

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

To: File for Isobutyltrimethoxysilane (CAS# 18395-30-7)

From : Keisha Williams, Air Quality Division, Toxics Unit

Subject : Screening Level File Updates for Isobutyltrimethoxysilane

Date: October 10, 2016

The initial threshold screening level (ITSL) for isobutyltrimethoxysilane is $200 \mu\text{g}/\text{m}^3$, annual averaging time and was established on December 17, 1991 (MDNR, 1991).

This memo to file is meant to clarify terms and references presented in the original file. The acceptable atmospheric concentration (AAC) described in the original file is synonymous with the term ITSL. Furthermore, the ITSL was based on AQD Rule 336.1232 (1) (f) and 336.1232 (2) (c). Lastly, the reference for the research study used for the ITSL derivation is provided here.

References

Act 451 of 1994, Natural Resources and Environmental Protection Act and Air Pollution Control Rules, Michigan Department of Environmental Quality.

Kolesar, G.B. 1989. An Acute Whole Body Vapor Inhalation Toxicity Study of Dimethyldimethoxysilane in the Rat. Unpublished Report. Dow Corning Corporation, Toxicology Department.

MDNR. 1991. Memo from Gary Butterfield to Paul Schleusner. Subject: AAC for dimethyldimethoxysilane (1112-39-6) and isobutyltrimethoxysilane (18395-30-7) for Dow Corning Permit 930-78J. December 17, 1991. Michigan Department of Natural Resources, Air Quality Division.

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

Dec 17, 1991

To: Paul Schleusener
Permit Section

From : Gary Butterfield
Toxics Unit

Subject : AAC for dimethyldimethoxysilane (1112-39-6) and isobutyltrimethoxysilane (18395-30-7) for Dow Corning Permit 930-78J

A literature search found no other toxicity studies available for review, besides the data provided by Dow Corning. The data provided by 1989 Dow Corning report indicated that the four hour LC50 for dimethyldimethoxysilane (1112-39-6) was 4700 mg/m³ and in the 1984 report the LC50 for isobutyltrimethoxysilane (18395-30-7) was 11000 mg/m³. Using this data the AAC's are calculated as follows:

dimethyldimethoxysilane (1112-39-6)

$$AAC = \frac{4700}{500 * 100} = 90 \mu\text{g}/\text{m}^3$$

isobutyltrimethoxysilane (18395-30-7)

$$AAC = \frac{11000}{500 * 100} = 200 \mu\text{g}/\text{m}^3$$

Both of these AAC's are to be used with annual averaging.

If you have any further questions on this issue please feel free to call me at 373-7061.