 8(e) Notification of Substantial Risk
Hexamethoxydisilylethane

Dear Sir:

In accordance with the provisions of Section 8(e) of the Toxic Substances Control Act (TSCA), as interpreted in the Statement of Interpretation and Enforcement Policy (40 FR 11110, March 16, 1978), Dow Corning Corporation is submitting the following information as a followup to our Notification of Substantial Risk of August 10, 1990 (8EHQ-0890-1047).

Chemical Substance:

Hexamethoxydisilylethane
CASRN 18406-41-2

8920000032



001020066F

Manufacturer:

Dow Corning Corporation
2200 West Salzburg Road
Midland, Michigan 48686-0994

Ongoing Study:

AN ACUTE VAPOR INHALATION TOXICITY STUDY OF
DOW CORNING® X1-6145A ADDITIVE IN DOGS

Executive Summary:

DOW CORNING® X1-6145A Additive, chemically described as hexamethoxydisilylethane (CASRN 18406-41-2), previously has been demonstrated to be a respiratory toxicant at very low concentrations (3-10 ppm) in rats. In order to test a second model which is a non-obligatory nasal breather, an acute preliminary inhalation toxicity study was conducted with dogs at ManTechnology, Inc., a consulting laboratory.

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Following exposure of three dogs to 10 ppm of the test material for six hours, the test animals began to exhibit signs of respiratory distress, commencing sneezing, coughing, and sometimes heavy salivation about one hour post-exposure. Following a second six hour exposure to 10 ppm of the test material, increased signs of respiratory distress were observed.

In one animal, slight lacrimation, trembling, and coughing up of a whitish liquid were observed following the initial exposure, which signs increased in intensity during the second exposure: accordingly, this test animal was euthanized four hours into the second exposure.

A second test animal exhibited salivation, coughing, and anxiousness and was sacrificed, as scheduled, immediately after the second exposure.

Opacity in both eyes and non-productive emesis, as well as bloody and thick yellow mucous in the feces were observed with the third test animal. During the sixteen hours following the second exposure, clinical signs progressed to more salivation, coughing, dyspnea, rales, nasal congestion and discharge, and depression, at which point the animal was sacrificed for humane reasons.

Gross necropsy findings on the first test animal included few gross lesions and all were considered to be minimal to mild in severity. Little evidence of laryngeal or tracheal damage was seen. No eye lesions were seen.

Gross necropsy findings on the second test animal included increased signs of respiratory damage, including mucoid material originating in the nasolacrimal ducts and mucoid material in the nares and pharynx. Multiple 1-2 mm diameter brown to deep red foci were found in the middle and diaphragmatic lung lobes.

Gross necropsy findings on the third test animal included signs of yet increased respiratory irritation, included swollen and mottled nasal turbinates, tonsils and larynx, and frothy, clear fluid in the trachea. Multiple 2 mm and larger coalescing dull red foci were observed in the middle lung lobes. The eyes appeared to have centrally located corneal defects consisting of cloudiness and a well-defined ring at about two-thirds of the distance from the center of the cornea to the nimbus.

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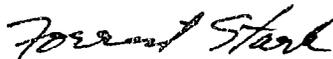
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Actions:

Dow Corning will provide EPA with a copy of the study on completion of the final report and will inform the Agency of any pertinent information that may be developed concerning this chemical substance.

If you require further information concerning this notification of substantial risk, please contact Dr. Rhys G. Daniels, Regulatory Compliance Specialist, Dow Corning Product Safety and Regulatory Compliance Department, at the address provided below or by telephone at 517-496-4222.

Sincerely,



Dr. Forrest O. Stark
U.S. Area Vice-President
Director of Health and Environmental Sciences