

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

January 21, 1997

TO: File for Tripropylamine (CAS No. 102-69-2)

FROM: Michael Depa, Toxics Unit, Air Quality Division

SUBJECT: Screening Level Determination

The initial threshold screening level (ITSL) for tripropylamine is $0.2 \mu\text{g}/\text{m}^3$ based on an annual averaging time.

The following references or databases were searched to identify data to determine the ITSL: IRIS, RTECS, ACGIH Threshold Limit Values, NIOSH Pocket Guide to Hazardous Chemicals, Environmental Protection Bureau Library, IARC Monographs, CAS Online (1967 - November 26, 1996), National Library of Medicine, Health Effects Assessment Summary Tables, and NTP Status Report. Review of these sources found that EPA has established an RfD or RfC for tripropylamine. The ACGIH and NIOSH have not established occupational exposure limits (OELs) for tripropylamine.

Groups of 5 male Carworth-Wistar rats were dosed with tripropylamine by gastric intubation and observed for 14 days (Smyth et al., 1969). The doses were arranged in a logarithmic series differing by a factor of two. The LD50 was estimated using the method of Thompson using the tables of Weil. The LD50 for tripropylamine was reported as 0.096 ml/kg (0.071-0.13). The specific gravity for tripropylamine is 0.757 (Verschueren, 1983), therefore, the LD50 is 0.073 g/kg or 73 mg/kg. The ITSL was determined according to Rule 232(1)(h) as follows:

$$\text{ITSL} = 1/500 \times 1/100 \times 1/40 \times \text{LD50}/0.167 \times W_a/I_a$$

Where W_a and I_a are the default weight and inhalation rate of the rat (EPA, 1988).

$$\text{ITSL} = 1/(2,000,000) \times (73 \text{ mg/kg})/(0.167) \times (0.395 \text{ kg})/(0.373 \text{ m}^3)$$

$$\text{ITSL} = 2.3 \times 10^{-4} \text{ mg}/\text{m}^3$$

$$\text{ITSL} = 0.2 \mu\text{g}/\text{m}^3 \text{ (based on an annual averaging time)}$$

The ITSL for tripropylamine is $0.2 \mu\text{g}/\text{m}^3$ based on an annual averaging time.

REFERENCES

Verschueren, Karel, Ed. 1983. Handbook of Environmental Data on Organic Chemicals, Second Edition. Published by Van Nostrand Reinhold Co. New York, NY.

Smyth HF, Carpenter CP, Weil CS, Pozzani UC, Striegel JA, and Nycum JA. 1969 Range-finding toxicity data: List VII. American Industrial Hygiene Association Journal. Vol 30: 470-475.

MD:slb