

March 22, 2006

George M. Rusch, Ph.D., DABT, FATS
Director of Toxicology and Risk Assessment
Honeywell International Inc.
101 Columbia Road
Morristown, NJ 07962

Dear Dr. Rusch:

The Office of Pollution Prevention and Toxics is transmitting EPA's comments on the robust summaries and test plan for 2-Methyl-2-methylthiopropional oxime (Aldicarb Oxime) posted on the ChemRTK HPV Challenge Program Web site on September 9, 2004. I commend Honeywell International Inc. for its commitment to the HPV Challenge Program.

EPA reviews test plans and robust summaries to determine whether the reported data and test plans will provide the data necessary to adequately characterize each SIDS endpoint. On its Challenge Web site, EPA has provided guidance for determining the adequacy of data and preparing test plans used to prioritize chemicals for further work.

EPA will post this letter and the enclosed comments on the HPV Challenge Web site within the next few days. As noted in the comments, we ask that Honeywell advise the Agency, within 60 days of this posting on the Web site, of any modifications to its submission. Please send any electronic revisions or comments to the following e-mail addresses: oppt.ncic@epa.gov and chem.rtk@epa.gov.

If you have any questions about this response, please contact Mark Townsend, Chief of the HPV Chemicals Branch, at 202-564-8617. Submit questions about the HPV Challenge Program through the "Contact Us" link on the HPV Challenge Program Web site pages or through the TSCA Assistance Information Service (TSCA Hotline) at (202) 554-1404. The TSCA Hotline can also be reached by e-mail at tsc-hotline@epa.gov.

I thank you for your submission and look forward to your continued participation in the HPV Challenge Program.

Sincerely,

/s/

Oscar Hernandez, Director
Risk Assessment Division

Enclosure

cc: W. Penberthy
J. Willis

**EPA Comments on Chemical RTK HPV Challenge Submission:
Aldicarb Oxime**

Summary of EPA Comments

The sponsor, Honeywell International, Inc., submitted a test plan and robust summaries to EPA for Aldicarb Oxime (2-methyl-2-methylthiopropional oxime; CAS No. 1646-75-9) dated December 5, 2003. EPA posted the submission on the ChemRTK HPV Challenge Web site on September 9, 2004. EPA has reviewed this submission and has reached the following conclusions:

1. Physicochemical Properties. The submitter needs to provide more information to address the vapor pressure endpoint, address a discrepancy in the Log Kow endpoint, and provide additional robust summary information.
2. Environmental Fate. Data are adequate for these endpoints for the purposes of the HPV Challenge Program.
3. Health Effects. The submitter needs to provide data for the chromosomal aberrations endpoint, summarize developmental toxicity data appropriately, and address deficiencies in the robust summaries.
4. Ecological Effects. EPA reserves judgement on the adequacy of fish, daphnia, and algal endpoints pending submission of more detailed information and evaluation on the submitted studies.

EPA requests that the submitter advise the Agency within 60 days of any modifications to its submission.

EPA Comments on the Aldicarb Oxime Challenge Submission

Test Plan

Physicochemical Properties (melting point, boiling point, vapor pressure, partition coefficient and water solubility)

The data provided by the submitter for melting point, boiling point, and water solubility are adequate for the purposes of the HPV Challenge Program.

Vapor pressure. A revised robust summary submitted on January 18, 2006, provides a single value stated to be measured. The submitter needs to indicate the method used and provide any available details, or provide measured data following OECD guidelines.

Partition coefficient. In the originally submitted robust summary the submitter provided a log Kow value of 1.25, citing EPIWIN. In the second robust summary the submitter provided a value, with no method cited, of ca. 15.1, which is far out of line with the structure and the water solubility. The submitter needs to address this discrepancy.

Water solubility. The submitter needs to confirm that the value of 25 g/L provided is measured. This is an MSDS value for which the submitter did not provide any experimental details. However, EPA obtained an estimated value of 47.6 g/L at 25 °C using WSKOW v1.41. The water solubility of the closely related substance aldicarb (CAS No. 116-06-3) is 6 g/L at 25 °C (Bowman and Sans 1983). These values suggest that the submitter's value is reasonable and the data can be considered adequate for this endpoint. The submitter needs to provide any available experimental details.

Environmental Fate (photodegradation, stability in water, biodegradation, fugacity)

The data provided by the submitter for these endpoints are adequate for the purposes of the HPV Challenge Program (an updated robust summary submitted January 18, 2006, included an adequate OECD TG 111 stability-in-water study).

Photodegradation. Although the submitter indicated in the robust summary that no photodegradation data are available, it has provided atmospheric oxidation data in the monitoring data section of the robust summary. The submitter needs to transfer the atmospheric oxidation data (Model AopWin v.191) from the Monitoring Data section (3.2) of the robust summary to the Photodegradation section (3.1.1).

Health Effects (acute toxicity, repeated-dose toxicity, genetic toxicity, and reproductive/developmental toxicity)

Adequate data are available for the acute, repeated-dose, gene mutation and reproduction toxicity endpoints for the purposes of the HPV Challenge Program. The submitter needs to address deficiencies in the robust summaries.

Genetic toxicity (chromosomal aberrations). Data submitted for gene mutations do not address the requirements of the chromosomal aberrations endpoint. Therefore, the submitter needs to provide *in vitro* chromosomal assay data according to OECD TG 473.

Developmental toxicity. No data were submitted specifically for this endpoint. However, Honeywell submitted data for an oral one-generation reproduction study of aldicarb oxime in rats (revised submission of January 18, 2006). The submitter needs to provide the developmental toxicity endpoint data from this study in robust summary format.

Ecological Effects (fish, invertebrates, and algae)

EPA reserves judgement on the adequacy of data for the acute aquatic toxicity for fish, daphnia, and algae pending the submission of more detailed critical information on the submitted studies.

Specific Comments on the Robust Summaries

Overall, the robust summaries lack detail. The submitter should consult EPA guidance for the preparation of robust summaries (<http://www.epa.gov/opptintr/chemrtk/guidocs.htm>).

Physicochemical Properties

In the revised summary the water solubility input reported for the Henry's Law calculation in the water solubility section is stated incorrectly (2.5 e-004 instead of 2.5 e+004 ppm).

Health Effects

Acute toxicity. Details missing from one or more of the robust summaries of the oral studies in rats and mice include the purity of the test material, animal data (e.g., numbers, sex, age and weight), and dose levels tested.

Repeated-dose toxicity. The robust summary for the 13-week subchronic dietary study in rats does not contain information on the specific hematology, clinical chemistry and urinalysis parameters examined, and all the specific organs that were weighed or examined for gross and microscopic pathology.

Genetic toxicity (gene mutations). Robust summaries of two Ames tests lack information about the purity of the test substance, the culture conditions (e.g., temperature and medium used), duration of incubation, number of colonies counted per concentration, identity of positive controls, responses to positive

controls, and statistical methods used and the results of statistical analyses.

Ecological Effects

Fish and Invertebrates. Details missing included the loading rates, information on the use of a control, information on water chemistry parameters such as water hardness, pH, and dissolved oxygen concentration, and the discussion of resulting data.

Algae. Details missing included the type of test, identity and purity of the test substance, information on the use of a control and the discussion of resulting data.

Followup Activity

EPA requests that the submitter advise the Agency within 60 days of any modifications to its submission.