

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

August 30, 1993

TO: Hexamethyldisilazane, CAS No. 999-97-3
FROM: Mary Lee Hultin, Toxics Unit
SUBJECT: Revised ITSL for Hexamethyldisilazane

The ITSL for hexamethyldisilazane is being revised due to the submittal of new data for review. Dow Corning has provided summaries of acute toxicity tests to our office, including an acute vapor inhalation study. Therefore, a 4 hour LC50 is available for derivation of an ITSL which will replace the current ITSL of 0.04 µg/m³. The trace value was selected due to a lack of available data. The Dow Corning data from BIO-TEST laboratories is sufficient for screening level derivation.

BIO-TEST data included an acute vapor inhalation toxicity study performed using albino rats. Sprague-Dawley strain rats with an average body weight of 250g were divided into five groups of four rats each (two per sex). Each group was exposed to vapors for four hours and observed for 14 days following exposure. The LC50 calculated by the method of Litchfield and Wilcoxon was 10.3 mg/L.

Using this LC50, the ITSL is derived as follows:

Conversion to mg/m³: 10.3 mg/L x 1000L/m³ = 10,300 mg/m³

ITSL = 10,300 mg/m³/(500x100) = 0.206 mg/m³ x 1000µg/mg

Thus, the ITSL is 206 µg/m³, based on annual averaging time.