

Initial Risk-Based Prioritization of High Production Volume Chemicals

Butylated Triphenyl Phosphate (CAS No. 220352-35-2) (9th CI Name: Phenol, *tert*-Butyl Derivatives, Phosphates (3:1))

This document is based on screening-level characterizations done by EPA on the environmental fate, hazard, and exposure of the listed chemical. The information used by EPA includes data submitted under the HPV Challenge Program¹ and the 2006 Inventory Update Reporting (IUR)², and data publicly available through other selected sources³. This screening-level prioritization presents EPA's initial thinking regarding the potential risks presented by this chemical and future possible actions that may be needed. These initial characterization and prioritization documents do not constitute a final Agency determination as to risk, nor do they determine whether sufficient data are available to characterize risk. Rather, they are interim evaluations. Recommended actions may be considered by EPA in the future based on a relative judgment regarding this chemical in comparison with others evaluated under this program, and in light of the uncertainties presented by gaps in the available data that may be determined to exist. These evaluations contribute to meeting U.S. commitments under the chemicals cooperation work being done in North America⁴ through the EPA Chemical Assessment and Management Program (ChAMP)⁵.

Hazard and Fate Summary:

- **Human Health:** Available data indicate that this chemical presents a low concern for hazard to human health. It is of low acute toxicity by the oral, inhalation, and dermal routes of exposure, and is a mild dermal irritant and a very mild eye irritant. Reproductive, developmental, and maternal toxicity were observed only at very high doses in animal studies.
- **Environment:** Available data indicate the potential acute hazard of this chemical is low to fish, high to aquatic invertebrates, and medium to aquatic plants, and that the potential chronic hazard is high to aquatic invertebrates.
- **Persistence and Bioaccumulation:**
 - Available data indicate that this chemical has low persistence.
 - Available data indicate that this chemical has low bioaccumulation potential.

Exposure Summary:

- Both Confidential Business Information (CBI) and non-confidential information from IUR and other sources were used in developing this initial prioritization.
- **Production Volume:** This chemical is an HPV chemical manufactured and/or imported in the U.S. with an aggregated production volume in the range of 10 to 50 million pounds in 2005.

¹ US EPA, HPV Challenge Program information: <http://epa.gov/hpv/>.

² US EPA, IUR information: <http://www.epa.gov/oppt/iur/index.htm>.

³ US EPA, Information on additional public databases used: <http://www.epa.gov/hpvis/pubdtsum.htm>.

⁴ US EPA, U.S. Commitments to North American Chemicals Cooperation:
<http://www.epa.gov/hpv/pubs/general/sppframework.htm>.

⁵ US EPA, ChAMP information: <http://www.epa.gov/champ/>.

- Uses: Non-confidential information in the IUR indicates that there are industrial processing and commercial/consumer uses of the chemical, including uses in lubricants, fuel additives, and incorporation into rubber and plastic products. The HPV submission for this chemical stated that it is primarily used as a component of plastics, lubricants, and hydraulic fluids.
- General Population and Environment: Based on use information that includes lubricant and hydraulic fluid uses, there is potential for environmental releases. Combining use, fate, and related information, EPA identifies a medium potential that the general population and the environment might be exposed to the chemical.
- Workers: This chemical is not volatile (vapor pressure is 8.1×10^{-6} mm Hg). However, workers could be exposed to mists in industrial or commercial settings such as auto repair shops and/or metal working facilities. EPA identifies a high relative ranking for potential worker exposure.
- Consumers: Based on IUR data, this chemical is found in consumer products, including lubricants and rubber and plastic products. EPA identifies a high potential that consumers might be exposed to the chemical in consumer products.
- Children: There were no uses in children's products reported under the IUR. Exposures to children, however, may occur through the household use of some consumer products. EPA identifies a medium potential that children might be exposed.

Risk Characterization Summary:

- Potential Risk to Aquatic Organisms from Environmental Releases: *MEDIUM/HIGH CONCERN*. Based on use information, EPA identifies a medium potential for exposure to aquatic organisms from environmental releases to water. This chemical has low persistence and low bioaccumulation. These fate characteristics in combination with the low toxicity for fish indicate a low concern for potential risk to fish. In combination with the high acute and high chronic aquatic hazards for invertebrates and the medium acute aquatic hazard for plants, these fate characteristics suggest a high concern for potential risk to aquatic invertebrates and a medium concern for potential risk to aquatic plants.
- Potential Risk to the General Population from Environmental Releases: *LOW CONCERN*. Based on use information, EPA identifies a medium potential for exposure to the general population from environmental releases. The potential human health hazard is expected to be low. The low hazard combined with the environmental fate characteristics of low persistence and low bioaccumulation suggest a low concern for potential risk to the general population from environmental releases.
- Potential Risk to Workers: *LOW CONCERN*. Available IUR data indicate that workers may be exposed to this chemical. The potential human health hazard is expected to be low. However, there is potential for mild skin and eye irritation. Adherence to standard good industrial hygiene practices to prevent irritation would limit the exposure of workers. Therefore, the available information suggests a low concern for potential risks to workers.
- Potential Risk to Consumers from Known Uses: *LOW CONCERN*. Available IUR data indicate that there is a high potential that consumers might be exposed. However, the potential human health hazard is expected to be low. Therefore, the available information suggests a low concern for potential risks to consumers.

- Potential Risk to Children: *LOW CONCERN*. Available IUR data indicate that there is a medium potential that children might be exposed. The potential human health hazard is expected to be low. Therefore, the available information suggests a low concern for potential risks to children.

Regulatory and Related Information Summary:

- This chemical is listed on the TSCA Inventory. It is not otherwise regulated under TSCA.

Assumptions and Uncertainties:

- EPA has no quantitative information on releases of this chemical, and assumes potential exposures based on reported uses.
- Because this chemical breaks down rapidly in the environment, EPA assumes that chronic environmental exposures would be unlikely unless environmental releases were constant and ongoing.

Rationale Leading To Prioritization Decision:

- Available data suggest a low hazard to humans in all potentially exposed groups.
- The medium to high concern for potential risk to aquatic plants and aquatic invertebrates respectively is driven by acute and chronic toxicity data combined with assumptions about the potential for environmental exposures. The rapid breakdown of the chemical in the environment limits this concern to locations where the chemical might be released to water. Information concerning releases to water and resultant exposures would be useful in determining the extent of potential concern.

Prioritization Decision:

- **MEDIUM PRIORITY, POTENTIAL CONCERN:** In order to further evaluate the medium to high concern for potential risk to aquatic plants and aquatic invertebrates from this chemical, companies are encouraged to provide available information on a voluntary and non-confidential basis. Examples of information that would assist EPA in its analysis include, but are not limited to:
 - Information concerning potential releases to water from manufacturing, use and disposal of the chemical and products containing the chemical; and
 - Other information pertinent to environmental exposures to this chemical.

Supporting Documentation:

Screening-Level Risk Characterization: July 2008

Screening-Level Hazard Characterization: July 2008

Screening-Level Exposure Characterization: July 2008