MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

July 14, 2004

TO: Iso-bornyl acrylate file (CAS # 5888-33-5)

FROM: Gary Butterfield

SUBJECT: Screening level for Iso-bornyl acrylate

Iso-bornyl acrylate has a molecular weight of 208.3 g/mol.

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 (1968 - May 2004), National Library of Medicine (NLM) - Toxline, and National Toxicology Program (NTP) Status Report.

The CAS and NLM on-line literature searches were conducted on May 10, 2004. The only toxicity study identified during the literature search was the unpublished acute oral study reported by Cannon Labs (1974). In this study, groups of 10 male Wistar rats were administered doses of 0, 3, 3.5, 4, 4.5, 5, or 6 g/kg. The LD50 was determined by the method of Miller and Tainter (1944) at the end of the 14-day observation period. The LD50 was determined to be 4.35 g/kg.

The ITSL will set using that oral LD50 and the equation from R232(1)(h) as follows.

$$\text{ITSL} = \frac{4350\ \text{mg/kg}}{500 \times 40 \times 100 \times 0.167} \times \frac{1\ \text{kg}}{0.9\ \text{m3}} = 14\ \text{ug/m3 annual average}$$

The default rat inhalation rate of 0.9 m3/kg was used in the above calculation.

References:

Cannon Labs. 1974. Report on the acute oral toxicity of isobornyl acrylate in rats. EPA OTS doc # 0536067.

GB:LH