MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

January 5, 1994

TO: Trimethylolpropane trimethacrylate file (CAS # 3290-92-4)

FROM: Gary Butterfield, Toxics Unit, Air Quality Division

SUBJECT: ITSL for Trimethyloipropane trimethacrylate

No ACGIH TLV, NIOSH REL, EPA RfC, or EPA RfD was available for trimethyl-olpropane trimethacrylate. A September 24, 1993 CAS-online search and NLM search was conducted. No long term exposure studies with trimethylol-propane trimethacrylate have been reported via a route appropriate for calculation of the ITSL. A brief description of a single dose level unpublished teratology study was reported in the review of Andrews and Clary (1986). That study found signs of fetotoxicity (decreased fetal weight and crown-rump length) occurring at maternal toxic oral, dose of 2500 mg/kg. From this study, no conclusions on the teratogenic potential of trimethylolpropane trimethacrylate was possible.

An LD50 of 5.66 ml/kg (or 6 g/kg) was also reported by Carpenter et al (1974). Because the above teratology is unpublished and unavailable for detailed review, the ITSL is based on the LD50 reported by Carpenter et al of 6 g/kg. The ITSL can be calculated from the equation in Rule 232 (1) (h) as follows.

ITSL = ((6 g/kg)/(500 x 40 x 100 x 0.167)) x (1 kg/0.9m^3) = 20 µg/m^3
annual average

where 0.9 m^3/kg is the default inhalation rate for rats.

References:

Andrews and Clary. 1986. Review of the toxicity of multifunctional acrylates. J Toxicol Environ Health 19:149-164.

Carpenter et al. 1974. Range finding toxicity data: list VIII. Toxicol Appl Pharmacol 28:313-319.