

Initial Risk-Based Prioritization of High Production Volume Chemicals

2,4,6-Trimethylphenol (CAS No. 527-60-6) (9th CI Name: Phenol, 2,4,6-trimethyl-)

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 health effects studies indicate the potential health hazard is low. This chemical is a skin irritant.
- **Environment:** Available environmental effects data indicate the potential acute hazard to fish, aquatic invertebrates and aquatic plants is moderate.
- **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 1 to 10 million pounds in 2005.
- **Uses:** Non-confidential information in the IUR indicated that the chemical is primarily used as a solvent in paints and coatings. The HPV submission states that the chemical is used as a component in solvent formulation for either polyamide or polyurethane based resin to coat wire. There were no consumer uses reported under the IUR or other public databases.

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/>.

- General Population and Environment: It is likely that there would be some releases to water and/or air during manufacturing, processing, and industrial use. This chemical was found in quantifiable amounts in air, ground water, and in the effluent of a petroleum refinery and publicly owned treatment works. EPA identifies a medium potential that the general population and the environment might be exposed to this chemical.
- Workers: Based on available information, EPA identifies a high relative ranking for potential worker exposure. Although this chemical is a solid at room temperature, it is manufactured in liquid form. The vapor pressure is 0.05 mm Hg and therefore workers could be exposed to vapors. In addition, workers could be exposed to mists based on uses in spray paints and coatings.
- Consumers: There were no consumer uses reported under the IUR, therefore EPA identifies a low potential that consumers might be exposed to this chemical.
- Children: There were no uses in children's products reported under the IUR, therefore EPA identifies a low potential that children might be exposed to this chemical.

Risk Characterization Summary:

- Potential Risk to Aquatic Organisms from Environmental Releases: *MEDIUM CONCERN*. EPA identifies a medium potential for exposure to aquatic organisms from environmental releases. This chemical was found in quantifiable amounts in air, ground water, and other environmental samples. A moderate acute aquatic hazard considered in combination with the environmental fate characteristics of low persistence and low bioaccumulation suggests a medium concern for potential risk to aquatic organisms from environmental releases.
- Potential Risk to the General Population from Environmental Releases: *LOW CONCERN*. 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 and the environmental fate characteristics of low persistence and low bioaccumulation considered together 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 the potential for skin irritation at high concentrations. 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 low potential that consumers might be exposed to this chemical. 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 low potential that children might be exposed to this chemical. 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, but is not otherwise specifically regulated by EPA.

Assumptions and Uncertainties:

- EPA has no quantitative information on releases of this chemical, and assumes potential exposures based on reported uses and detection in environmental samples.

Rationale Leading To Prioritization Decision:

- Hazard communication and standard industrial hygiene practices, if properly followed, may be sufficient to address concerns for occupational exposures.
- Additional information clarifying existing controls on potential occupational exposure and the environmental releases could be useful to better characterize potential risks. However, such information would not be likely to change the prioritization decision.

Prioritization Decision:

- LOW PRIORITY – Follow-up action not suggested at this time.

Supporting Documentation:

Screening-Level Risk Characterization: July 2008

Screening-Level Hazard Characterization: July 2008

Screening-Level Exposure Characterization: July 2008