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01/27/04 07:13 AM

To: NCIC HPV@EPA
CC:
Subject: Environmental Defense comments on N,N, N',N'-Tetramethyl-1,2-ethanediamine (CAS# 110-18-9)

----- Forwarded by Anh Nguyen/DC/USEPA/US on 01/27/2004 07:09 AM -----



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Subject: Environmental Defense comments on N,N, N',N'-Tetramethyl-1,2-ethanediamine (CAS# 110-18-9)

(Submitted via Internet 1/23/04 to oppt.ncic@epa.gov, hpv.chemrtk@epa.gov, boswell.karen@epa.gov, chem.rtk@epa.gov, MTC@mchsi.com, and mark_thomson@cromptoncorp.com)

Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for N,N,N',N'-Tetramethyl-1,2-ethanediamine (CAS# 110-18-9).

The Crompton Corporation, in response to EPA's High Production Challenge, has submitted Robust Summaries and a Test Plan describing available data for and proposed testing of N,N,N',N'-tetramethyl-1,2-ethanediamine (CAS# 110-18-9) needed to fulfill SIDS elements for this chemical.

Our review indicates this submission is a minimal effort to comply with the objectives of the HPV Challenge. Whereas we realize this chemical has not been the subject of a great deal of research, we feel this submission should be as complete as possible and certainly more comprehensive than at present. For example, while not required, it would be highly desirable for the Test Plan to provide background information on this chemical describing its uses, transport and potential for human and environmental exposure. At present, background information is limited to a statement that N,N,N',N'-tetramethyl-1,2-ethanediamine "may be used in the preparation of epoxy curing agents, etc." The Test Plan does not describe any specific products in which this chemical is used or at what concentrations it may be used. Further, no information is provided regarding production volume, or the potential for and efforts to limit release of this chemical into the environment or prevent human exposure. No information is provided regarding consumer products that may contain this chemical or the levels at which it may be present or released from products in which it is used. We have determined from the literature that N,N,N',N'-tetramethyl-1,2-ethanediamine is used primarily as a catalyst. In such use it may, in fact, be consumed in the synthetic process, but this information is not provided in the Test Plan.

Data addressing the requested SIDS elements are limited; however, our review of the Test Plan/Robust Summaries and other literature sources make it clear that N,N,N',N'-tetramethyl-1,2-ethanediamine is a potent irritant. As such, this chemical is bound to cause extreme discomfort in treated animals. Thus the irritant effects of this chemical are likely to overshadow any systemic toxicities it may induce. Therefore, we recommend that additional animal testing be eliminated or kept to a minimum. Any

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studies considered absolutely necessary should be should be designed to provide the maximum data with the minimum number of animals. That is, if considered necessary, one additional animal study should be designed so as to provide repeat dose toxicity data, as well as reproductive and developmental toxicity data.

Specific Comments:

1. A list of synonyms and/or chemical names is not provided for N,N,N',N'-tetramethyl-1,2-ethanediamine.
2. Data describing the physicochemical properties of N,N,N',N'-tetramethyl-1,2-ethanediamine are cited in the Test Plan as "in a peer-reviewed publication", but a reference to that publication is not provided in the Test Plan. The same term is used again in the Robust Summaries along with a reference number. The reference given is the Handbook of Chemistry and Physics. That reference should be provided in the Test Plan, as should other references listed at the end of the Robust Summaries.
3. Biodegradation of this chemical is modeled and the results of that study are described in the Test Plan as indicating that the chemical is "not readily biodegradable". Actual estimates of rates of biodegradation are provided In the Robust Summaries, but the terms, i.e. weeks/months, are not clearly defined and in some cases no values are given. This deficiency should be addressed.

Thank you for this opportunity to comment.

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