1,4-Cyclohexanedimethanol - Comments of Environmental Defense

(Submitted via Internet 10/23/02)

Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for 1,4-Cyclohexanedimethanol (CAS #105-08-8).

1,4-Cyclohexanedimethanol (CHDM) is used solely as an industrial intermediate in the production of polymers and resins. Limited studies of this chemical have shown CHDM to have little acute toxicity. CHDM does not have structural characteristics that might indicate chronic toxicity or carcinogenicity based on existing information. CHDM is relatively nonvolatile, soluble in water and, if released into the environment, it is predicted to partition into soil and water. Any CHDM that volatized would be expected to degrade relatively rapidly. If released into the environment, CHDM has low toxicity to fish, aquatic invertebrates and plants and is degraded by microorganisms. Available data indicate that it is not to be a mutagen, does not disrupt development and is not toxic to the reproductive system.

The Eastman Chemical Company has prepared a short but adequate Robust Summery for CHDM that appears to include most of the published and some unpublished data on this chemical. Nevertheless, two additional references that might be included in the Robust Summary are listed below. It should be noted that, although the letter of submission for this chemical describes available data as "substantial", the Robust Summary indicates that data describing the fate and toxicity of CHDM are no more than minimally adequate. The number of studies is very limited. Further, some of these studies are old, were not conducted under GLP, and used only one sex of one species. Other studies are recent and are fully adequate.

Although we do believe that additional data need to be generated on this compound, we wish to point out that the Test Plan itself is not well crafted, which makes reviewing it unnecessarily difficult. Specifically, descriptions of data on SIDS endpoints should provide a more informative summary of available data, rather than the notably sketchy information in the Test Plan for CHDM. Indeed, in some instances, the data are not described at all. Rather there is statement to effect that "A value for this endpoint was obtained from a reputable textbook" and no data are provided for the respective endpoint. The Test Plan also fails to include a figure showing the molecular structure of CHDM. In our view, the Test Plan would be much more useful and informative if it adequately summarized data presented in the Robust Summary. (The sponsor may wish to refer to the Test Plan on the Monoterpene Hydrocarbons as an example of a well-prepared Test Plan.)

Additional References:

Divincenzo, G.D., Ziegler, D.A. Metabolic fate of carbon-14-labeled 1,4-cyclohexanedimethanol in rats. Toxicol. Appl. Pharmacol.: 52, 10-15, 1980.

Anonymous, Information profiles on potential occupational hazards: Glycols, Center for Chemical Hazard Assessment, Syracuse Research Corporation, Syracuse, New York, 208 pages, 206 references, 1982.

Thank you for this opportunity to comment.

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