

February 2, 2004

Dr. Mark A. Thomson
Manager, Toxicology & International Product Registration
Crompton Corporation
199 Benson Road
Middlebury, CT 06749

Dear Dr. Thomson:

The Office of Pollution Prevention and Toxics is transmitting EPA's comments on the robust summaries and test plan for Phenol, 2-sec-butyl-4,6-dintro- posted on the ChemRTK HPV Challenge Program Web site on October 3, 2003. I commend Crompton Corporation 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 Crompton 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 Richard Hefter, Chief of the HPV Chemicals Branch, at 202-564-7649. 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 tsca-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
M. E. Weber

EPA Comments on Chemical RTK HPV Challenge Submission: 4,6-Dinitrobutylphenol

Summary of EPA Comments

The sponsor, Crompton Corporation, submitted a test plan and robust summaries to EPA for 4,6-dinitrobutylphenol (CAS No. 88-85-7), dated September 4, 2003. EPA posted the submission on the ChemRTK HPV Challenge Web site on October 3, 2003.

EPA has reviewed this submission and reached the following conclusions:

1. Physicochemical Properties. Except for boiling point, data are adequate for the purposes of the HPV Challenge Program. EPA recommends that the submitter replace the submitted value with the one identified by EPA.
2. Environmental Fate. Except for biodegradation, data are adequate for the purposes of the HPV Challenge Program. The submitter needs to provide measured ready biodegradation data.
3. Health Effects. The submitted data are adequate for all health effects endpoints for the purposes of the HPV Challenge Program.
4. Ecological Effects. The acute and chronic toxicity data for fish and invertebrates are adequate for the purposes of the HPV Challenge Program. The acute toxicity data for algae are inadequate. Testing is recommended for this endpoint.

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

EPA Comments on the 4,6-dinitrobutylphenol Challenge Submission

Test Plan

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

The submitted data for melting point, vapor pressure, partition coefficient, and water solubility are adequate for the purposes of the HPV Challenge Program.

Boiling point. The source of the provided value of 223 °C and details regarding the conditions in which it was measured (reduced or atmospheric pressure) are unclear. EPA was able to locate a measured (possibly extrapolated) boiling point of 332 °C from Syracuse Research Corporation's PhysProp Database and from the Extension Toxicology Network (EXTOXNET). With the vapor pressure of 1.0 torr at 151.1 °C reported for this chemical in EXTOXNET, EPA calculated a boiling point of 340.5 °C using the NOMO5 program and a boiling point of 372 °C using the MPBPVP program in EPIWIN v.3.11. Another estimated boiling point of 362 °C was reported in a secondary source (Mackay et al. 2000). The boiling point of 332 °C is in good agreement with these calculated or estimated values. The submitter's value of 223 °C may be incorrect or estimated, or it may have been obtained at reduced pressure. EPA recommends that the submitted value be replaced with the value of 332 °C and the robust summary corrected.

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

The submitted data for photodegradation, stability in water, and fugacity are adequate for the purposes of the HPV Challenge Program.

Biodegradation. The submitter provided only estimated data, which are not adequate. The submitter needs to provide measured ready biodegradation data following OECDTG 301.

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

The submitted data, the same data provided to EPA under FIFRA when this chemical was registered, are adequate for the purposes of the HPV Challenge Program.

Ecological Effects (fish, invertebrates, and algae).

The submitted data for fish and invertebrates are adequate for the purposes of the HPV Challenge Program

The acute algal toxicity study was not conducted according to accepted guidelines with regard to study duration (24 hours). It is recommended that an acute algal toxicity test be conducted with a duration of 72 hours (OECDTG 201) or 96 hours (preferred; OPPTSTG 850.5400).

Followup Activity

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