

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

TO: File for Methyl methacrylate (CAS # 80-62-6)

FROM: Robert Sills, AQD Toxics Unit Supervisor

SUBJECT: Methyl methacrylate ITSL justification and change in the averaging time from 24 hrs to annual

DATE: December 27, 2016

The current ITSL for Methyl methacrylate is 700 ug/m³, with annual averaging time (AT).

Previously, the ITSL was established on March 16, 1998 at 700 ug/m³ with 24 hr averaging time. The averaging time (AT) assigned to the ITSL at that time was 24 hours, as per the default methodology at that time (Rule 232(2)(b)). The ITSL was based on and consistent with an EPA (1998) Reference Concentration (RfC) of 700 ug/m³, which EPA derived from a chronic (2 year) rat inhalation bioassay. The critical effect was degeneration/atrophy of the olfactory epithelium in male rats. EPA (1998) applied a total uncertainty factor (UF) = 10, which consisted of a UF = 3 for interspecies extrapolation (possible toxicodynamic differences) and UF = 3 for intraspecies variability. The current file review concludes that the AT for the ITSL may appropriately be set at annual, based on the nature and duration of the key study and the ITSL value derivation, as allowed under Rule 229(2)(b).

References:

EPA. 1998. Integrated Risk Information System (IRIS database). Chemical file for Methyl methacrylate. Inhalation RfC assessment last revised 3/2/98. Retrieved on 12/27/16.