

Michigan Department of Natural Resources

Interoffice Communication

August 6, 1992

To : Hexamethylcyclotrisiloxane File (CAS # 541-05-9)

From : Gary Butterfield

Subject : ITSL for Hexamethylcyclotrisiloxane

A CAS-on—line search through July 1992 was not able to locate any toxicity data for this material. There also was no data in RTECS. Dow Corning was able to provide the results from a 28 day gavage study that they conducted on a group of 12 Sprague-Dawley rats. There was only one dose level, 1500 mg/kg. Compared to the controls, the males had reduced body weights, reduced food consumption, and both males and females had increased liver weights. Pathologic exam found no effects in the females. However, the male kidneys had an increase in the number of hyaline droplets in the proximal tubule epithelium. The one dose level tested will be considered as a LOAEL in calculation of the ITSL.

$ITSL = (1500 \text{ mg/kg}) \times (1/35 \times 100) \times (1 \text{ kg}/0.9 \text{ m}^3) \times 1/10 = 50 \text{ ug/m}^3$ with annual averaging

Where an additional factor of 1/10 was used to adjust the LOAEL to an NOAEL, and $0.9 \text{ m}^3/\text{kg}$ is the inhalation rate for rats (EPA 1988).

References:

Crofoot et al. 1990. A 28 day subchronic oral gavage feasibility study of various low molecular weight silicone oligomers in rats. Dow Corning, Doc ID # 1990-I0000-35105.

EPA. 1988. Recommendations for and documentation of biological values used in risk assessment. PB 88—179874.