

# MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

## INTEROFFICE COMMUNICATION

February 6, 2001

TO: Ethyl toluene file (CAS # 25550-14-5)  
FROM: Gary Butterfield  
SUBJECT: Ethyl toluene PAI Approval

The screening level for ethyl toluene is being set at  $0.1\mu\text{g}/\text{m}^3$  with annual averaging.

The following references or databases were searched to identify data to determine the screening level: U.S. Environmental Protection Agency (EPA) Integrated Risk Information System (IRIS), National Institute for Occupational Safety and Health (NIOSH) Registry for Toxic Effects of Chemical Substances (RTECS), American Conference of Governmental and Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs), Michigan Department of Environmental Quality (DEQ) library, International Agency for Research on Cancer (IARC) Monographs, Chemical Abstract Service (CAS) Online (1967-Jan, 2001), National Library of Medicine (NLM) - Toxline, and National Toxicology Program (NTP) Status Report.

As a result of the request for screening level development for Adco Products Permit 67-92A, January 25, 2001 CAS and NLM on-line literature search was conducted. No toxicity information on the mixture of ethyl toluene isomers (CAS# 25550-14-5) was found in the standard secondary toxicity references- RTECS, EPA IRIS, NTP, IARC, ATSDR, ACGIH, etc.

The majority of toxicity information that was located during the literature searches had exposures to mixtures where ethyl toluene was only a small component of the total mixture. These types of studies are not adequate to develop a screening level for ethyl toluene.

In an absorption, metabolism, excretion study reported by Chin et al (1980), rats exposed to ethyl toluene at concentrations of  $1\text{ gm}/\text{m}^3$  for 6 hours (no reports on mortality were given in this study) were found to absorb approximately 44% of the inhaled ethyl toluene. Once absorbed, 71% was excreted in the urine. Only minor amounts of ethyl toluene were retained in body tissues following a post-exposure period of 48 hours.

Due to a lack of toxicity data the screening level for ethyl toluene is being set at the trace value of  $0.1\mu\text{g}/\text{m}^3$  annual average, under R232(i). In the past, there has been a trace screening level set for the o-ethyl toluene isomer (CAS# 611-14-3). If additional toxicity literature becomes available for other ethyl toluene isomers, it may become possible in the future to establish a non-trace value for the mixture.

References:

Chin et al. 1980. Absorption, distribution, and excretion of ethylbenzene, ethylcyclohexane, and methylethylbenzene isomers in rats. Bull Environ Contam Toxicol 24:477-83.

GB:DB

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