

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

TO: File for Diglycidyl Ether (CAS No. 2238-07-5)
FROM: Cathy Simon, Air Quality Division
DATE: Screening Level Update
SUBJECT: December 3, 2012

The initial threshold screening level (ITSL) for diglycidyl ether has been changed from 5 $\mu\text{g}/\text{m}^3$ (8-hour averaging time) to 0.5 $\mu\text{g}/\text{m}^3$ (8-hour averaging time). This change is being made as part of a project to update ITSLs that are derived from outdated occupational exposure limits. The evaluation of data being done as part of this project is limited to identifying the most recent occupational exposure limit, and does not include a review of all the available scientific literature.

The original ITSL for diglycidyl ether was set in 2005 and was derived from the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) of 0.1 ppm (0.5 mg/m^3) (MDEQ, 2005). This TLV of 0.1 ppm was first adopted by the ACGIH in 1981. The new ITSL is based upon the most recent TLV of 0.01 ppm (0.05 mg/m^3), which was adopted by the ACGIH in 2006, and represents the most up to date and scientifically based TLV available from the ACGIH. The new ITSL was derived as follows:

$$ITSL = \frac{TLV}{100} = \frac{0.05 \text{ mg } m^3}{100} = 0.0005 \text{ mg } m^3 = 0.5 \mu\text{g } m^3$$

The above ITSL of 0.5 $\mu\text{g}/\text{m}^3$ (8-hour averaging time) was derived pursuant to Rule 229(2)(b) of the Michigan Air Pollution Control Rules, and is consistent with the methodology of Rule 232(1)(c).

References

MDEQ. 2005. *Memo from Gary Butterfield to Diglycidyl Ether File (CAS No. 2238-07-5). Subject: Screening Level for Digylcidyl Ether.* August 9, 2005. Michigan Department of Environmental Quality, Air Quality Division.

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