

**MICHIGAN DEPARTMENT OF NATURAL RESOURCES**

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**INTEROFFICE COMMUNICATION**

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March 27, 1995

TO: Tetramethyldihydrogendisiloxane File (CAS No. 3277-26-7)  
FROM: Gary Butterfield  
SUBJECT: Screening Level for Tetramethyldihydrogendisiloxane

We had a request to re-review the screening level established for tetramethyldihydrogendisiloxane that was set in January 1994, as trace because no data was available. A February 7, 1995 CAS on-line search still found no published toxicity data upon which a screening level could be based.

Dow Corning provided a copy of an unpublished rat acute inhalation toxicity test conducted with tetramethyldihydrogendisiloxane by IRDC (1994) for Dow Corning. This study found no deaths occurring in 5 male and 5 female rats with a four hour exposure at a concentration of 5.8 mg/L. Based on this information the LC50 can be expected to be higher than 5.8 mg/L (or 5800 mg/m<sup>3</sup>). This information can be utilized as a surrogate LC50 for the purposes of developing a screening level. The screening level can be determined using the LC50 and the ITSL equation from R232(1)(f), as follows.

$$\text{ITSL} = (5800 \text{ mg/m}^3) / (500 \times 100) = 120 \text{ } \mu\text{g/m}^3 \text{ with annual averaging}$$

The ITSL for tetramethyldihydrogendisiloxane is being established at this time as 120  $\mu\text{g/m}^3$  with annual averaging.

**Reference:**

IRDC. 1994. Acute inhalation toxicity evaluation of Dow Corning 3-7010 intermediate in rats. Dow Corning doc id #: 1994-10000-39626. IRDC project # 416-107.