

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

May 18, 2001

TO: File for Sanduvor 3068 Liquid
(1-acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl-2,2,6,6-tetramethylpiperidine
in 2-methoxy-1-methylethylacetate (106917-31-1).

FROM: Marco Bianchi, Toxics Unit, Air Quality Division

SUBJECT: Initial Threshold Screening Level

The initial threshold screening level (ITSL) for Sanduvor 3068 Liquid is $52 \mu\text{g}/\text{m}^3$ based on an annual averaging time.

The following references or databases were searched to identify data to determine the ITSL: IRIS-online, HEAST, NTP Management Status Report-online, RTECS, EPB-CCD database, EPB library, CAS-online, NLM-online, IARC-online, NIOSH Pocket Guide, and ACGIH Guide.

A complete reference check was conducted for Sanduvor 3068 Liquid, but only an e-mail submittal of the minimum data reporting requirements for acute toxicity testing was available for review. From this submittal, it was determined that five male and five female Sprague-Dawley rats were exposed to a test concentration of 2.61 mg/l Sanduvor 3068 Liquid. This compound was optimally aerosolized using an 80 percent w/w solution of the test substance in acetone. Purity of the test compound was 84.5 percent. No mortalities were noted at the 2.61 mg/l exposure concentration. Animals were observed for 14-days post-exposure. The LC_{50} was determined to be $>2.61 \text{ mg}/\text{l}$.

The ITSL was derived as follows:

$$\text{LC}_{50} = 2.61 \text{ mg}/\text{l}$$

Conversion of mg/l to mg/m³

$$2.61 \text{ mg}/\text{l} \times \frac{1000 \text{ liters}}{1 \text{ m}^3} = 2610 \text{ mg}/\text{m}^3$$

$$\text{LC}_{50} = 2610 \text{ mg}/\text{m}^3$$

$$\text{ITSL} = \frac{2610 \text{ mg}/\text{m}^3}{500 \times 100} = 0.052 \text{ mg}/\text{m}^3$$

$$0.052 \text{ mg}/\text{m}^3 \times 1000 = 52 \mu\text{g}/\text{m}^3 \text{ based on annual averaging.}$$

The ITSL for Sanduvor 3068 Liquid = $52 \mu\text{g}/\text{m}^3$ based on annual averaging.

References:

1. E-mail communication. 5/10/01. Sontakay (Clariant Corporation) to Brenda Menovcik (BASF Corporation). Acute inhalation toxicity information on Sanduvor 3068 Liquid.

MB:DB

cc: Cathy Simon, AQD
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